Idaho
National
Engineering
Laboratory

INEL-95/0310
(Formerly EGG-WM-10903)
Rev. 1
August 1995

A Comprehensive Inventory of Radiological and Nonradiological Contaminants in Waste Buried in the Subsurface Disposal Area of the INEL RWMC During the Years 1952–1983

Volume 5

Lockheed
Idaho Technologies Company

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Idaho National Engineering Laboratory
Lockheed Idaho Technologies Company
Idaho Falls, Idaho 83415

Prepared for the
U.S. Department of Energy
Office of Environmental Restoration and Waste Management
Under DOE Idaho Operations Office
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PREFACE

This report, *A Comprehensive Inventory of Radiological and Nonradiological Contaminants in Waste Buried in the Subsurface Disposal Area of the INEL RWMC During the Years 1952–1983*, is comprised of five volumes. Volume 1 consists of the main body of the report and Appendices A, C, D, E, F, and G. Appendix B, the complete printout of the inventory database, is provided in Volumes 2 through 5. Because of its size, distribution of Appendix B has been limited.

Appendix B

Complete Printout of the Contaminant Inventory and Other Information from the CIDRA Database

(continued)

Test Reactor Area

(continued)

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 193

1. Preparer: Amaro, C.

2. Date prepared: 08/27/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 603
(building number - use code from attached list)

5. Number of waste stream from this facility:
15H

6. Waste stream:
Metal (aluminum, stainless steel, zircaloy, beryllium and cadmium).

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1960 Ending year 1983

9. Waste stream volume:
Amount 1349.7906 Units Cubic feet.
Check box: [ ] annual or [X] total over all years
Check box: [X] container volume or [ ] waste volume

10. Comments (specify number of pertinent question):
4. Also 614 and 632.

1. General physical form (see attached list)
Zirconium.
[ ] other (specify)

2. Details on physical form(particularly confinement related)
A variety of metal from Al, stainless steel, zircaloy, Be, and Cd.

3. Chemical form:
Metal, Al, stainless steel, zircaloy, BeO, CdO, Be, and Cd.

4. Inner packaging: [ ] plastic bag [X] plastic liner
[ ] metal liner [ ] none [ ] other (specify)

5. Waste container type (see attached list)
Cardboard box*.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
4. Because a variety of container types were used, it is a guess that the containers were lined with plastic.
5. Also BLM, "Other", BXW, and I. "Other" and I cannot be defined by the preparer.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
7440-41-7 Beryllium	Solid.	BeO and Beryllium.	A 34025.000000000	GM	1960	1960	N			
7440-41-7 Beryllium	Solid.	BeO and Beryllium.	A 547021.50000000	GM	1962	1962	N			
7440-41-7 Beryllium	Solid.	BeO and Beryllium.	A 453600.00000000	GM	1963	1963	N			
7440-41-7 Beryllium	Solid.	BeO and Beryllium.	A 281232.50000000	GM	1969	1969	N			
7440-41-7 Beryllium	Solid.	BeO and Beryllium.	A 157500.00000000	GM	1970	1970	N			
7440-43-9 Cadmium	Solid.	CdO, Cd metal.	A 34025.000000000	GM	1960	1960	N			
7440-43-9 Cadmium	Solid.	CdO, Cd metal.	A 547021.50000000	GM	1962	1962	N			
7440-43-9 Cadmium	Solid.	CdO, Cd metal.	A 453600.00000000	GM	1963	1963	N			
7440-43-9 Cadmium	Solid.	CdO, Cd metal.	A 281232.50000000	GM	1969	1969	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

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7440-43-9 Cadmium	Solid.	CdO, Cd metal.	A 157500.00000000	GM	1970	1970	N			

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Metal.	Unknown.	T 418.10000000000	CI	1960	1960	N			See continuation page.
C-14	Metal.	Unknown.	T 56.090000000000	CI	1960	1960	N			See continuation page.
Fe-55	Metal.	Unknown.	T 9688.0000000000	CI	1960	1960	N			See continuation page.
Ni-59	Metal.	Unknown.	T 2.9060000000000	CI	1960	1960	N			See continuation page.
Ni-63	Metal.	Unknown.	T 1632.0000000000	CI	1960	1960	N			See continuation page.
Co-60	Metal.	Unknown.	T 3416.0000000000	CI	1960	1960	N			See continuation page.
Sr-90	Metal.	Unknown.	T 4.6910000000000	CI	1960	1960	N			See continuation page.
Tc-99	Metal.	Unknown.	T .91780000000000	CI	1960	1960	N			See continuation page.
I-129	Metal.	Unknown.	T .00238590000000	CI	1960	1960	N			See continuation page.

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Cs-137	Metal.	Unknown.	T 1020.0000000000	CI	1960	1960	N			See continuation page.
Ce-144	Metal.	Unknown.	T 23.960000000000	CI	1960	1960	N			See continuation page.
Eu-154	Metal.	Unknown.	T .01479000000000	CI	1960	1960	N			See continuation page.
Eu-155	Metal.	Unknown.	T 47.930000000000	CI	1960	1960	N			See continuation page.
U-234	Metal.	Unknown.	T .01071000000000	CI	1960	1960	N			See continuation page.
U-235	Metal.	Unknown.	T .00022940000000	CI	1960	1960	N			See continuation page.
U-236	Metal.	Unknown.	T .00407900000000	CI	1960	1960	N			See continuation page.
Np-237	Metal.	Unknown.	T .00662800000000	CI	1960	1960	N			See continuation page.
Pu-238	Metal.	Unknown.	T .27530000000000	CI	1960	1960	N			See continuation page.

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Pu-239	Metal.	Unknown.	T .27530000000000	CI	1960	1960	N			See continuation page.
Pu-240	Metal.	Unknown.	T .02906000000000	CI	1960	1960	N			See continuation page.
Pu-241	Metal.	Unknown.	T 30.080000000000	CI	1960	1960	N			See continuation page.
Am-241	Metal.	Unknown.	T .13770000000000	CI	1960	1960	N			See continuation page.
Cm-242	Metal.	Unknown.	T .13770000000000	CI	1960	1960	N			See continuation page.
Cm-244	Metal.	Unknown.	T .12750000000000	CI	1960	1960	N			See continuation page.
Fe-59	Metal.	Unknown.	T 2.0000000000000	CI	1960	1960	N	-20%	+20%	See comment below.
H-3	Metal.	Unknown.	T 10030.000000000	CI	1961	1961	N			See continuation page.
C-14	Metal.	Unknown.	T 1346.0000000000	CI	1961	1961	N			See continuation page.

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Fe-55	Metal.	Unknown.	T 232500.00000000	CI	1961	1961	N			See continuation page.
Ni-59	Metal.	Unknown.	T 69.740000000000	CI	1961	1961	N			See continuation page.
Ni-63	Metal.	Unknown.	T 39150.000000000	CI	1961	1961	N			See continuation page.
Co-60	Metal.	Unknown.	T 81970.000000000	CI	1961	1961	N			See continuation page.
Sr-90	Metal.	Unknown.	T 112.60000000000	CI	1961	1961	N			See continuation page.
Tc-99	Metal.	Unknown.	T 22.020000000000	CI	1961	1961	N			See continuation page.
I-129	Metal.	Unknown.	T .00572580000000	CI	1961	1961	N			See continuation page.
Cs-137	Metal.	Unknown.	T 24470.000000000	CI	1961	1961	N			See continuation page.
Ce-144	Metal.	Unknown.	T 575.00000000000	CI	1961	1961	N			See continuation page.

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Eu-154	Metal.	Unknown.	T .35480000000000	CI	1961	1961	N			See continuation page.
Eu-155	Metal.	Unknown.	T 1150.0000000000	CI	1961	1961	N			See continuation page.
U-234	Metal.	Unknown.	T .25690000000000	CI	1961	1961	N			See continuation page.
U-235	Metal.	Unknown.	T .00550600000000	CI	1961	1961	N			See continuation page.
U-236	Metal.	Unknown.	T .09788000000000	CI	1961	1961	N			See continuation page.
Np-237	Metal.	Unknown.	T .15910000000000	CI	1961	1961	N			See continuation page.
Pu-238	Metal.	Unknown.	T 6.6070000000000	CI	1961	1961	N			See continuation page.
Pu-239	Metal.	Unknown.	T 6.6070000000000	CI	1961	1961	N			See continuation page.
Pu-240	Metal.	Unknown.	T .69740000000000	CI	1961	1961	N			See continuation page.

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Pu-241	Metal.	Unknown.	T 721.90000000000	CI	1961	1961	N			See continuation page.
Am-241	Metal.	Unknown.	T 3.3030000000000	CI	1961	1961	N			See continuation page.
Cm-242	Metal.	Unknown.	T 3.3030000000000	CI	1961	1961	N			See continuation page.
Cm-244	Metal.	Unknown.	T 3.0590000000000	CI	1961	1961	N			See continuation page.
U-235	Metal.	Unknown.	T .00014036000000	CI	1961	1961	N	-20%	+20%	See comment below.
H-3	Metal.	Unknown.	T 44410.000000000	CI	1962	1962	N			See continuation page.
C-14	Metal.	Unknown.	T 5958.0000000000	CI	1962	1962	N			See continuation page.
Fe-55	Metal.	Unknown.	T 1029000.0000000	CI	1962	1962	N			See continuation page.
Ni-59	Metal.	Unknown.	T 308.70000000000	CI	1962	1962	N			See continuation page.

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Ni-63	Metal.	Unknown.	T 173300.00000000	CI	1962	1962	N			See continuation page.
Co-60	Metal.	Unknown.	T 362900.00000000	CI	1962	1962	N			See continuation page.
Sr-90	Metal.	Unknown.	T 498.30000000000	CI	1962	1962	N			See continuation page.
Tc-99	Metal.	Unknown.	T 97.490000000000	CI	1962	1962	N			See continuation page.
I-129	Metal.	Unknown.	T .02534400000000	CI	1962	1962	N			See continuation page.
Cs-137	Metal.	Unknown.	T 108300.00000000	CI	1962	1962	N			See continuation page.
Ce-144	Metal.	Unknown.	T 2546.0000000000	CI	1962	1962	N			See continuation page.
Eu-154	Metal.	Unknown.	T 1.5710000000000	CI	1962	1962	N			See continuation page.
Eu-155	Metal.	Unknown.	T 5091.0000000000	CI	1962	1962	N			See continuation page.

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U-234	Metal.	Unknown.	T 1.1370000000000	CI	1962	1962	N			See continuation page.
U-235	Metal.	Unknown.	T .02437000000000	CI	1962	1962	N			See continuation page.
U-236	Metal.	Unknown.	T .43330000000000	CI	1962	1962	N			See continuation page.
Np-237	Metal.	Unknown.	T .70410000000000	CI	1962	1962	N			See continuation page.
Pu-238	Metal.	Unknown.	T 29.250000000000	CI	1962	1962	N			See continuation page.
Pu-239	Metal.	Unknown.	T 29.250000000000	CI	1962	1962	N			See continuation page.
Pu-240	Metal.	Unknown.	T 3.0870000000000	CI	1962	1962	N			See continuation page.
Pu-241	Metal.	Unknown.	T 3195.0000000000	CI	1962	1962	N			See continuation page.
Am-241	Metal.	Unknown.	T 14.620000000000	CI	1962	1962	N			See continuation page.

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Cm-242	Metal.	Unknown.	T 14.620000000000	CI	1962	1962	N			See continuation page.
Cm-244	Metal.	Unknown.	T 13.540000000000	CI	1962	1962	N			See continuation page.
H-3	Metal.	Unknown.	T 2164.0000000000	CI	1963	1963	N			See continuation page.
C-14	Metal.	Unknown.	T 290.30000000000	CI	1963	1963	N			See continuation page.
Fe-55	Metal.	Unknown.	T 50140.000000000	CI	1963	1963	N			See continuation page.
Ni-59	Metal.	Unknown.	T 15.040000000000	CI	1963	1963	N			See continuation page.
Ni-63	Metal.	Unknown.	T 8444.0000000000	CI	1963	1963	N			See continuation page.
Co-60	Metal.	Unknown.	T 17680.000000000	CI	1963	1963	N			See continuation page.
Sr-90	Metal.	Unknown.	T 24.280000000000	CI	1963	1963	N			See continuation page.

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Tc-99	Metal.	Unknown.	T 4.7500000000000	CI	1963	1963	N			See continuation page.
I-129	Metal.	Unknown.	T .00123480000000	CI	1963	1963	N			See continuation page.
Cs-137	Metal.	Unknown.	T 5278.0000000000	CI	1963	1963	N			See continuation page.
Ce-144	Metal.	Unknown.	T 124.00000000000	CI	1963	1963	N			See continuation page.
Eu-154	Metal.	Unknown.	T .07653000000000	CI	1963	1963	N			See continuation page.
Eu-155	Metal.	Unknown.	T 248.00000000000	CI	1963	1963	N			See continuation page.
U-234	Metal.	Unknown.	T .05542000000000	CI	1963	1963	N			See continuation page.
U-235	Metal.	Unknown.	T .00118700000000	CI	1963	1963	N			See continuation page.
U-236	Metal.	Unknown.	T .02111000000000	CI	1963	1963	N			See continuation page.

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Np-237	Metal.	Unknown.	T .03430000000000	CI	1963	1963	N			See continuation page.
Pu-238	Metal.	Unknown.	T 1.4250000000000	CI	1963	1963	N			See continuation page.
Pu-239	Metal.	Unknown.	T 1.4250000000000	CI	1963	1963	N			See continuation page.
Pu-240	Metal.	Unknown.	T .15040000000000	CI	1963	1963	N			See continuation page.
Pu-241	Metal.	Unknown.	T 155.70000000000	CI	1963	1963	N			See continuation page.
Am-241	Metal.	Unknown.	T .71250000000000	CI	1963	1963	N			See continuation page.
Cm-242	Metal.	Unknown.	T .71250000000000	CI	1963	1963	N			See continuation page.
Cm-244	Metal.	Unknown.	T .65970000000000	CI	1963	1963	N			See continuation page.
H-3	Metal.	Unknown.	T 731.60000000000	CI	1964	1964	N			See continuation page.

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C-14	Metal.	Unknown.	T 98.140000000000	CI	1964	1964	N			See continuation page.
Fe-55	Metal.	Unknown.	T 16950.000000000	CI	1964	1964	N			See continuation page.
Ni-59	Metal.	Unknown.	T 5.0850000000000	CI	1964	1964	N			See continuation page.
Ni-63	Metal.	Unknown.	T 2855.0000000000	CI	1964	1964	N			See continuation page.
Co-60	Metal.	Unknown.	T 5977.0000000000	CI	1964	1964	N			See continuation page.
Sr-90	Metal.	Unknown.	T 8.2080000000000	CI	1964	1964	N			See continuation page.
Tc-99	Metal.	Unknown.	T 1.6060000000000	CI	1964	1964	N			See continuation page.
I-129	Metal.	Unknown.	T .00041751000000	CI	1964	1964	N			See continuation page.
Cs-137	Metal.	Unknown.	T 1784.0000000000	CI	1964	1964	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Ce-144	Metal.	Unknown.	T 41.930000000000	CI	1964	1964	N			See continuation page.
Eu-154	Metal.	Unknown.	T .02587000000000	CI	1964	1964	N			See continuation page.
Eu-155	Metal.	Unknown.	T 83.860000000000	CI	1964	1964	N			See continuation page.
U-234	Metal.	Unknown.	T .01874000000000	CI	1964	1964	N			See continuation page.
U-235	Metal.	Unknown.	T .00040150000000	CI	1964	1964	N			See continuation page.
U-236	Metal.	Unknown.	T .00713700000000	CI	1964	1964	N			See continuation page.
Np-237	Metal.	Unknown.	T .01160000000000	CI	1964	1964	N			See continuation page.
Pu-238	Metal.	Unknown.	T .48180000000000	CI	1964	1964	N			See continuation page.
Pu-239	Metal.	Unknown.	T .48180000000000	CI	1964	1964	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-240	Metal.	Unknown.	T .05085000000000	CI	1964	1964	N			See continuation page.
Pu-241	Metal.	Unknown.	T 52.640000000000	CI	1964	1964	N			See continuation page.
Am-241	Metal.	Unknown.	T .24090000000000	CI	1964	1964	N			See continuation page.
Cm-242	Metal.	Unknown.	T .24090000000000	CI	1964	1964	N			See continuation page.
Cm-244	Metal.	Unknown.	T .22300000000000	CI	1964	1964	N			See continuation page.
U-235	Metal.	Unknown.	T .50000000000000	CI	1964	1964	N	-20%	+20%	See comment below.
Th-232	Metal.	Unknown.	T .00000000050000	CI	1964	1964	N	-20%	+20%	See comment below.
H-3	Metal.	Unknown.	T 1122.0000000000	CI	1965	1965	N			See continuation page.
C-14	Metal.	Unknown.	T 150.50000000000	CI	1965	1965	N			See continuation page.

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Fe-55	Metal.	Unknown.	T 25990.000000000	CI	1965	1965	N			See continuation page.
Ni-59	Metal.	Unknown.	T 7.7980000000000	CI	1965	1965	N			See continuation page.
Ni-63	Metal.	Unknown.	T 4378.0000000000	CI	1965	1965	N			See continuation page.
Co-60	Metal.	Unknown.	T 9166.0000000000	CI	1965	1965	N			See continuation page.
Sr-90	Metal.	Unknown.	T 12.590000000000	CI	1965	1965	N			See continuation page.
Tc-99	Metal.	Unknown.	T 2.4630000000000	CI	1965	1965	N			See continuation page.
I-129	Metal.	Unknown.	T .00064026000000	CI	1965	1965	N			See continuation page.
Cs-137	Metal.	Unknown.	T 2736.0000000000	CI	1965	1965	N			See continuation page.
Ce-144	Metal.	Unknown.	T 64.300000000000	CI	1965	1965	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-154	Metal.	Unknown.	T .03967000000000	CI	1965	1965	N			See continuation page.
Eu-155	Metal.	Unknown.	T 128.60000000000	CI	1965	1965	N			See continuation page.
U-234	Metal.	Unknown.	T .02873000000000	CI	1965	1965	N			See continuation page.
U-235	Metal.	Unknown.	T .00061560000000	CI	1965	1965	N			See continuation page.
U-236	Metal.	Unknown.	T .01094000000000	CI	1965	1965	N			See continuation page.
Np-237	Metal.	Unknown.	T .01779000000000	CI	1965	1965	N			See continuation page.
Pu-238	Metal.	Unknown.	T .73880000000000	CI	1965	1965	N			See continuation page.
Pu-239	Metal.	Unknown.	T .73880000000000	CI	1965	1965	N			See continuation page.
Pu-240	Metal.	Unknown.	T .07798000000000	CI	1965	1965	N			See continuation page.

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Pu-241	Metal.	Unknown.	T 80.720000000000	CI	1965	1965	N			See continuation page.
Am-241	Metal.	Unknown.	T .36940000000000	CI	1965	1965	N			See continuation page.
Cm-242	Metal.	Unknown.	T .36940000000000	CI	1965	1965	N			See continuation page.
Cm-244	Metal.	Unknown.	T .34200000000000	CI	1965	1965	N			See continuation page.
U-235	Metal.	Unknown.	T .00003412800000	CI	1965	1965	N	-20%	+20%	See comment below.
H-3	Metal.	Unknown.	T 1948.0000000000	CI	1966	1966	N			See continuation page.
C-14	Metal.	Unknown.	T 261.30000000000	CI	1966	1966	N			See continuation page.
Fe-55	Metal.	Unknown.	T 45140.000000000	CI	1966	1966	N			See continuation page.
Ni-59	Metal.	Unknown.	T 13.540000000000	CI	1966	1966	N			See continuation page.

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Ni-63	Metal.	Unknown.	T 7603.0000000000	CI	1966	1966	N			See continuation page.
Co-60	Metal.	Unknown.	T 15920.000000000	CI	1966	1966	N			See continuation page.
Sr-90	Metal.	Unknown.	T 21.860000000000	CI	1966	1966	N			See continuation page.
Tc-99	Metal.	Unknown.	T 4.2770000000000	CI	1966	1966	N			See continuation page.
I-129	Metal.	Unknown.	T .00111150000000	CI	1966	1966	N			See continuation page.
Cs-137	Metal.	Unknown.	T 4752.0000000000	CI	1966	1966	N			See continuation page.
Ce-144	Metal.	Unknown.	T 111.70000000000	CI	1966	1966	N			See continuation page.
Eu-154	Metal.	Unknown.	T .06890000000000	CI	1966	1966	N			See continuation page.
Eu-155	Metal.	Unknown.	T 223.30000000000	CI	1966	1966	N			See continuation page.

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U-234	Metal.	Unknown.	T .04989000000000	CI	1966	1966	N			See continuation page.
U-235	Metal.	Unknown.	T .00106900000000	CI	1966	1966	N			See continuation page.
U-236	Metal.	Unknown.	T .01901000000000	CI	1966	1966	N			See continuation page.
Np-237	Metal.	Unknown.	T .03089000000000	CI	1966	1966	N			See continuation page.
Pu-238	Metal.	Unknown.	T 1.2830000000000	CI	1966	1966	N			See continuation page.
Pu-239	Metal.	Unknown.	T 1.2830000000000	CI	1966	1966	N			See continuation page.
Pu-240	Metal.	Unknown.	T .13540000000000	CI	1966	1966	N			See continuation page.
Pu-241	Metal.	Unknown.	T 140.20000000000	CI	1966	1966	N			See continuation page.
Am-241	Metal.	Unknown.	T .64150000000000	CI	1966	1966	N			See continuation page.

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Cm-242	Metal.	Unknown.	T .64150000000000	CI	1966	1966	N			See continuation page.
Cm-244	Metal.	Unknown.	T .59400000000000	CI	1966	1966	N			See continuation page.
U-235	Metal.	Unknown.	T .00007992000000	CI	1966	1966	N	-20%	+20%	See comment below.
H-3	Metal.	Unknown.	T 190.80000000000	CI	1967	1967	N			See continuation page.
C-14	Metal.	Unknown.	T 25.600000000000	CI	1967	1967	N			See continuation page.
Fe-55	Metal.	Unknown.	T 4422.0000000000	CI	1967	1967	N			See continuation page.
Ni-59	Metal.	Unknown.	T 1.3260000000000	CI	1967	1967	N			See continuation page.
Ni-63	Metal.	Unknown.	T 744.70000000000	CI	1967	1967	N			See continuation page.
Co-60	Metal.	Unknown.	T 1559.0000000000	CI	1967	1967	N			See continuation page.

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Sr-90	Metal.	Unknown.	T 2.1410000000000	CI	1967	1967	N			See continuation page.
Tc-99	Metal.	Unknown.	T .41890000000000	CI	1967	1967	N			See continuation page.
I-129	Metal.	Unknown.	T .00010890000000	CI	1967	1967	N			See continuation page.
Cs-137	Metal.	Unknown.	T 465.40000000000	CI	1967	1967	N			See continuation page.
Ce-144	Metal.	Unknown.	T 10.940000000000	CI	1967	1967	N			See continuation page.
Eu-154	Metal.	Unknown.	T .00674900000000	CI	1967	1967	N			See continuation page.
Eu-155	Metal.	Unknown.	T 21.880000000000	CI	1967	1967	N			See continuation page.
U-234	Metal.	Unknown.	T .00488700000000	CI	1967	1967	N			See continuation page.
U-235	Metal.	Unknown.	T .00010470000000	CI	1967	1967	N			See continuation page.

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U-236	Metal.	Unknown.	T .00186200000000	CI	1967	1967	N			See continuation page.
Np-237	Metal.	Unknown.	T .00302500000000	CI	1967	1967	N			See continuation page.
Pu-238	Metal.	Unknown.	T .12570000000000	CI	1967	1967	N			See continuation page.
Pu-239	Metal.	Unknown.	T .12570000000000	CI	1967	1967	N			See continuation page.
Pu-240	Metal.	Unknown.	T .01326000000000	CI	1967	1967	N			See continuation page.
Pu-241	Metal.	Unknown.	T 13.730000000000	CI	1967	1967	N			See continuation page.
Am-241	Metal.	Unknown.	T .06283000000000	CI	1967	1967	N			See continuation page.
Cm-242	Metal.	Unknown.	T .06283000000000	CI	1967	1967	N			See continuation page.
Cm-244	Metal.	Unknown.	T .05818000000000	CI	1967	1967	N			See continuation page.

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U-235	Metal.	Unknown.	T .00002160000000	CI	1967	1967	N	-20%	+20%	See comment below.
H-3	Metal.	Unknown.	T 2387.0000000000	CI	1968	1968	N			See continuation page.
C-14	Metal.	Unknown.	T 320.20000000000	CI	1968	1968	N			See continuation page.
Fe-55	Metal.	Unknown.	T 55300.000000000	CI	1968	1968	N			See continuation page.
Ni-59	Metal.	Unknown.	T 16.590000000000	CI	1968	1968	N			See continuation page.
Ni-63	Metal.	Unknown.	T 9314.0000000000	CI	1968	1968	N			See continuation page.
Co-60	Metal.	Unknown.	T 19500.000000000	CI	1968	1968	N			See continuation page.
Sr-90	Metal.	Unknown.	T 26.780000000000	CI	1968	1968	N			See continuation page.
Tc-99	Metal.	Unknown.	T 5.2390000000000	CI	1968	1968	N			See continuation page.

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I-129	Metal.	Unknown.	T .00136260000000	CI	1968	1968	N			See continuation page.
Cs-137	Metal.	Unknown.	T 5821.0000000000	CI	1968	1968	N			See continuation page.
Ce-144	Metal.	Unknown.	T 136.80000000000	CI	1968	1968	N			See continuation page.
Eu-154	Metal.	Unknown.	T .08441000000000	CI	1968	1968	N			See continuation page.
Eu-155	Metal.	Unknown.	T 273.60000000000	CI	1968	1968	N			See continuation page.
U-234	Metal.	Unknown.	T .06112000000000	CI	1968	1968	N			See continuation page.
U-235	Metal.	Unknown.	T .00131000000000	CI	1968	1968	N			See continuation page.
U-236	Metal.	Unknown.	T .02328000000000	CI	1968	1968	N			See continuation page.
Np-237	Metal.	Unknown.	T .03784000000000	CI	1968	1968	N			See continuation page.

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Pu-238	Metal.	Unknown.	T 1.5720000000000	CI	1968	1968	N			See continuation page.
Pu-239	Metal.	Unknown.	T 1.5720000000000	CI	1968	1968	N			See continuation page.
Pu-240	Metal.	Unknown.	T .16590000000000	CI	1968	1968	N			See continuation page.
Pu-241	Metal.	Unknown.	T 171.70000000000	CI	1968	1968	N			See continuation page.
Am-241	Metal.	Unknown.	T .78590000000000	CI	1968	1968	N			See continuation page.
Cm-242	Metal.	Unknown.	T .78590000000000	CI	1968	1968	N			See continuation page.
Cm-244	Metal.	Unknown.	T .72770000000000	CI	1968	1968	N			See continuation page.
Pu-241	Metal.	Unknown.	T 44.800000000000	CI	1968	1968	N	-20%	+20%	See comment below.
U-235	Metal.	Unknown.	T .00006848000000	CI	1968	1968	N	-20%	+20%	See comment below.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Metal.	Unknown.	T 22960.000000000	CI	1969	1969	N			See continuation page.
C-14	Metal.	Unknown.	T 3079.0000000000	CI	1969	1969	N			See continuation page.
Fe-55	Metal.	Unknown.	T 531900.00000000	CI	1969	1969	N			See continuation page.
Ni-59	Metal.	Unknown.	T 159.60000000000	CI	1969	1969	N			See continuation page.
Ni-63	Metal.	Unknown.	T 89580.000000000	CI	1969	1969	N			See continuation page.
Co-60	Metal.	Unknown.	T 187600.00000000	CI	1969	1969	N			See continuation page.
Sr-90	Metal.	Unknown.	T 257.50000000000	CI	1969	1969	N			See continuation page.
Tc-99	Metal.	Unknown.	T 50.390000000000	CI	1969	1969	N			See continuation page.
I-129	Metal.	Unknown.	T .01310400000000	CI	1969	1969	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Metal.	Unknown.	T 55990.000000000	CI	1969	1969	N			See continuation page.
Ce-144	Metal.	Unknown.	T 1316.0000000000	CI	1969	1969	N			See continuation page.
Eu-154	Metal.	Unknown.	T .81180000000000	CI	1969	1969	N			See continuation page.
Eu-155	Metal.	Unknown.	T 2631.0000000000	CI	1969	1969	N			See continuation page.
U-234	Metal.	Unknown.	T .58790000000000	CI	1969	1969	N			See continuation page.
U-235	Metal.	Unknown.	T .01260000000000	CI	1969	1969	N			See continuation page.
U-236	Metal.	Unknown.	T .22400000000000	CI	1969	1969	N			See continuation page.
Np-237	Metal.	Unknown.	T .36390000000000	CI	1969	1969	N			See continuation page.
Pu-238	Metal.	Unknown.	T 15.120000000000	CI	1969	1969	N			See continuation page.

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Pu-239	Metal.	Unknown.	T 15.120000000000	CI	1969	1969	N			See continuation page.
Pu-240	Metal.	Unknown.	T 1.5960000000000	CI	1969	1969	N			See continuation page.
Pu-241	Metal.	Unknown.	T 1652.0000000000	CI	1969	1969	N			See continuation page.
Am-241	Metal.	Unknown.	T 7.5580000000000	CI	1969	1969	N			See continuation page.
Cm-242	Metal.	Unknown.	T 7.5580000000000	CI	1969	1969	N			See continuation page.
Cm-244	Metal.	Unknown.	T 6.9990000000000	CI	1969	1969	N			See continuation page.
U-235	Metal.	Unknown.	T .00070665000000	CI	1969	1969	N	-20%	+20%	See comment below.
H-3	Metal.	Unknown.	T 44.030000000000	CI	1970	1970	N			See continuation page.
C-14	Metal.	Unknown.	T 5.9060000000000	CI	1970	1970	N			See continuation page.

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Fe-55	Metal.	Unknown.	T 1020.0000000000	CI	1970	1970	N			See continuation page.
Ni-59	Metal.	Unknown.	T .30600000000000	CI	1970	1970	N			See continuation page.
Ni-63	Metal.	Unknown.	T 171.80000000000	CI	1970	1970	N			See continuation page.
Co-60	Metal.	Unknown.	T 359.70000000000	CI	1970	1970	N			See continuation page.
Sr-90	Metal.	Unknown.	T .49400000000000	CI	1970	1970	N			See continuation page.
Tc-99	Metal.	Unknown.	T .09664000000000	CI	1970	1970	N			See continuation page.
I-129	Metal.	Unknown.	T .00002512800000	CI	1970	1970	N			See continuation page.
Cs-137	Metal.	Unknown.	T 107.40000000000	CI	1970	1970	N			See continuation page.
Ce-144	Metal.	Unknown.	T 2.5230000000000	CI	1970	1970	N			See continuation page.

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Eu-154	Metal.	Unknown.	T .00155700000000	CI	1970	1970	N			See continuation page.
Eu-155	Metal.	Unknown.	T 5.0470000000000	CI	1970	1970	N			See continuation page.
U-234	Metal.	Unknown.	T .00112800000000	CI	1970	1970	N			See continuation page.
U-235	Metal.	Unknown.	T .00002416000000	CI	1970	1970	N			See continuation page.
U-236	Metal.	Unknown.	T .00042950000000	CI	1970	1970	N			See continuation page.
Np-237	Metal.	Unknown.	T .00069800000000*	CI	1970	1970	N			See continuation page.
Pu-238	Metal.	Unknown.	T .02899000000000	CI	1970	1970	N			See continuation page.
Pu-239	Metal.	Unknown.	T .02899000000000	CI	1970	1970	N			See continuation page.
Pu-240	Metal.	Unknown.	T .00306000000000	CI	1970	1970	N			See continuation page.

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Pu-241	Metal.	Unknown.	T 3.1680000000000	CI	1970	1970	N			See continuation page.
Am-241	Metal.	Unknown.	T .01450000000000	CI	1970	1970	N			See continuation page.
Cm-242	Metal.	Unknown.	T .01450000000000	CI	1970	1970	N			See continuation page.
Cm-244	Metal.	Unknown.	T .01342000000000	CI	1970	1970	N			See continuation page.
Co-60	Metal.	Unknown.	T 72982.180000000	CI	1970	1970	N	-20%	+20%	See comment below.
Cr-51	Metal.	Unknown.	T 270470.00000000	CI	1970	1970	N	-20%	+20%	See comment below.
Fe-59	Metal.	Unknown.	T 33658.000000000	CI	1970	1970	N	-20%	+20%	See comment below.
H-3	Metal.	Unknown.	T 514.00000000000	CI	1970	1970	N	-20%	+20%	See comment below.
H-3	Metal.	Unknown.	T .14970000000000	CI	1971	1971	N			See continuation page.

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C-14	Metal.	Unknown.	T .02009000000000	CI	1971	1971	N			See continuation page.
Fe-55	Metal.	Unknown.	T 3.4700000000000	CI	1971	1971	N			See continuation page.
Ni-59	Metal.	Unknown.	T .00104100000000	CI	1971	1971	N			See continuation page.
Ni-63	Metal.	Unknown.	T .58430000000000	CI	1971	1971	N			See continuation page.
Co-60	Metal.	Unknown.	T 1.2230000000000	CI	1971	1971	N			See continuation page.
Sr-90	Metal.	Unknown.	T .00168000000000	CI	1971	1971	N			See continuation page.
Tc-99	Metal.	Unknown.	T .00032870000000	CI	1971	1971	N			See continuation page.
I-129	Metal.	Unknown.	T .00000008546000	CI	1971	1971	N			See continuation page.
Cs-137	Metal.	Unknown.	T .36520000000000	CI	1971	1971	N			See continuation page.

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Ce-144	Metal.	Unknown.	T .00858300000000	CI	1971	1971	N			See continuation page.
Eu-154	Metal.	Unknown.	T .00000529600000	CI	1971	1971	N			See continuation page.
Eu-155	Metal.	Unknown.	T .01717000000000	CI	1971	1971	N			See continuation page.
U-234	Metal.	Unknown.	T .00000383500000	CI	1971	1971	N			See continuation page.
U-235	Metal.	Unknown.	T .00000008217000	CI	1971	1971	N			See continuation page.
U-236	Metal.	Unknown.	T .00000146100000	CI	1971	1971	N			See continuation page.
Np-237	Metal.	Unknown.	T .00000237400000	CI	1971	1971	N			See continuation page.
Pu-238	Metal.	Unknown.	T .00009861000000	CI	1971	1971	N			See continuation page.
Pu-239	Metal.	Unknown.	T .00009861000000	CI	1971	1971	N			See continuation page.

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Pu-240	Metal.	Unknown.	T .00001041000000	CI	1971	1971	N			See continuation page.
Pu-241	Metal.	Unknown.	T .01077000000000	CI	1971	1971	N			See continuation page.
Am-241	Metal.	Unknown.	T .00004930000000	CI	1971	1971	N			See continuation page.
Cm-242	Metal.	Unknown.	T .00004930000000	CI	1971	1971	N			See continuation page.
Cm-244	Metal.	Unknown.	T .00004565000000	CI	1971	1971	N			See continuation page.
Co-60	Metal.	Unknown.	T 26208.000000000	CI	1971	1971	N	-20%	+20%	See comment below.
Cr-51	Metal.	Unknown.	T 235870.00000000	CI	1971	1971	N	-20%	+20%	See comment below.
Fe-59	Metal.	Unknown.	T 29120.000000000	CI	1971	1971	N	-20%	+20%	See comment below.
Th-232	Metal.	Unknown.	T .00010899000000	CI	1971	1971	N	-20%	+20%	See comment below.

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U-235	Metal.	Unknown.	T .00020969000000	CI	1971	1971	N	-20%	+20%	See comment below.
U-238	Metal.	Unknown.	T .00000399590000	CI	1971	1971	N	-20%	+20%	See comment below.
H-3	Metal.	Unknown.	T 4.3840000000000	CI	1972	1972	N			See continuation page.
C-14	Metal.	Unknown.	T .58800000000000	CI	1972	1972	N			See continuation page.
Fe-55	Metal.	Unknown.	T 101.60000000000	CI	1972	1972	N			See continuation page.
Ni-59	Metal.	Unknown.	T .03047000000000	CI	1972	1972	N			See continuation page.
Ni-63	Metal.	Unknown.	T 17.110000000000	CI	1972	1972	N			See continuation page.
Co-60	Metal.	Unknown.	T 35.820000000000	CI	1972	1972	N			See continuation page.
Sr-90	Metal.	Unknown.	T .04918000000000	CI	1972	1972	N			See continuation page.

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Tc-99	Metal.	Unknown.	T .00962200000000	CI	1972	1972	N			See continuation page.
I-129	Metal.	Unknown.	T .00000250200000	CI	1972	1972	N			See continuation page.
Cs-137	Metal.	Unknown.	T 10.690000000000	CI	1972	1972	N			See continuation page.
Ce-144	Metal.	Unknown.	T .25130000000000	CI	1972	1972	N			See continuation page.
Eu-154	Metal.	Unknown.	T .00015500000000	CI	1972	1972	N			See continuation page.
Eu-155	Metal.	Unknown.	T .50250000000000	CI	1972	1972	N			See continuation page.
U-234	Metal.	Unknown.	T .00011230000000	CI	1972	1972	N			See continuation page.
U-235	Metal.	Unknown.	T .00000240600000	CI	1972	1972	N			See continuation page.
U-236	Metal.	Unknown.	T .00004277000000	CI	1972	1972	N			See continuation page.

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Np-237	Metal.	Unknown.	T .00006950000000	CI	1972	1972	N			See continuation page.
Pu-238	Metal.	Unknown.	T .00288700000000	CI	1972	1972	N			See continuation page.
Pu-239	Metal.	Unknown.	T .00288700000000	CI	1972	1972	N			See continuation page.
Pu-240	Metal.	Unknown.	T .00030470000000	CI	1972	1972	N			See continuation page.
Pu-241	Metal.	Unknown.	T .31540000000000	CI	1972	1972	N			See continuation page.
Am-241	Metal.	Unknown.	T .00144300000000	CI	1972	1972	N			See continuation page.
Cm-242	Metal.	Unknown.	T .00144300000000	CI	1972	1972	N			See continuation page.
Cm-244	Metal.	Unknown.	T .00133600000000	CI	1972	1972	N			See continuation page.
Co-60	Metal.	Unknown.	T 591.45000000000	CI	1972	1972	N	-20%	+20%	See comment below.

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Cr-51	Metal.	Unknown.	T 4991.3500000000	CI	1972	1972	N	-20%	+20%	See comment below.
Fe-59	Metal.	Unknown.	T 137.00000000000	CI	1972	1972	N	-20%	+20%	See comment below.
Mn-54	Metal.	Unknown.	T 3.5000000000000	CI	1972	1972	N	-20%	+20%	See comment below.
Mn-56	Metal.	Unknown.	T 26.000000000000	CI	1972	1972	N	-20%	+20%	See comment below.
Ni-59	Metal.	Unknown.	T 112.10000000000	CI	1972	1972	N	-20%	+20%	See comment below.
U-235	Metal.	Unknown.	T .01000000000000	CI	1972	1972	N	-20%	+20%	See comment below.
U-238	Metal.	Unknown.	T .00262610000000	CI	1972	1972	N	-20%	+20%	See comment below.
H-3	Metal.	Unknown.	T .04255000000000	CI	1973	1973	N			See continuation page.
C-14	Metal.	Unknown.	T .00570700000000	CI	1973	1973	N			See continuation page.

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Fe-55	Metal.	Unknown.	T .98580000000000	CI	1973	1973	N			See continuation page.
Ni-59	Metal.	Unknown.	T .00029570000000	CI	1973	1973	N			See continuation page.
Ni-63	Metal.	Unknown.	T .16600000000000	CI	1973	1973	N			See continuation page.
Co-60	Metal.	Unknown.	T .34760000000000	CI	1973	1973	N			See continuation page.
Sr-90	Metal.	Unknown.	T .00047730000000	CI	1973	1973	N			See continuation page.
Tc-99	Metal.	Unknown.	T .00009339000000	CI	1973	1973	N			See continuation page.
I-129	Metal.	Unknown.	T .00000002428000	CI	1973	1973	N			See continuation page.
Cs-137	Metal.	Unknown.	T .10380000000000	CI	1973	1973	N			See continuation page.
Ce-144	Metal.	Unknown.	T .00243900000000	CI	1973	1973	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-154	Metal.	Unknown.	T .00000150500000	CI	1973	1973	N			See continuation page.
Eu-155	Metal.	Unknown.	T .00487700000000	CI	1973	1973	N			See continuation page.
U-234	Metal.	Unknown.	T .00000109000000	CI	1973	1973	N			See continuation page.
U-235	Metal.	Unknown.	T .00000002340000	CI	1973	1973	N			See continuation page.
U-236	Metal.	Unknown.	T .00000041510000	CI	1973	1973	N			See continuation page.
Np-237	Metal.	Unknown.	T .00000067450000	CI	1973	1973	N			See continuation page.
Pu-238	Metal.	Unknown.	T .00002802000000	CI	1973	1973	N			See continuation page.
Pu-239	Metal.	Unknown.	T .00002802000000	CI	1973	1973	N			See continuation page.
Pu-240	Metal.	Unknown.	T .00000295700000	CI	1973	1973	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-241	Metal.	Unknown.	T .00306100000000	CI	1973	1973	N			See continuation page.
Am-241	Metal.	Unknown.	T .00001401000000	CI	1973	1973	N			See continuation page.
Cm-242	Metal.	Unknown.	T .00001401000000	CI	1973	1973	N			See continuation page.
Cm-244	Metal.	Unknown.	T .00001297000000	CI	1973	1973	N			See continuation page.
Co-60	Metal.	Unknown.	T 58.140000000000	CI	1973	1973	N	-20%	+20%	See comment below.
Cr-51	Metal.	Unknown.	T 522.56000000000	CI	1973	1973	N	-20%	+20%	See comment below.
Fe-59	Metal.	Unknown.	T 64.600000000000	CI	1973	1973	N	-20%	+20%	See comment below.
H-3	Metal.	Unknown.	T .15390000000000	CI	1974	1974	N			See continuation page.
C-14	Metal.	Unknown.	T .02064000000000	CI	1974	1974	N			See continuation page.

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Fe-55	Metal.	Unknown.	T 3.5650000000000	CI	1974	1974	N			See continuation page.
Ni-59	Metal.	Unknown.	T .00106900000000	CI	1974	1974	N			See continuation page.
Ni-63	Metal.	Unknown.	T .60040000000000	CI	1974	1974	N			See continuation page.
Co-60	Metal.	Unknown.	T 1.2570000000000	CI	1974	1974	N			See continuation page.
Sr-90	Metal.	Unknown.	T .00172600000000	CI	1974	1974	N			See continuation page.
Tc-99	Metal.	Unknown.	T .00033770000000	CI	1974	1974	N			See continuation page.
I-129	Metal.	Unknown.	T .00000008780000	CI	1974	1974	N			See continuation page.
Cs-137	Metal.	Unknown.	T .37520000000000	CI	1974	1974	N			See continuation page.
Ce-144	Metal.	Unknown.	T .00881800000000	CI	1974	1974	N			See continuation page.

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Eu-154	Metal.	Unknown.	T .00000544100000	CI	1974	1974	N			See continuation page.
Eu-155	Metal.	Unknown.	T .01764000000000	CI	1974	1974	N			See continuation page.
U-234	Metal.	Unknown.	T .00000394000000	CI	1974	1974	N			See continuation page.
U-235	Metal.	Unknown.	T .00000008440000	CI	1974	1974	N			See continuation page.
U-236	Metal.	Unknown.	T .00000150100000	CI	1974	1974	N			See continuation page.
Np-237	Metal.	Unknown.	T .00000243900000	CI	1974	1974	N			See continuation page.
Pu-238	Metal.	Unknown.	T .00010130000000	CI	1974	1974	N			See continuation page.
Pu-239	Metal.	Unknown.	T .00010130000000	CI	1974	1974	N			See continuation page.
Pu-240	Metal.	Unknown.	T .00001069000000	CI	1974	1974	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-241	Metal.	Unknown.	T .01107000000000	CI	1974	1974	N			See continuation page.
Am-241	Metal.	Unknown.	T .00005066000000	CI	1974	1974	N			See continuation page.
Cm-242	Metal.	Unknown.	T .00005066000000	CI	1974	1974	N			See continuation page.
Cm-244	Metal.	Unknown.	T .00004691000000	CI	1974	1974	N			See continuation page.
Co-60	Metal.	Unknown.	T 82.600000000000	CI	1974	1974	N	-20%	+20%	See comment below.
Cr-51	Metal.	Unknown.	T 38.670000000000	CI	1974	1974	N	-20%	+20%	See comment below.
Fe-59	Metal.	Unknown.	T 4.7700000000000	CI	1974	1974	N	-20%	+20%	See comment below.
Mn-54	Metal.	Unknown.	T 31.900000000000	CI	1974	1974	N	-20%	+20%	See comment below.
Th-232	Metal.	Unknown.	T .00001915500000	CI	1974	1974	N	-20%	+20%	See comment below.

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U-235	Metal.	Unknown.	T .00003143500000	CI	1974	1974	N	-20%	+20%	See comment below.
U-238	Metal.	Unknown.	T .00005729600000	CI	1974	1974	N	-20%	+20%	See comment below.
Zn-65	Metal.	Unknown.	T 179.80000000000	CI	1974	1974	N	-20%	+20%	See comment below.
H-3	Metal.	Unknown.	T .46860000000000	CI	1975	1975	N			See continuation page.
C-14	Metal.	Unknown.	T .06287000000000	CI	1975	1975	N			See continuation page.
Fe-55	Metal.	Unknown.	T 10.860000000000	CI	1975	1975	N			See continuation page.
Ni-59	Metal.	Unknown.	T .00325800000000	CI	1975	1975	N			See continuation page.
Ni-63	Metal.	Unknown.	T 1.8290000000000	CI	1975	1975	N			See continuation page.
Co-60	Metal.	Unknown.	T 3.8290000000000	CI	1975	1975	N			See continuation page.

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Sr-90	Metal.	Unknown.	T .00525800000000	CI	1975	1975	N			See continuation page.
Tc-99	Metal.	Unknown.	T .00102900000000	CI	1975	1975	N			See continuation page.
I-129	Metal.	Unknown.	T .00000026748000	CI	1975	1975	N			See continuation page.
Cs-137	Metal.	Unknown.	T 1.1430000000000	CI	1975	1975	N			See continuation page.
Ce-144	Metal.	Unknown.	T .02686000000000	CI	1975	1975	N			See continuation page.
Eu-154	Metal.	Unknown.	T .00001657000000	CI	1975	1975	N			See continuation page.
Eu-155	Metal.	Unknown.	T .05372000000000	CI	1975	1975	N			See continuation page.
U-234	Metal.	Unknown.	T .00001200000000	CI	1975	1975	N			See continuation page.
U-235	Metal.	Unknown.	T .00000025720000	CI	1975	1975	N			See continuation page.

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U-236	Metal.	Unknown.	T .00000457200000	CI	1975	1975	N			See continuation page.
Np-237	Metal.	Unknown.	T .00000743000000	CI	1975	1975	N			See continuation page.
Pu-238	Metal.	Unknown.	T .00030860000000	CI	1975	1975	N			See continuation page.
Pu-239	Metal.	Unknown.	T .00030860000000	CI	1975	1975	N			See continuation page.
Pu-240	Metal.	Unknown.	T .00003258000000	CI	1975	1975	N			See continuation page.
Pu-241	Metal.	Unknown.	T .03372000000000	CI	1975	1975	N			See continuation page.
Am-241	Metal.	Unknown.	T .00015430000000	CI	1975	1975	N			See continuation page.
Cm-242	Metal.	Unknown.	T .00015430000000	CI	1975	1975	N			See continuation page.
Cm-244	Metal.	Unknown.	T .00014290000000	CI	1975	1975	N			See continuation page.

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Co-60	Metal.	Unknown.	T 6.4800000000000	CI	1975	1975	N	-20%	+20%	See comment below.
Cr-51	Metal.	Unknown.	T 58.320000000000	CI	1975	1975	N	-20%	+20%	See comment below.
Fe-59	Metal.	Unknown.	T 7.2000000000000	CI	1975	1975	N	-20%	+20%	See comment below.
Th-232	Metal.	Unknown.	T .00002180000000	CI	1975	1975	N	-20%	+20%	See comment below.
U-235	Metal.	Unknown.	T .00004328900000	CI	1975	1975	N	-20%	+20%	See comment below.
U-238	Metal.	Unknown.	T .00002591600000	CI	1975	1975	N	-20%	+20%	See comment below.
H-3	Metal.	Unknown.	T 2.8540000000000	CI	1976	1976	N			See continuation page.
C-14	Metal.	Unknown.	T .38280000000000	CI	1976	1976	N			See continuation page.
Fe-55	Metal.	Unknown.	T 66.120000000000	CI	1976	1976	N			See continuation page.

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Ni-59	Metal.	Unknown.	T .01984000000000	CI	1976	1976	N			See continuation page.
Ni-63	Metal.	Unknown.	T 11.140000000000	CI	1976	1976	N			See continuation page.
Co-60	Metal.	Unknown.	T 23.320000000000	CI	1976	1976	N			See continuation page.
Sr-90	Metal.	Unknown.	T .03202000000000	CI	1976	1976	N			See continuation page.
Tc-99	Metal.	Unknown.	T .00626400000000	CI	1976	1976	N			See continuation page.
I-129	Metal.	Unknown.	T .00000162900000	CI	1976	1976	N			See continuation page.
Cs-137	Metal.	Unknown.	T 6.9600000000000	CI	1976	1976	N			See continuation page.
Ce-144	Metal.	Unknown.	T .16360000000000	CI	1976	1976	N			See continuation page.
Eu-154	Metal.	Unknown.	T .00010090000000	CI	1976	1976	N			See continuation page.

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Eu-155	Metal.	Unknown.	T .32710000000000	CI	1976	1976	N			See continuation page.
U-234	Metal.	Unknown.	T .00007308000000	CI	1976	1976	N			See continuation page.
U-235	Metal.	Unknown.	T .00000156600000	CI	1976	1976	N			See continuation page.
U-236	Metal.	Unknown.	T .00002784000000	CI	1976	1976	N			See continuation page.
Np-237	Metal.	Unknown.	T .00004524000000	CI	1976	1976	N			See continuation page.
Pu-238	Metal.	Unknown.	T .00187900000000	CI	1976	1976	N			See continuation page.
Pu-239	Metal.	Unknown.	T .00187900000000	CI	1976	1976	N			See continuation page.
Pu-240	Metal.	Unknown.	T .00019840000000	CI	1976	1976	N			See continuation page.
Pu-241	Metal.	Unknown.	T .20530000000000	CI	1976	1976	N			See continuation page.

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Am-241	Metal.	Unknown.	T .00093960000000	CI	1976	1976	N			See continuation page.
Cm-242	Metal.	Unknown.	T .00093960000000	CI	1976	1976	N			See continuation page.
Cm-244	Metal.	Unknown.	T .00087000000000	CI	1976	1976	N			See continuation page.
Co-60	Metal.	Unknown.	T 22.500000000000	CI	1976	1976	N	-20%	+20%	See comment below.
Cr-51	Metal.	Unknown.	T 202.50000000000	CI	1976	1976	N	-20%	+20%	See comment below.
Fe-59	Metal.	Unknown.	T 25.000000000000	CI	1976	1976	N	-20%	+20%	See comment below.
U-235	Metal.	Unknown.	T .00000356660000	CI	1976	1976	N	-20%	+20%	See comment below.
U-238	Metal.	Unknown.	T .00000061170000	CI	1976	1976	N	-20%	+20%	See comment below.
H-3	Metal.	Unknown.	T 3.0050000000000	CI	1977	1977	N			See continuation page.

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C-14	Metal.	Unknown.	T .40310000000000	CI	1977	1977	N			See continuation page.
Fe-55	Metal.	Unknown.	T 69.620000000000	CI	1977	1977	N			See continuation page.
Ni-59	Metal.	Unknown.	T .02089000000000	CI	1977	1977	N			See continuation page.
Ni-63	Metal.	Unknown.	T 11.730000000000	CI	1977	1977	N			See continuation page.
Co-60	Metal.	Unknown.	T 24.550000000000	CI	1977	1977	N			See continuation page.
Sr-90	Metal.	Unknown.	T .03371000000000	CI	1977	1977	N			See continuation page.
Tc-99	Metal.	Unknown.	T .00659600000000	CI	1977	1977	N			See continuation page.
I-129	Metal.	Unknown.	T .00000171450000	CI	1977	1977	N			See continuation page.
Cs-137	Metal.	Unknown.	T 7.3280000000000	CI	1977	1977	N			See continuation page.

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Ce-144	Metal.	Unknown.	T .17220000000000	CI	1977	1977	N			See continuation page.
Eu-154	Metal.	Unknown.	T .00010630000000	CI	1977	1977	N			See continuation page.
Eu-155	Metal.	Unknown.	T .34440000000000	CI	1977	1977	N			See continuation page.
U-234	Metal.	Unknown.	T .00007695000000	CI	1977	1977	N			See continuation page.
U-235	Metal.	Unknown.	T .00000164900000	CI	1977	1977	N			See continuation page.
U-236	Metal.	Unknown.	T .00002931000000	CI	1977	1977	N			See continuation page.
Np-237	Metal.	Unknown.	T .00004764000000	CI	1977	1977	N			See continuation page.
Pu-238	Metal.	Unknown.	T .00197900000000	CI	1977	1977	N			See continuation page.
Pu-239	Metal.	Unknown.	T .00197900000000	CI	1977	1977	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-240	Metal.	Unknown.	T .00020890000000	CI	1977	1977	N			See continuation page.
Pu-241	Metal.	Unknown.	T .21620000000000	CI	1977	1977	N			See continuation page.
Am-241	Metal.	Unknown.	T .00098930000000	CI	1977	1977	N			See continuation page.
Cm-242	Metal.	Unknown.	T .00098930000000	CI	1977	1977	N			See continuation page.
Cm-244	Metal.	Unknown.	T .00091610000000	CI	1977	1977	N			See continuation page.
Th-232	Metal.	Unknown.	T .00000016130000	CI	1977	1977	N	-20%	+20%	See comment below.
U-235	Metal.	Unknown.	T .00022066000000	CI	1977	1977	N	-20%	+20%	See comment below.
U-238	Metal.	Unknown.	T .00073204000000	CI	1977	1977	N	-20%	+20%	See comment below.
U-235	Metal.	Unknown.	T .00010911000000	CI	1978	1978	N	-20%	+20%	See comment below.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-238	Metal.	Unknown.	T .00039190000000	CI	1978	1978	N	-20%	+20%	See comment below.
H-3	Metal.	Unknown.	T .00759800000000	CI	1983	1983	N			See continuation page.
C-14	Metal.	Unknown.	T .00101900000000	CI	1983	1983	N			See continuation page.
Fe-55	Metal.	Unknown.	T .17610000000000	CI	1983	1983	N			See continuation page.
Ni-59	Metal.	Unknown.	T .00005282000000	CI	1983	1983	N			See continuation page.
Ni-63	Metal.	Unknown.	T .02965000000000	CI	1983	1983	N			See continuation page.
Co-60	Metal.	Unknown.	T .06208000000000	CI	1983	1983	N			See continuation page.
Sr-90	Metal.	Unknown.	T .00008525000000	CI	1983	1983	N			See continuation page.
Tc-99	Metal.	Unknown.	T .00001668000000	CI	1983	1983	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
I-129	Metal.	Unknown.	T .00000000434000	CI	1983	1983	N			See continuation page.
Cs-137	Metal.	Unknown.	T .01853000000000	CI	1983	1983	N			See continuation page.
Ce-144	Metal.	Unknown.	T .00043550000000	CI	1983	1983	N			See continuation page.
Eu-154	Metal.	Unknown.	T .00000026870000	CI	1983	1983	N			See continuation page.
Eu-155	Metal.	Unknown.	T .00087100000000	CI	1983	1983	N			See continuation page.
U-234	Metal.	Unknown.	T .00000019460000	CI	1983	1983	N			See continuation page.
U-235	Metal.	Unknown.	T .00000000420000	CI	1983	1983	N			See continuation page.
U-236	Metal.	Unknown.	T .00000007410000	CI	1983	1983	N			See continuation page.
Np-237	Metal.	Unknown.	T .00000012050000	CI	1983	1983	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-238	Metal.	Unknown.	T .00000500400000	CI	1983	1983	N			See continuation page.
Pu-239	Metal.	Unknown.	T .00000500400000	CI	1983	1983	N			See continuation page.
Pu-240	Metal.	Unknown.	T .00000052820000	CI	1983	1983	N			See continuation page.
Pu-241	Metal.	Unknown.	T .00054670000000	CI	1983	1983	N			See continuation page.
Am-241	Metal.	Unknown.	T .00000250200000	CI	1983	1983	N			See continuation page.
Cm-242	Metal.	Unknown.	T .00000250200000	CI	1983	1983	N			See continuation page.
Cm-244	Metal.	Unknown.	T .00000231700000	CI	1983	1983	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

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1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [ ] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)
Interviewees wish to remain anonymous.

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
A portion of, or all of the measurements, were assumed to be taken using a G-M detector which only measures gamma emitters; beta emitters have been added to the RWMIS activity based on scaling factors. Therefore, the total activity will be greater than that in RWMIS.

7. Major unknowns in inventories of contaminants:
MAP and MFP and unidentified beta and gamma radionuclides were unknown.

8. Key assumptions used to deal with the unknowns:
MAP radionuclides were chosen based on their cross sections and half lives. MFP radionuclides were chosen based on their fissionable products. Unidentified beta radionuclides were chosen based on their half lives and MAP and MFP radionuclides. On part D, no G-M counter correction is needed to entries for which upper and lower bounds are given. The presence of such bounds indicates that the estimate was based on weight, laboratory analysis, spectrometry, and/or mathematical calculations. The G-M counter correction is needed for entries for which no bounds are given, because such estimates were originally made using the G-M counter method.

Continuation of Part D Column or Question Number or Title Uncertainty basis.

Because of the time spread, 1960-1977, the method of analysis is not known. Radionuclide information was obtained from a variety of methods such as a smear, a Geiger-Mueller counter, NaI and Germanium detectors. Therefore, the true uncertainty is not known.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 204

1. Preparer: Amaro, C.

2. Date prepared: 08/30/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 603
(building number - use code from attached list)

5. Number of waste stream from this facility:
16H

6. Waste stream:
Paper.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1960 Ending year 1977

9. Waste stream volume:
Amount 1056.2019 Units Cubic feet.
Check box: [ ] annual or [X] total over all years
Check box: [X] container volume or [ ] waste volume

10. Comments (specify number of pertinent question):
4. Also 632, 642, 653, 670, and 661.

1. General physical form (see attached list)
Combustibles (paper, cloth, wood, etc.).
[ ] other (specify)

2. Details on physical form(particularly confinement related)
Paper.

3. Chemical form:
Unknown.

4. Inner packaging: [ ] plastic bag [X] plastic liner
[ ] metal liner [ ] none [ ] other (specify)

5. Waste container type (see attached list)
Cardboard box*.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
4. Because various container types were used it is assumed they were lined with plastic.
5. BLM, "Other", and BXM. "Other" cannot be defined by the preparer.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
None.										

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.
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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Particulate.	Unknown.	T 1.4690000000000	CI	1960	1960	N			See continuation page.
C-14	Particulate.	Unknown.	T .19700000000000	CI	1960	1960	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 34.030000000000	CI	1960	1960	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .01021000000000	CI	1960	1960	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 5.7310000000000	CI	1960	1960	N			See continuation page.
Co-60	Particulate.	Unknown.	T 12.000000000000	CI	1960	1960	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .01648000000000	CI	1960	1960	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00322400000000	CI	1960	1960	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000083817000	CI	1960	1960	N			See continuation page.

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Cs-137	Particulate.	Unknown.	T 3.5820000000000	CI	1960	1960	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .08417000000000	CI	1960	1960	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00005194000000	CI	1960	1960	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .16830000000000	CI	1960	1960	N			See continuation page.
U-234	Particulate.	Unknown.	T .00003761000000	CI	1960	1960	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000080590000	CI	1960	1960	N			See continuation page.
U-236	Particulate.	Unknown.	T .00001433000000	CI	1960	1960	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00002328000000	CI	1960	1960	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00096710000000	CI	1960	1960	N			See continuation page.

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Pu-239	Particulate.	Unknown.	T .00096710000000	CI	1960	1960	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00010210000000	CI	1960	1960	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .10570000000000	CI	1960	1960	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00048360000000	CI	1960	1960	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00048360000000	CI	1960	1960	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00044770000000	CI	1960	1960	N			See continuation page.
H-3	Particulate.	Unknown.	T 25.090000000000	CI	1961	1961	N			See continuation page.
C-14	Particulate.	Unknown.	T 3.3660000000000	CI	1961	1961	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 581.40000000000	CI	1961	1961	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samp les?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Ni-59	Particulate.	Unknown.	T .17440000000000	CI	1961	1961	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 97.920000000000	CI	1961	1961	N			See continuation page.
Co-60	Particulate.	Unknown.	T 205.00000000000	CI	1961	1961	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .28150000000000	CI	1961	1961	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .05508000000000	CI	1961	1961	N			See continuation page.
I-129	Particulate.	Unknown.	T .00001431900000	CI	1961	1961	N			See continuation page.
Cs-137	Particulate.	Unknown.	T 61.200000000000	CI	1961	1961	N			See continuation page.
Ce-144	Particulate.	Unknown.	T 1.4380000000000	CI	1961	1961	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00088740000000	CI	1961	1961	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-155	Particulate.	Unknown.	T 2.8760000000000	CI	1961	1961	N			See continuation page.
U-234	Particulate.	Unknown.	T .00064260000000	CI	1961	1961	N			See continuation page.
U-235	Particulate.	Unknown.	T .00001377000000	CI	1961	1961	N			See continuation page.
U-236	Particulate.	Unknown.	T .00024480000000	CI	1961	1961	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00039780000000	CI	1961	1961	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .01652000000000	CI	1961	1961	N			See continuatioh page.
Pu-239	Particulate.	Unknown.	T .01652000000000	CI	1961	1961	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00174400000000	CI	1961	1961	N			See continuation page.
Pu-241	Particulate.	Unknown.	T 1.8050000000000	CI	1961	1961	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Am-241	Particulate.	Unknown.	T .00826200000000	CI	1961	1961	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00826200000000	CI	1961	1961	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00765000000000	CI	1961	1961	N			See continuation page.
H-3	Particulate.	Unknown.	T .97420000000000	CI	1962	1962	N			See continuation page.
C-14	Particulate.	Unknown.	T .13070000000000	CI	1962	1962	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 22.570000000000	CI	1962	1962	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00677200000000	CI	1962	1962	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 3.8020000000000	CI	1962	1962	N			See continuation page.
Co-60	Particulate.	Unknown.	T 7.9600000000000	CI	1962	1962	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Sr-90	Particulate.	Unknown.	T .01093000000000	CI	1962	1962	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00213800000000	CI	1962	1962	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000055602000	CI	1962	1962	N			See continuation page.
Cs-137	Particulate.	Unknown.	T 2.3760000000000	CI	1962	1962	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .05584000000000	CI	1962	1962	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00003445000000	CI	1962	1962	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .11170000000000	CI	1962	1962	N			See continuation page.
U-234	Particulate.	Unknown.	T .00002495000000	CI	1962	1962	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000053460000	CI	1962	1962	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-236	Particulate.	Unknown.	T .00000950400000	CI	1962	1962	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00001544000000	CI	1962	1962	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00064150000000	CI	1962	1962	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00064150000000	CI	1962	1962	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00006772000000	CI	1962	1962	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .07009000000000	CI	1962	1962	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00032080000000	CI	1962	1962	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00032080000000	CI	1962	1962	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00029700000000	CI	1962	1962	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Particulate.	Unknown.	T 1.1750000000000	CI	1963	1963	N			See continuation page.
C-14	Particulate.	Unknown.	T .15770000000000	CI	1963	1963	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 27.230000000000	CI	1963	1963	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00817000000000	CI	1963	1963	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 4.5860000000000	CI	1963	1963	N			See continuation page.
Co-60	Particulate.	Unknown.	T 9.6030000000000	CI	1963	1963	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .01319000000000	CI	1963	1963	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00258000000000	CI	1963	1963	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000067077000	CI	1963	1963	N			See continuation page.

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Cs-137	Particulate.	Unknown.	T 2.8670000000000	CI	1963	1963	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .06736000000000	CI	1963	1963	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00004156000000	CI	1963	1963	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .13470000000000	CI	1963	1963	N			See continuation page.
U-234	Particulate.	Unknown.	T .00003010000000	CI	1963	1963	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000064500000	CI	1963	1963	N			See continuation page.
U-236	Particulate.	Unknown.	T .00001147000000	CI	1963	1963	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00001863000000	CI	1963	1963	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00077400000000	CI	1963	1963	N			See continuation page.

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Pu-239	Particulate.	Unknown.	T .00077400000000	CI	1963	1963	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00008170000000	CI	1963	1963	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .08456000000000	CI	1963	1963	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00038700000000	CI	1963	1963	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00038700000000	CI	1963	1963	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00035830000000	CI	1963	1963	N			See continuation page.
H-3	Particulate.	Unknown.	T .83870000000000	CI	1964	1964	N			See continuation page.
C-14	Particulate.	Unknown.	T .11250000000000	CI	1964	1964	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 19.430000000000	CI	1964	1964	N			See continuation page.

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Ni-59	Particulate.	Unknown.	T .00583000000000	CI	1964	1964	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 3.2730000000000	CI	1964	1964	N			See continuation page.
Co-60	Particulate.	Unknown.	T 6.8520000000000	CI	1964	1964	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .00940900000000	CI	1964	1964	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00184100000000	CI	1964	1964	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000047862000	CI	1964	1964	N			See continuation page.
Cs-137	Particulate.	Unknown.	T 2.0460000000000	CI	1964	1964	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .04807000000000	CI	1964	1964	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00002966000000	CI	1964	1964	N			See continuation page.

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Eu-155	Particulate.	Unknown.	T .09614000000000	CI	1964	1964	N			See continuation page.
U-234	Particulate.	Unknown.	T .00002148000000	CI	1964	1964	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000046020000	CI	1964	1964	N			See continuation page.
U-236	Particulate.	Unknown.	T .00000818200000	CI	1964	1964	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .06034000000000	CI	1964	1964	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00000244000000	CI	1964	1964	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00948600000000	CI	1964	1964	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00004080000000	CI	1964	1964	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00002448000000	CI	1964	1964	N			See continuation page.

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Pu-242	Particulate.	Unknown.	T .00000025500000	CI	1964	1964	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00002856000000	CI	1964	1964	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00016320000000	CI	1964	1964	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00044880000000	CI	1964	1964	N			See continuation page.
Ta-182	Particulate.	Unknown.	T .50000000000000	CI	1964	1964	N	-20%	+20%	See comment below.
U-235	Particulate.	Unknown.	T .50000000000000	CI	1964	1964	N	-20%	+20%	See comment below.
H-3	Particulate.	Unknown.	T 60.960000000000	CI	1965	1965	N			See continuation page.
C-14	Particulate.	Unknown.	T 8.1770000000000	CI	1965	1965	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 1412.0000000000	CI	1965	1965	N			See continuation page.

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Ni-59	Particulate.	Unknown.	T .42370000000000	CI	1965	1965	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 237.90000000000	CI	1965	1965	N			See continuation page.
Co-60	Particulate.	Unknown.	T 49800.000000000	CI	1965	1965	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .68390000000000	CI	1965	1965	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .13380000000000	CI	1965	1965	N			See continuation page.
I-129	Particulate.	Unknown.	T .03478500000000	CI	1965	1965	N			See continuation page.
Cs-137	Particulate.	Unknown.	T 148.70000000000	CI	1965	1965	N			See continuation page.
Ce-144	Particulate.	Unknown.	T 3.4940000000000	CI	1965	1965	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00215600000000	CI	1965	1965	N			See continuation page.

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Eu-155	Particulate.	Unknown.	T 6.9880000000000	CI	1965	1965	N			See continuation page.
U-234	Particulate.	Unknown.	T .00156100000000	CI	1965	1965	N			See continuation page.
U-235	Particulate.	Unknown.	T .00003345000000	CI	1965	1965	N			See continuation page.
U-236	Particulate.	Unknown.	T .00059700000000	CI	1965	1965	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00096640000000	CI	1965	1965	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .04014000000000	CI	1965	1965	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .04014000000000	CI	1965	1965	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00423700000000	CI	1965	1965	N			See continuation page.
Pu-241	Particulate.	Unknown.	T 4.3860000000000	CI	1965	1965	N			See continuation page.

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Am-241	Particulate.	Unknown.	T .02007000000000	CI	1965	1965	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .02007000000000	CI	1965	1965	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .01858000000000	CI	1965	1965	N			See continuation page.
H-3	Particulate.	Unknown.	T .78050000000000	CI	1966	1966	N			See continuation page.
C-14	Particulate.	Unknown.	T .10470000000000	CI	1966	1966	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 18.080000000000	CI	1966	1966	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00542500000000	CI	1966	1966	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 3.0460000000000	CI	1966	1966	N			See continuation page.
Co-60	Particulate.	Unknown.	T 6.3770000000000	CI	1966	1966	N			See continuation page.

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Sr-90	Particulate.	Unknown.	T .00875700000000	CI	1966	1966	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00171300000000	CI	1966	1966	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000044550000	CI	1966	1966	N			See continuation page.
Cs-137	Particulate.	Unknown.	T 1.9040000000000	CI	1966	1966	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .04474000000000	CI	1966	1966	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00002760000000	CI	1966	1966	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .08947000000000	CI	1966	1966	N			See continuation page.
U-234	Particulate.	Unknown.	T .00001999000000	CI	1966	1966	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000042830000	CI	1966	1966	N			See continuation page.

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U-236	Particulate.	Unknown.	T .00000761500000	CI	1966	1966	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00001237000000	CI	1966	1966	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00051400000000	CI	1966	1966	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00051400000000	CI	1966	1966	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00005425000000	CI	1966	1966	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .05616000000000	CI	1966	1966	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00025700000000	CI	1966	1966	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00025700000000	CI	1966	1966	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00023800000000	CI	1966	1966	N			See continuation page.

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H-3	Particulate.	Unknown.	T 15.600000000000	CI	1967	1967	N			See continuation page.
C-14	Particulate.	Unknown.	T 2.0930000000000	CI	1967	1967	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 361.40000000000	CI	1967	1967	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .10840000000000	CI	1967	1967	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 60.870000000000	CI	1967	1967	N			See continuation page.
Co-60	Particulate.	Unknown.	T 127.50000000000	CI	1967	1967	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .17500000000000	CI	1967	1967	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .03424000000000	CI	1967	1967	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000890280000	CI	1967	1967	N			See continuation page.

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Cs-137	Particulate.	Unknown.	T 38.050000000000	CI	1967	1967	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .89410000000000	CI	1967	1967	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00055170000000	CI	1967	1967	N			See continuation page.
Eu-155	Particulate.	Unknown.	T 1.7880000000000	CI	1967	1967	N			See continuation page.
U-234	Particulate.	Unknown.	T .00039950000000	CI	1967	1967	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000856000000	CI	1967	1967	N			See continuation page.
U-236	Particulate.	Unknown.	T .00015220000000	CI	1967	1967	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00024730000000	CI	1967	1967	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .01027000000000	CI	1967	1967	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Particulate.	Unknown.	T .01027000000000	CI	1967	1967	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00108400000000	CI	1967	1967	N			See continuation page.
Pu-241	Particulate.	Unknown.	T 1.1220000000000	CI	1967	1967	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00513600000000	CI	1967	1967	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00513600000000	CI	1967	1967	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00475600000000	CI	1967	1967	N			See continuation page.
H-3	Particulate.	Unknown.	T .33070000000000	CI	1968	1968	N			See continuation page.
C-14	Particulate.	Unknown.	T .04437000000000	CI	1968	1968	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 7.6640000000000	CI	1968	1968	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Ni-59	Particulate.	Unknown.	T .00229900000000	CI	1968	1968	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 1.2910000000000	CI	1968	1968	N			See continuation page.
Co-60	Particulate.	Unknown.	T 2.7020000000000	CI	1968	1968	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .00371100000000	CI	1968	1968	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00072600000000	CI	1968	1968	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000018873000	CI	1968	1968	N			See continuation page.
Cs-137	Particulate.	Unknown.	T .80670000000000	CI	1968	1968	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .01896000000000	CI	1968	1968	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00001170000000	CI	1968	1968	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-155	Particulate.	Unknown.	T .03792000000000	CI	1968	1968	N			See continuation page.
U-234	Particulate.	Unknown.	T .00000847000000	CI	1968	1968	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000018150000	CI	1968	1968	N			See continuation page.
U-236	Particulate.	Unknown.	T .00000322700000	CI	1968	1968	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00000524400000	CI	1968	1968	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00021780000000	CI	1968	1968	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00021780000000	CI	1968	1968	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00002299000000	CI	1968	1968	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .02380000000000	CI	1968	1968	N			See continuation page.

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Am-241	Particulate.	Unknown.	T .00010890000000	CI	1968	1968	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00010890000000	CI	1968	1968	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00010080000000	CI	1968	1968	N			See continuation page.
U-235	Particulate.	Unknown.	T .00001378000000	CI	1968	1968	N	-20%	+20%	See comment below.
H-3	Particulate.	Unknown.	T 4798.0000000000	CI	1969	1969	N			See continuation page.
C-14	Particulate.	Unknown.	T 643.60000000000	CI	1969	1969	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 111200.00000000	CI	1969	1969	N			See continuation page.
Ni-59	Particulate.	Unknown.	T 33.350000000000	CI	1969	1969	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 18720.000000000	CI	1969	1969	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Co-60	Particulate.	Unknown.	T 39200.000000000	CI	1969	1969	N			See continuation page.
Sr-90	Particulate.	Unknown.	T 53.830000000000	CI	1969	1969	N			See continuation page.
Tc-99	Particulate.	Unknown.	T 10.530000000000	CI	1969	1969	N			See continuation page.
I-129	Particulate.	Unknown.	T .00273780000000	CI	1969	1969	N			See continuation page.
Cs-137	Particulate.	Unknown.	T 11700.000000000	CI	1969	1969	N			See continuation page.
Ce-144	Particulate.	Unknown.	T 275.00000000000	CI	1969	1969	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .16970000000000	CI	1969	1969	N			See continuation page.
Eu-155	Particulate.	Unknown.	T 550.00000000000	CI	1969	1969	N			See continuation page.
U-234	Particulate.	Unknown.	T .12290000000000	CI	1969	1969	N			See continuation page.

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U-235	Particulate.	Unknown.	T .00263300000000	CI	1969	1969	N			See continuation page.
U-236	Particulate.	Unknown.	T .04680000000000	CI	1969	1969	N			See continuation page.
Np-237	Particulate.	Unknown.	T .07606000000000	CI	1969	1969	N			See continuation page.
Pu-238	Particulate.	Unknown.	T 3.1590000000000	CI	1969	1969	N			See continuation page.
Pu-239	Particulate.	Unknown.	T 3.1590000000000	CI	1969	1969	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .33350000000000	CI	1969	1969	N			See continuation page.
Pu-241	Particulate.	Unknown.	T 345.20000000000	CI	1969	1969	N			See continuation page.
Am-241	Particulate.	Unknown.	T 1.5800000000000	CI	1969	1969	N			See continuation page.
Cm-242	Particulate.	Unknown.	T 1.5800000000000	CI	1969	1969	N			See continuation page.

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Cm-244	Particulate.	Unknown.	T 1.4630000000000	CI	1969	1969	N			See continuation page.
U-235	Particulate.	Unknown.	T .00014623000000	CI	1969	1969	N	-20%	+20%	See comment below.
U-235	Particulate.	Unknown.	T .28000000000000	CI	1970	1970	N	-20%	+20%	See comment below.
H-3	Particulate.	Unknown.	T .06088000000000	CI	1971	1971	N			See continuation page.
C-14	Particulate.	Unknown.	T .00816700000000	CI	1971	1971	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 1.4110000000000	CI	1971	1971	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00042320000000	CI	1971	1971	N			See continuation page.
Ni-63	Particulate.	Unknown.	T .23760000000000	CI	1971	1971	N			See continuation page.
Co-60	Particulate.	Unknown.	T .49740000000000	CI	1971	1971	N			See continuation page.

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Sr-90	Particulate.	Unknown.	T .00068310000000	CI	1971	1971	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00013360000000	CI	1971	1971	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000003475000	CI	1971	1971	N			See continuation page.
Cs-137	Particulate.	Unknown.	T .14850000000000	CI	1971	1971	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .00349000000000	CI	1971	1971	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00000215300000	CI	1971	1971	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .00697900000000	CI	1971	1971	N			See continuation page.
U-234	Particulate.	Unknown.	T .00000155900000	CI	1971	1971	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000003340000	CI	1971	1971	N			See continuation page.

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U-236	Particulate.	Unknown.	T .00000059400000	CI	1971	1971	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00000096520000	CI	1971	1971	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00004009000000	CI	1971	1971	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00004009000000	CI	1971	1971	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00000423200000	CI	1971	1971	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .00438000000000	CI	1971	1971	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00002005000000	CI	1971	1971	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00002005000000	CI	1971	1971	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00001856000000	CI	1971	1971	N			See continuation page.

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H-3	Particulate.	Unknown.	T .00760400000000	CI	1973	1973	N			See continuation page.
C-14	Particulate.	Unknown.	T .00102000000000	CI	1973	1973	N			See continuation page.
Fe-55	Particulate.	Unknown.	T .17620000000000	CI	1973	1973	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00005286000000	CI	1973	1973	N			See continuation page.
Ni-63	Particulate.	Unknown.	T .02967000000000	CI	1973	1973	N			See continuation page.
Co-60	Particulate.	Unknown.	T .06213000000000	CI	1973	1973	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .00008531000000	CI	1973	1973	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00001669000000	CI	1973	1973	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000000434000	CI	1973	1973	N			See continuation page.

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Cs-137	Particulate.	Unknown.	T .01855000000000	CI	1973	1973	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .00043580000000	CI	1973	1973	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00000026890000	CI	1973	1973	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .00087170000000	CI	1973	1973	N			See continuation page.
U-234	Particulate.	Unknown.	T .00000019470000	CI	1973	1973	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000000420000	CI	1973	1973	N			See continuation page.
U-236	Particulate.	Unknown.	T .00000007420000	CI	1973	1973	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00000012050000	CI	1973	1973	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00000500700000	CI	1973	1973	N			See continuation page.

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Pu-239	Particulate.	Unknown.	T .00000500700000	CI	1973	1973	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00000052860000	CI	1973	1973	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .00054170000000	CI	1973	1973	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00000250400000	CI	1973	1973	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00000250400000	CI	1973	1973	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00000231800000	CI	1973	1973	N			See continuation page.
Co-60	Particulate.	Unknown.	T 155.94000000000	CI	1973	1973	N	-20%	+20%	See comment below.
Cr-51	Particulate.	Unknown.	T 1402.8900000000	CI	1973	1973	N	-20%	+20%	See comment below.
Fe-59	Particulate.	Unknown.	T 172.34000000000	CI	1973	1973	N	-20%	+20%	See comment below.

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Mn-54	Particulate.	Unknown.	T .05000000000000	CI	1973	1973	N	-20%	+20%	See comment below.
Ni-59	Particulate.	Unknown.	T .20000000000000	CI	1973	1973	N	-20%	+20%	See continuation page.
Co-60	Particulate.	Unknown.	T 91.260000000000	CI	1974	1974	N	-20%	+20%	See comment below.
Cr-51	Particulate.	Unknown.	T 116.64000000000	CI	1974	1974	N	-20%	+20%	See comment below.
Fe-59	Particulate.	Unknown.	T 14.400000000000	CI	1974	1974	N	-20%	+20%	See comment below.
Mn-54	Particulate.	Unknown.	T 31.900000000000	CI	1974	1974	N	-20%	+20%	See comment below.
Zn-65	Particulate.	Unknown.	T 179.80000000000	CI	1974	1974	N	-20%	+20%	See comment below.
H-3	Particulate.	Unknown.	T .03404000000000	CI	1975	1975	N			See continuation page.
C-14	Particulate.	Unknown.	T .00456600000000	CI	1975	1975	N			See continuation page.

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Fe-55	Particulate.	Unknown.	T .78870000000000	CI	1975	1975	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00023660000000	CI	1975	1975	N			See continuation page.
Ni-63	Particulate.	Unknown.	T .13280000000000	CI	1975	1975	N			See continuation page.
Co-60	Particulate.	Unknown.	T .27810000000000	CI	1975	1975	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .00038190000000	CI	1975	1975	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00007472000000	CI	1975	1975	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000001943000	CI	1975	1975	N			See continuation page.
Cs-137	Particulate.	Unknown.	T .08302000000000	CI	1975	1975	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .00195100000000	CI	1975	1975	N			See continuation page.

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The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-154	Particulate.	Unknown.	T .00000120400000	CI	1975	1975	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .00390200000000	CI	1975	1975	N			See continuation page.
U-234	Particulate.	Unknown.	T .00000087180000	CI	1975	1975	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000001870000	CI	1975	1975	N			See continuation page.
U-236	Particulate.	Unknown.	T .00000033210000	CI	1975	1975	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00000053970000	CI	1975	1975	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00002242000000	CI	1975	1975	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00002242000000	CI	1975	1975	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00000236600000	CI	1975	1975	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-241	Particulate.	Unknown.	T .00244900000000	CI	1975	1975	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00001121000000	CI	1975	1975	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00001121000000	CI	1975	1975	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00001038000000	CI	1975	1975	N			See continuation page.
Co-60	Particulate.	Unknown.	T 19.440000000000	CI	1975	1975	N	-20%	+20%	See comment below.
Cr-51	Particulate.	Unknown.	T 174.96000000000	CI	1975	1975	N	-20%	+20%	See comment below.
Fe-59	Particulate.	Unknown.	T 21.600000000000	CI	1975	1975	N	-20%	+20%	See comment below.
H-3	Particulate.	Unknown.	T 2.8280000000000	CI	1976	1976	N			See continuation page.
C-14	Particulate.	Unknown.	T .37940000000000	CI	1976	1976	N			See continuation page.

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Additional information or explanations (indicate pertinent contaminant)

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Fe-55	Particulate.	Unknown.	T 65.530000000000	CI	1976	1976	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .01966000000000	CI	1976	1976	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 11.040000000000	CI	1976	1976	N			See continuation page.
Co-60	Particulate.	Unknown.	T 23.110000000000	CI	1976	1976	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .03173000000000	CI	1976	1976	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00620900000000	CI	1976	1976	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000161460000	CI	1976	1976	N			See continuation page.
Cs-137	Particulate.	Unknown.	T 6.8980000000000	CI	1976	1976	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .16210000000000	CI	1976	1976	N			See continuation page.

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Additional information or explanations (indicate pertinent contaminant)

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-154	Particulate.	Unknown.	T .00010000000000	CI	1976	1976	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .32420000000000	CI	1976	1976	N			See continuation page.
U-234	Particulate.	Unknown.	T .00007243000000	CI	1976	1976	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000155200000	CI	1976	1976	N			See continuation page.
U-236	Particulate.	Unknown.	T .00002759000000	CI	1976	1976	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00004484000000	CI	1976	1976	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00186300000000	CI	1976	1976	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00186300000000	CI	1976	1976	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00019660000000	CI	1976	1976	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-241	Particulate.	Unknown.	T .20350000000000	CI	1976	1976	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00093130000000	CI	1976	1976	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00093130000000	CI	1976	1976	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00086230000000	CI	1976	1976	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000962990000	CI	1976	1976	N	-20%	+20%	See comment below.
U-238	Particulate.	Unknown.	T .00006443500000	CI	1976	1976	N	-20%	+20%	See comment below.
H-3	Particulate.	Unknown.	T 8.8160000000000	CI	1977	1977	N			See continuation page.
C-14	Particulate.	Unknown.	T 1.1830000000000	CI	1977	1977	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 204.30000000000	CI	1977	1977	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Ni-59	Particulate.	Unknown.	T .06128000000000	CI	1977	1977	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 34.400000000000	CI	1977	1977	N			See continuation page.
Co-60	Particulate.	Unknown.	T 72.030000000000	CI	1977	1977	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .09891000000000	CI	1977	1977	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .01935000000000	CI	1977	1977	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000503100000	CI	1977	1977	N			See continuation page.
Cs-137	Particulate.	Unknown.	T 21.500000000000	CI	1977	1977	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .50530000000000	CI	1977	1977	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00031180000000	CI	1977	1977	N			See continuation page.

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Additional information or explanations (indicate pertinent contaminant)
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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-155	Particulate.	Unknown.	T 1.0110000000000	CI	1977	1977	N			See continuation page.
U-234	Particulate.	Unknown.	T .00022580000000	CI	1977	1977	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000483800000	CI	1977	1977	N			See continuation page.
U-236	Particulate.	Unknown.	T .00008601000000	CI	1977	1977	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00013980000000	CI	1977	1977	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00580500000000	CI	1977	1977	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00580500000000	CI	1977	1977	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00061280000000	CI	1977	1977	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .63430000000000	CI	1977	1977	N			See continuation page.

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Additional information or explanations (indicate pertinent contaminant)

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Am-241	Particulate.	Unknown.	T .00290300000000	CI	1977	1977	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00290300000000	CI	1977	1977	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00268800000000	CI	1977	1977	N			See continuation page.

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Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [X] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)
Interviewees wish to remain anonymous.

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
A portion of, or all of the measurements, were assumed to be taken using a G-M detector which only measures gamma emitters; beta emitters have been added to the RWMIS activity based on scaling factors. Therefore, the total activity will be greater than that in RWMIS.

7. Major unknowns in inventories of contaminants:
MAP, MFP, and unidentified beta and gamma radionuclides are unknown.

8. Key assumptions used to deal with the unknowns:
MAP radionuclides were chosen based on their cross sections and half lives. MFP radionuclides were chosen based on their fissionable products. Unidentified beta are MAP and MFP radionuclides. The gamma radionuclide is the only appreciable gamma for this area because of the reactors. On part D, no G-M counter correction is needed to entries for which upper and lower bounds are given. The presence of such bounds indicates that the estimate was based on weight, laboratory analysis, spectrometry, and/or mathematical calculations. The G-M counter correction is needed for entries for which no bounds are given, because such estimates were originally made using the G-M counter method.

Continuation of Part D Column or Question Number or Title Uncertainty basis.

Because of the time spread, 1960-1977, the method of analysis is not known. Radionuclide information was obtained from a variety of methods such as a smear, a Geiger-Mueller counter, NaI and Germanium detectors. Therefore, the true uncertainty is not known.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 203

1. Preparer: Amaro, C.

2. Date prepared: 08/30/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 603
(building number - use code from attached list)

5. Number of waste stream from this facility:
17H

6. Waste stream:
Dirt.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1960 Ending year 1973

9. Waste stream volume:
Amount 152.7256 Units Cubic feet.
Check box: [ ] annual or [X] total over all years
Check box: [X] container volume or [ ] waste volume

10. Comments (specify number of pertinent question):
4. Also 632, 642, 647, 670, 662, and 657.

1. General physical form (see attached list)
Soil.
[ ] other (specify)

2. Details on physical form(particularly confinement related)
Dirt.

3. Chemical form:
Unknown.

4. Inner packaging: [ ] plastic bag [ ] plastic liner
[ ] metal liner [ ] none [ ] other (specify)

5. Waste container type (see attached list)
Wooden box*.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
5. BLM, BXC, and "Other". "Other" cannot be defined by the preparer.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
None.										

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Particulate.	Unknown.	T .01788000000000	CI	1960	1960	N			See continuation page.
C-14	Particulate.	Unknown.	T .00239800000000	CI	1960	1960	N			See continuation page.
Fe-55	Particulate.	Unknown.	T .41420000000000	CI	1960	1960	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00012430000000	CI	1960	1960	N			See continuation page.
Ni-63	Particulate.	Unknown.	T .06976000000000	CI	1960	1960	N			See continuation page.
Co-60	Particulate.	Unknown.	T .14610000000000	CI	1960	1960	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .00020060000000	CI	1960	1960	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00003924000000	CI	1960	1960	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000001021000	CI	1960	1960	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

Additional radionuclides (e.g. U-234, U-235, U-236, Pu-238, Pu-239, Pu-240, Am-241) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Particulate.	Unknown.	T .04360000000000	CI	1960	1960	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .00102500000000	CI	1960	1960	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00000063220000	CI	1960	1960	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .00204900000000	CI	1960	1960	N			See continuation page.
U-234	Particulate.	Unknown.	T .00000045780000	CI	1960	1960	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000000980000	CI	1960	1960	N			See continuation page.
U-236	Particulate.	Unknown.	T .00000017440000	CI	1960	1960	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00000028340000	CI	1960	1960	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00001177000000	CI	1960	1960	N			See continuation page.

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Pu-239	Particulate.	Unknown.	T .00001177000000	CI	1960	1960	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00000124300000	CI	1960	1960	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .00128600000000	CI	1960	1960	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00000588600000	CI	1960	1960	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00000588600000	CI	1960	1960	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00000545000000	CI	1960	1960	N			See continuation page.
H-3	Particulate.	Unknown.	T .02805000000000	CI	1961	1961	N			See continuation page.
C-14	Particulate.	Unknown.	T .00376300000000	CI	1961	1961	N			See continuation page.
Fe-55	Particulate.	Unknown.	T .65000000000000	CI	1961	1961	N			See continuation page.

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Additional information or explanations (indicate pertinent contaminant)

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Ni-59	Particulate.	Unknown.	T .00019500000000	CI	1961	1961	N			See continuation page.
Ni-63	Particulate.	Unknown.	T .10950000000000	CI	1961	1961	N			See continuation page.
Co-60	Particulate.	Unknown.	T .22920000000000	CI	1961	1961	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .00031470000000	CI	1961	1961	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00006158000000	CI	1961	1961	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000001601000	CI	1961	1961	N			See continuation page.
Cs-137	Particulate.	Unknown.	T .06842000000000	CI	1961	1961	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .00160800000000	CI	1961	1961	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00000099210000	CI	1961	1961	N			See continuation page.

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If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-155	Particulate.	Unknown.	T .00321600000000	CI	1961	1961	N			See continuation page.
U-234	Particulate.	Unknown.	T .00000071840000	CI	1961	1961	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000001540000	CI	1961	1961	N			See continuation page.
U-236	Particulate.	Unknown.	T .00000027370000	CI	1961	1961	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00000044470000	CI	1961	1961	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00001847000000	CI	1961	1961	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00001847000000	CI	1961	1961	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00000195000000	CI	1961	1961	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .00201800000000	CI	1961	1961	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

Additional radionuclides (e.g. U-234, U-235, U-236, Pu-238, Pu-239, Pu-240, Am-241) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Am-241	Particulate.	Unknown.	T .00000923700000	CI	1961	1961	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00000923700000	CI	1961	1961	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00000855200000	CI	1961	1961	N			See continuation page.
H-3	Particulate.	Unknown.	T .04087000000000	CI	1962	1962	N			See continuation page.
C-14	Particulate.	Unknown.	T .00548200000000	CI	1962	1962	N			See continuation page.
Fe-55	Particulate.	Unknown.	T .94700000000000	CI	1962	1962	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00028410000000	CI	1962	1962	N			See continuation page.
Ni-63	Particulate.	Unknown.	T .15950000000000	CI	1962	1962	N			See continuation page.
Co-60	Particulate.	Unknown.	T .33390000000000	CI	1962	1962	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

Additional radionuclides (e.g. U-234, U-235, U-236, Pu-238, Pu-239, Pu-240, Am-241) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Sr-90	Particulate.	Unknown.	T .00045850000000	CI	1962	1962	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00008971000000	CI	1962	1962	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000002333000	CI	1962	1962	N			See continuation page.
Cs-137	Particulate.	Unknown.	T .09968000000000	CI	1962	1962	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .00234200000000	CI	1962	1962	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00000144500000	CI	1962	1962	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .00468500000000	CI	1962	1962	N			See continuation page.
U-234	Particulate.	Unknown.	T .00000104700000	CI	1962	1962	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000002240000	CI	1962	1962	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
Additional radionuclides (e.g. U-234, U-235, U-236, Pu-238, Pu-239, Pu-240, Am-241) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-236	Particulate.	Unknown.	T .00000039870000	CI	1962	1962	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00000064790000	CI	1962	1962	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00002691000000	CI	1962	1962	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00002691000000	CI	1962	1962	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00000284100000	CI	1962	1962	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .00294100000000	CI	1962	1962	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00001346000000	CI	1962	1962	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00001346000000	CI	1962	1962	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00001246000000	CI	1962	1962	N			See continuation page.

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Additional radionuclides (e.g. U-234, U-235, U-236, Pu-238, Pu-239, Pu-240, Am-241) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Particulate.	Unknown.	T .17320000000000	CI	1963	1963	N			See continuation page.
C-14	Particulate.	Unknown.	T .02323000000000	CI	1963	1963	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 4.0130000000000	CI	1963	1963	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00120400000000	CI	1963	1963	N			See continuation page.
Ni-63	Particulate.	Unknown.	T .67580000000000	CI	1963	1963	N			See continuation page.
Co-60	Particulate.	Unknown.	T 1.4150000000000	CI	1963	1963	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .00194300000000	CI	1963	1963	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00038010000000	CI	1963	1963	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000009882000	CI	1963	1963	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
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Additional information or explanations (indicate pertinent contaminant)
Additional radionuclides (e.g. U-234, U-235, U-236, Pu-238, Pu-239, Pu-240, Am-241) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Particulate.	Unknown.	T .42240000000000	CI	1963	1963	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .00992600000000	CI	1963	1963	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00000612400000	CI	1963	1963	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .01985000000000	CI	1963	1963	N			See continuation page.
U-234	Particulate.	Unknown.	T .00000443500000	CI	1963	1963	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000009500000	CI	1963	1963	N			See continuation page.
U-236	Particulate.	Unknown.	T .00000168900000	CI	1963	1963	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00000274500000	CI	1963	1963	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00011400000000	CI	1963	1963	N			See continuation page.

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Additional information or explanations (indicate pertinent contaminant)
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Pu-239	Particulate.	Unknown.	T .00011400000000	CI	1963	1963	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00001205000000	CI	1963	1963	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .01246000000000	CI	1963	1963	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00005702000000	CI	1963	1963	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00005702000000	CI	1963	1963	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00005280000000	CI	1963	1963	N			See continuation page.
H-3	Particulate.	Unknown.	T .01191000000000	CI	1964	1964	N			See continuation page.
C-14	Particulate.	Unknown.	T .00159800000000	CI	1964	1964	N			See continuation page.
Fe-55	Particulate.	Unknown.	T .27590000000000	CI	1964	1964	N			See continuation page.

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Additional information or explanations (indicate pertinent contaminant)

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Ni-59	Particulate.	Unknown.	T .00008278000000	CI	1964	1964	N			See continuation page.
Ni-63	Particulate.	Unknown.	T .04647000000000	CI	1964	1964	N			See continuation page.
Co-60	Particulate.	Unknown.	T .09730000000000	CI	1964	1964	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .00013360000000	CI	1964	1964	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00002614000000	CI	1964	1964	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000000680000	CI	1964	1964	N			See continuation page.
Cs-137	Particulate.	Unknown.	T .02905000000000	CI	1964	1964	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .00068260000000	CI	1964	1964	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00000042120000	CI	1964	1964	N			See continuation page.

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Additional radionuclides (e.g. U-234, U-235, U-236, Pu-238, Pu-239, Pu-240, Am-241) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

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Eu-155	Particulate.	Unknown.	T .00136500000000	CI	1964	1964	N			See continuation page.
U-234	Particulate.	Unknown.	T .00000030500000	CI	1964	1964	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000000650000	CI	1964	1964	N			See continuation page.
U-236	Particulate.	Unknown.	T .00000011620000	CI	1964	1964	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00000018880000	CI	1964	1964	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00000784200000	CI	1964	1964	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00000784200000	CI	1964	1964	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00000082780000	CI	1964	1964	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .00085690000000	CI	1964	1964	N			See continuation page.

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Am-241	Particulate.	Unknown.	T .00000392100000	CI	1964	1964	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00000392100000	CI	1964	1964	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00000363100000	CI	1964	1964	N			See continuation page.
H-3	Particulate.	Unknown.	T .00001640000000	CI	1965	1965	N			See continuation page.
C-14	Particulate.	Unknown.	T .00000220000000	CI	1965	1965	N			See continuation page.
Fe-55	Particulate.	Unknown.	T .00037990000000	CI	1965	1965	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00000011400000	CI	1965	1965	N			See continuation page.
Ni-63	Particulate.	Unknown.	T .00006399000000	CI	1965	1965	N			See continuation page.
Co-60	Particulate.	Unknown.	T .00013400000000	CI	1965	1965	N			See continuation page.

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Additional radionuclides (e.g. U-234, U-235, U-236, Pu-238, Pu-239, Pu-240, Am-241) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

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Sr-90	Particulate.	Unknown.	T .00000018400000	CI	1965	1965	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00000003600000	CI	1965	1965	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000000001000	CI	1965	1965	N			See continuation page.
Cs-137	Particulate.	Unknown.	T .00003999000000	CI	1965	1965	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .00000093990000	CI	1965	1965	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00000000060000	CI	1965	1965	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .00000188000000	CI	1965	1965	N			See continuation page.
U-234	Particulate.	Unknown.	T .00000000040000	CI	1965	1965	N			See continuation page.
U-236	Particulate.	Unknown.	T .00000000020000	CI	1965	1965	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

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Np-237	Particulate.	Unknown.	T .00000000030000	CI	1965	1965	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00000001080000	CI	1965	1965	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00000001080000	CI	1965	1965	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00000000110000	CI	1965	1965	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .00000118000000	CI	1965	1965	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00000000540000	CI	1965	1965	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00000000540000	CI	1965	1965	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00000000500000	CI	1965	1965	N			See continuation page.
H-3	Particulate.	Unknown.	T .00210400000000	CI	1966	1966	N			See continuation page.

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C-14	Particulate.	Unknown.	T .00028220000000	CI	1966	1966	N			See continuation page.
Fe-55	Particulate.	Unknown.	T .04874000000000	CI	1966	1966	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00001462000000	CI	1966	1966	N			See continuation page.
Ni-63	Particulate.	Unknown.	T .00820900000000	CI	1966	1966	N			See continuation page.
Co-60	Particulate.	Unknown.	T .01719000000000	CI	1966	1966	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .00002360000000	CI	1966	1966	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00000461800000	CI	1966	1966	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000000120000	CI	1966	1966	N			See continuation page.
Cs-137	Particulate.	Unknown.	T .00513100000000	CI	1966	1966	N			See continuation page.

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Ce-144	Particulate.	Unknown.	T .00012060000000	CI	1966	1966	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00000007440000	CI	1966	1966	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .00024110000000	CI	1966	1966	N			See continuation page.
U-234	Particulate.	Unknown.	T .00000005390000	CI	1966	1966	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000000120000	CI	1966	1966	N			See continuation page.
U-236	Particulate.	Unknown.	T .00000002050000	CI	1966	1966	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00000003340000	CI	1966	1966	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00000138500000	CI	1966	1966	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00000138500000	CI	1966	1966	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-240	Particulate.	Unknown.	T .00000014620000	CI	1966	1966	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .00015140000000	CI	1966	1966	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00000069270000	CI	1966	1966	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00000069270000	CI	1966	1966	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00000064130000	CI	1966	1966	N			See continuation page.
H-3	Particulate.	Unknown.	T .00000000090000	CI	1967	1967	N			See continuation page.
C-14	Particulate.	Unknown.	T .00000000010000	CI	1967	1967	N			See continuation page.
Fe-55	Particulate.	Unknown.	T .00000001920000	CI	1967	1967	N			See continuation page.
Ni-63	Particulate.	Unknown.	T .00000000320000	CI	1967	1967	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

Additional radionuclides (e.g. U-234, U-235, U-236, Pu-238, Pu-239, Pu-240, Am-241) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Co-60	Particulate.	Unknown.	T .00000000680000	CI	1967	1967	N			See continuation page.
Cs-137	Particulate.	Unknown.	T .00000000200000	CI	1967	1967	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .00000000010000	CI	1967	1967	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .00000000001000	CI	1967	1967	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .00000000001000	CI	1967	1967	N			See continuation page.
H-3	Particulate.	Unknown.	T .00002583000000	CI	1968	1968	N			See continuation page.
C-14	Particulate.	Unknown.	T .00000346400000	CI	1968	1968	N			See continuation page.
Fe-55	Particulate.	Unknown.	T .00059840000000	CI	1968	1968	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00000017950000	CI	1968	1968	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. if not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

Additional radionuclides (e.g. U-234, U-235, U-236, Pu-238, Pu-239, Pu-240, Am-241) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Ni-63	Particulate.	Unknown.	T .00010080000000	CI	1968	1968	N			See continuation page.
Co-60	Particulate.	Unknown.	T .00021100000000	CI	1968	1968	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .00000028980000	CI	1968	1968	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00000005670000	CI	1968	1968	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000000001000	CI	1968	1968	N			See continuation page.
Cs-137	Particulate.	Unknown.	T .00006299000000	CI	1968	1968	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .00000148000000	CI	1968	1968	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00000000090000	CI	1968	1968	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .00000296100000	CI	1968	1968	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
Additional radionuclides (e.g. U-234, U-235, U-236, Pu-238, Pu-239, Pu-240, Am-241) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-234	Particulate.	Unknown.	T .00000000070000	CI	1968	1968	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000000010000	CI	1968	1968	N			See continuation page.
U-236	Particulate.	Unknown.	T .00000000030000	CI	1968	1968	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00000000040000	CI	1968	1968	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00000001700000	CI	1968	1968	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00000001700000	CI	1968	1968	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00000000180000	CI	1968	1968	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .00000185800000	CI	1968	1968	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00000000850000	CI	1968	1968	N			See continuation page.

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Additional information or explanations (indicate pertinent contaminant)

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cm-242	Particulate.	Unknown.	T .00000000850000	CI	1968	1968	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00000000790000	CI	1968	1968	N			See continuation page.
H-3	Particulate.	Unknown.	T .00212700000000	CI	1973	1973	N			See continuation page.
C-14	Particulate.	Unknown.	T .00028530000000	CI	1973	1973	N			See continuation page.
Fe-55	Particulate.	Unknown.	T .04928000000000	CI	1973	1973	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00001478000000	CI	1973	1973	N			See continuation page.
Ni-63	Particulate.	Unknown.	T .00830000000000	CI	1973	1973	N			See continuation page.
Co-60	Particulate.	Unknown.	T .01738000000000	CI	1973	1973	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .00002386000000	CI	1973	1973	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

Additional radionuclides (e.g. U-234, U-235, U-236, Pu-238, Pu-239, Pu-240, Am-241) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Tc-99	Particulate.	Unknown.	T .00000466900000	CI	1973	1973	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000000121000	CI	1973	1973	N			See continuation page.
Cs-137	Particulate.	Unknown.	T .00518700000000	CI	1973	1973	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .00012190000000	CI	1973	1973	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00000007520000	CI	1973	1973	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .00024380000000	CI	1973	1973	N			See continuation page.
U-234	Particulate.	Unknown.	T .00000005450000	CI	1973	1973	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000000120000	CI	1973	1973	N			See continuation page.
U-236	Particulate.	Unknown.	T .00000002070000	CI	1973	1973	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

Additional radionuclides (e.g. U-234, U-235, U-236, Pu-238, Pu-239, Pu-240, Am-241) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Np-237	Particulate.	Unknown.	T .00000003370000	CI	1973	1973	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00000140100000	CI	1973	1973	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00000140100000	CI	1973	1973	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00000014780000	CI	1973	1973	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .00015300000000	CI	1973	1973	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00000070030000	CI	1973	1973	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00000070030000	CI	1973	1973	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00000064840000	CI	1973	1973	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

Additional radionuclides (e.g. U-234, U-235, U-236, Pu-238, Pu-239, Pu-240, Am-241) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [X] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)
Interviewees wish to remain anonymous.

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
A portion of, or all of the measurements, were assumed to be taken using a G-M detector which only measures gamma emitters; beta emitters have been added to the RWMIS activity based on scaling factors. Therefore, the total activity will be greater than that in RWMIS.

7. Major unknowns in inventories of contaminants:
MAP and MFP were unidentified.

8. Key assumptions used to deal with the unknowns:
MAP radionuclides were chosen based on their cross sections and half lives. MFP radionuclides were chosen based on their fissionable products and half lives. On part D, no G-M counter correction is needed to entries for which upper and lower bounds are given. The presence of such bounds indicates that the estimate was based on weight, laboratory analysis, spectrometry, and/or mathematical calculations. The G-M counter correction is needed for entries for which no bounds are given, because such estimates were originally made using the G-M counter method.

Continuation of Part D Column or Question Number or Title Uncertainty basis.

A Geiger-Mueller counter was probably used to measure this item. Therefore, a true uncertainty is not known.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 202

1. Preparer: Amaro, C.

2. Date prepared: 08/30/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 603
(building number - use code from attached list)

5. Number of waste stream from this facility:
18H

6. Waste stream:
Rags, floor sweepings and glassware.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1960 Ending year 1970

9. Waste stream volume:
Amount 1846.6219 Units Cubic feet.
Check box: [ ] annual or [X] total over all years
Check box: [X] container volume or [ ] waste volume

10. Comments (specify number of pertinent question):
4. Also 632, 642, 653, 661, and 670.

1. General physical form (see attached list)
Combustibles (paper, cloth, wood, etc.).
[X] other (specify)
43.

2. Details on physical form(particularly confinement related)
Forty percent rags, 40% floor sweepings, and 20% glassware make up this stream.

3. Chemical form:
Unknown.

4. Inner packaging: [ ] plastic bag [X] plastic liner
[ ] metal liner [ ] none [ ] other (specify)

5. Waste container type (see attached list)
Cardboard box*.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
5. BLM, "Other", and BXW. "Other" cannot be defined by the preparer.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
None.										

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
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Additional information or explanations (indicate pertinent contaminant)

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Unknown.	Unknown.	T 3.8340000000000	CI	1960	1960	N			See continuation page.
C-14	Unknown.	Unknown.	T .51430000000000	CI	1960	1960	N			See continuation page.
Fe-55	Unknown.	Unknown.	T 88.840000000000	CI	1960	1960	N			See continuation page.
Ni-59	Unknown.	Unknown.	T .02665000000000	CI	1960	1960	N			See continuation page.
Ni-63	Unknown.	Unknown.	T 14.960000000000	CI	1960	1960	N			See continuation page.
Co-60	Unknown.	Unknown.	T 31.330000000000	CI	1960	1960	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .04302000000000	CI	1960	1960	N			See continuation page.
Tc-99	Unknown.	Unknown.	T .00841600000000	CI	1960	1960	N			See continuation page.
I-129	Unknown.	Unknown.	T .00000218790000	CI	1960	1960	N			See continuation page.

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Additional information or explanations (indicate pertinent contaminant)

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Unknown.	Unknown.	T 9.3510000000000	CI	1960	1960	N			See continuation page.
Ce-144	Unknown.	Unknown.	T .21980000000000	CI	1960	1960	N			See continuation page.
Eu-154	Unknown.	Unknown.	T .00013560000000	CI	1960	1960	N			See continuation page.
Eu-155	Unknown.	Unknown.	T .43950000000000	CI	1960	1960	N			See continuation page.
U-234	Unknown.	Unknown.	T .00009819000000	CI	1960	1960	N			See continuation page.
U-235	Unknown.	Unknown.	T .00000210400000	CI	1960	1960	N			See continuation page.
U-236	Unknown.	Unknown.	T .00003740000000	CI	1960	1960	N			See continuation page.
Np-237	Unknown.	Unknown.	T .00006078000000	CI	1960	1960	N			See continuation page.
Pu-238	Unknown.	Unknown.	T .00252500000000	CI	1960	1960	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Unknown.	Unknown.	T .00252500000000	CI	1960	1960	N			See continuation page.
Pu-240	Unknown.	Unknown.	T .00026650000000	CI	1960	1960	N			See continuation page.
Pu-241	Unknown.	Unknown.	T .27590000000000	CI	1960	1960	N			See continuation page.
Am-241	Unknown.	Unknown.	T .00126200000000	CI	1960	1960	N			See continuation page.
Cm-242	Unknown.	Unknown.	T .00126200000000	CI	1960	1960	N			See continuation page.
Cm-244	Unknown.	Unknown.	T .00116900000000	CI	1960	1960	N			See continuation page.
H-3	Unknown.	Unknown.	T 28.210000000000	CI	1961	1961	N			See continuation page.
C-14	Unknown.	Unknown.	T 3.7850000000000	CI	1961	1961	N			See continuation page.
Fe-55	Unknown.	Unknown.	T 653.70000000000	CI	1961	1961	N			See continuation page.

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Ni-59	Unknown.	Unknown.	T .19610000000000	CI	1961	1961	N			See continuation page.
Ni-63	Unknown.	Unknown.	T 110.10000000000	CI	1961	1961	N			See continuation page.
Co-60	Unknown.	Unknown.	T 230.50000000000	CI	1961	1961	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .31650000000000	CI	1961	1961	N			See continuation page.
Tc-99	Unknown.	Unknown.	T .06193000000000	CI	1961	1961	N			See continuation page.
I-129	Unknown.	Unknown.	T .00001610100000	CI	1961	1961	N			See continuation page.
Cs-137	Unknown.	Unknown.	T 68.820000000000	CI	1961	1961	N			See continuation page.
Ce-144	Unknown.	Unknown.	T 1.6170000000000	CI	1961	1961	N			See continuation page.
Eu-154	Unknown.	Unknown.	T .00099780000000	CI	1961	1961	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-155	Unknown.	Unknown.	T 3.2340000000000	CI	1961	1961	N			See continuation page.
U-234	Unknown.	Unknown.	T .00072260000000	CI	1961	1961	N			See continuation page.
U-235	Unknown.	Unknown.	T .00001548000000	CI	1961	1961	N			See continuation page.
U-236	Unknown.	Unknown.	T .00027530000000	CI	1961	1961	N			See continuation page.
Np-237	Unknown.	Unknown.	T .00044730000000	CI	1961	1961	N			See continuation page.
Pu-238	Unknown.	Unknown.	T .01858000000000	CI	1961	1961	N			See continuation page.
Pu-239	Unknown.	Unknown.	T .01858000000000	CI	1961	1961	N			See continuation page.
Pu-240	Unknown.	Unknown.	T .00196100000000	CI	1961	1961	N			See continuation page.
Pu-241	Unknown.	Unknown.	T 2.0300000000000	CI	1961	1961	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Am-241	Unknown.	Unknown.	T .00929000000000	CI	1961	1961	N			See continuation page.
Cm-242	Unknown.	Unknown.	T .00929000000000	CI	1961	1961	N			See continuation page.
Cm-244	Unknown.	Unknown.	T .00860200000000	CI	1961	1961	N			See continuation page.
Fe-59	Unknown.	Unknown.	T 4.0000000000000	CI	1961	1961	N	-20%	+20%	See comment below.
H-3	Unknown.	Unknown.	T 24.600000000000	CI	1962	1962	N			See continuation page.
C-14	Unknown.	Unknown.	T 3.3000000000000	CI	1962	1962	N			See continuation page.
Fe-55	Unknown.	Unknown.	T 570.10000000000	CI	1962	1962	N			See continuation page.
Ni-59	Unknown.	Unknown.	T .17100000000000	CI	1962	1962	N			See continuation page.
Ni-63	Unknown.	Unknown.	T 96.010000000000	CI	1962	1962	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Co-60	Unknown.	Unknown.	T 201.00000000000	CI	1962	1962	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .27600000000000	CI	1962	1962	N			See continuation page.
Tc-99	Unknown.	Unknown.	T .05401000000000	CI	1962	1962	N			See continuation page.
I-129	Unknown.	Unknown.	T .00001404000000	CI	1962	1962	N			See continuation page.
Cs-137	Unknown.	Unknown.	T 60.010000000000	CI	1962	1962	N			See continuation page.
Ce-144	Unknown.	Unknown.	T 1.4100000000000	CI	1962	1962	N			See continuation page.
Eu-154	Unknown.	Unknown.	T .00087010000000	CI	1962	1962	N			See continuation page.
Eu-155	Unknown.	Unknown.	T 2.8200000000000	CI	1962	1962	N			See continuation page.
U-234	Unknown.	Unknown.	T .00063010000000	CI	1962	1962	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-235	Unknown.	Unknown.	T .00001350000000	CI	1962	1962	N			See continuation page.
U-236	Unknown.	Unknown.	T .00024000000000	CI	1962	1962	N			See continuation page.
Np-237	Unknown.	Unknown.	T .00039010000000	CI	1962	1962	N			See continuation page.
Pu-238	Unknown.	Unknown.	T .01620000000000	CI	1962	1962	N			See continuation page.
Pu-239	Unknown.	Unknown.	T .01620000000000	CI	1962	1962	N			See continuation page.
Pu-240	Unknown.	Unknown.	T .00171000000000	CI	1962	1962	N			See continuation page.
Pu-241	Unknown.	Unknown.	T 1.7700000000000	CI	1962	1962	N			See continuation page.
Am-241	Unknown.	Unknown.	T .00810100000000	CI	1962	1962	N			See continuation page.
Cm-242	Unknown.	Unknown.	T .00810100000000	CI	1962	1962	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cm-244	Unknown.	Unknown.	T .00750100000000	CI	1962	1962	N			See continuation page.
H-3	Unknown.	Unknown.	T 8203.0000000000	CI	1963	1963	N			See continuation page.
C-14	Unknown.	Unknown.	T 1100.0000000000	CI	1963	1963	N			See continuation page.
Fe-55	Unknown.	Unknown.	T 190100.00000000	CI	1963	1963	N			See continuation page.
Ni-59	Unknown.	Unknown.	T 57.020000000000	CI	1963	1963	N			See continuation page.
Ni-63	Unknown.	Unknown.	T 32010.000000000	CI	1963	1963	N			See continuation page.
Co-60	Unknown.	Unknown.	T 67030.000000000	CI	1963	1963	N			See continuation page.
Sr-90	Unknown.	Unknown.	T 92.040000000000	CI	1963	1963	N			See continuation page.
Tc-99	Unknown.	Unknown.	T 18.010000000000	CI	1963	1963	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
I-129	Unknown.	Unknown.	T .00468180000000	CI	1963	1963	N			See continuation page.
Cs-137	Unknown.	Unknown.	T 20010.000000000	CI	1963	1963	N			See continuation page.
Ce-144	Unknown.	Unknown.	T 470.20000000000	CI	1963	1963	N			See continuation page.
Eu-154	Unknown.	Unknown.	T .29010000000000	CI	1963	1963	N			See continuation page.
Eu-155	Unknown.	Unknown.	T 940.40000000000	CI	1963	1963	N			See continuation page.
U-234	Unknown.	Unknown.	T .21010000000000	CI	1963	1963	N			See continuation page.
U-235	Unknown.	Unknown.	T .00450200000000	CI	1963	1963	N			See continuation page.
U-236	Unknown.	Unknown.	T .08003000000000	CI	1963	1963	N			See continuation page.
Np-237	Unknown.	Unknown.	T .13010000000000	CI	1963	1963	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-238	Unknown.	Unknown.	T 5.4020000000000	CI	1963	1963	N			See continuation page.
Pu-239	Unknown.	Unknown.	T 5.4020000000000	CI	1963	1963	N			See continuation page.
Pu-240	Unknown.	Unknown.	T .57020000000000	CI	1963	1963	N			See continuation page.
Pu-241	Unknown.	Unknown.	T 590.20000000000	CI	1963	1963	N			See continuation page.
Am-241	Unknown.	Unknown.	T 2.7010000000000	CI	1963	1963	N			See continuation page.
Cm-242	Unknown.	Unknown.	T 2.7010000000000	CI	1963	1963	N			See continuation page.
Cm-244	Unknown.	Unknown.	T 2.5010000000000	CI	1963	1963	N			See continuation page.
H-3	Unknown.	Unknown.	T .74520000000000	CI	1964	1964	N			See continuation page.
C-14	Unknown.	Unknown.	T .09997000000000	CI	1964	1964	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samp les?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Fe-55	Unknown.	Unknown.	T 17.270000000000	CI	1964	1964	N			See continuation page.
Ni-59	Unknown.	Unknown.	T .00518000000000	CI	1964	1964	N			See continuation page.
Ni-63	Unknown.	Unknown.	T 2.9080000000000	CI	1964	1964	N			See continuation page.
Co-60	Unknown.	Unknown.	T 6.0890000000000	CI	1964	1964	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .00836100000000	CI	1964	1964	N			See continuation page.
Tc-99	Unknown.	Unknown.	T .00163600000000	CI	1964	1964	N			See continuation page.
I-129	Unknown.	Unknown.	T .00000042534000	CI	1964	1964	N			See continuation page.
Cs-137	Unknown.	Unknown.	T 1.8180000000000	CI	1964	1964	N			See continuation page.
Ce-144	Unknown.	Unknown.	T .04271000000000	CI	1964	1964	N			See continuation page.

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Eu-154	Unknown.	Unknown.	T .00002636000000	CI	1964	1964	N			See continuation page.
Eu-155	Unknown.	Unknown.	T .08543000000000	CI	1964	1964	N			See continuation page.
U-234	Unknown.	Unknown.	T .00001908000000	CI	1964	1964	N			See continuation page.
U-235	Unknown.	Unknown.	T .00000040900000	CI	1964	1964	N			See continuation page.
U-236	Unknown.	Unknown.	T .00000727000000	CI	1964	1964	N			See continuation page.
Np-237	Unknown.	Unknown.	T .00001181000000	CI	1964	1964	N			See continuation page.
Pu-238	Unknown.	Unknown.	T .00049080000000	CI	1964	1964	N			See continuation page.
Pu-239	Unknown.	Unknown.	T .00049080000000	CI	1964	1964	N			See continuation page.
Pu-240	Unknown.	Unknown.	T .00005180000000	CI	1964	1964	N			See continuation page.

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Pu-241	Unknown.	Unknown.	T .05362000000000	CI	1964	1964	N			See continuation page.
Am-241	Unknown.	Unknown.	T .00024540000000	CI	1964	1964	N			See continuation page.
Cm-242	Unknown.	Unknown.	T .00024540000000	CI	1964	1964	N			See continuation page.
Cm-244	Unknown.	Unknown.	T .00022720000000	CI	1964	1964	N			See continuation page.
H-3	Unknown.	Unknown.	T 2.3210000000000	CI	1965	1965	N			See continuation page.
C-14	Unknown.	Unknown.	T .31130000000000	CI	1965	1965	N			See continuation page.
Fe-55	Unknown.	Unknown.	T 53.770000000000	CI	1965	1965	N			See continuation page.
Ni-59	Unknown.	Unknown.	T .01613000000000	CI	1965	1965	N			See continuation page.
Ni-63	Unknown.	Unknown.	T 9.0560000000000	CI	1965	1965	N			See continuation page.

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Co-60	Unknown.	Unknown.	T 18.960000000000	CI	1965	1965	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .02604000000000	CI	1965	1965	N			See continuation page.
Tc-99	Unknown.	Unknown.	T .00509400000000	CI	1965	1965	N			See continuation page.
I-129	Unknown.	Unknown.	T .00000132480000	CI	1965	1965	N			See continuation page.
Cs-137	Unknown.	Unknown.	T 5.6600000000000	CI	1965	1965	N			See continuation page.
Ce-144	Unknown.	Unknown.	T .01330000000000	CI	1965	1965	N			See continuation page.
Eu-154	Unknown.	Unknown.	T .00008207000000	CI	1965	1965	N			See continuation page.
Eu-155	Unknown.	Unknown.	T .26600000000000	CI	1965	1965	N			See continuation page.
U-234	Unknown.	Unknown.	T .00005943000000	CI	1965	1965	N			See continuation page.

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U-235	Unknown.	Unknown.	T .00000127300000	CI	1965	1965	N			See continuation page.
U-236	Unknown.	Unknown.	T .00002264000000	CI	1965	1965	N			See continuation page.
Np-237	Unknown.	Unknown.	T .00003679000000	CI	1965	1965	N			See continuation page.
Pu-238	Unknown.	Unknown.	T .00152800000000	CI	1965	1965	N			See continuation page.
Pu-239	Unknown.	Unknown.	T .00152800000000	CI	1965	1965	N			See continuation page.
Pu-240	Unknown.	Unknown.	T .00016130000000	CI	1965	1965	N			See continuation page.
Pu-241	Unknown.	Unknown.	T .16700000000000	CI	1965	1965	N			See continuation page.
Am-241	Unknown.	Unknown.	T .00076410000000	CI	1965	1965	N			See continuation page.
Cm-242	Unknown.	Unknown.	T .00076410000000	CI	1965	1965	N			See continuation page.

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Cm-244	Unknown.	Unknown.	T .00070570000000	CI	1965	1965	N			See continuation page.
H-3	Unknown.	Unknown.	T .22650000000000	CI	1966	1966	N			See continuation page.
C-14	Unknown.	Unknown.	T .03039000000000	CI	1966	1966	N			See continuation page.
Fe-55	Unknown.	Unknown.	T 5.2490000000000	CI	1966	1966	N			See continuation page.
Ni-59	Unknown.	Unknown.	T .00157500000000	CI	1966	1966	N			See continuation page.
Ni-63	Unknown.	Unknown.	T .88400000000000	CI	1966	1966	N			See continuation page.
Co-60	Unknown.	Unknown.	T 1.8510000000000	CI	1966	1966	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .00254100000000	CI	1966	1966	N			See continuation page.
Tc-99	Unknown.	Unknown.	T .00049720000000	CI	1966	1966	N			See continuation page.

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I-129	Unknown.	Unknown.	T .00000012924000	CI	1966	1966	N			See continuation page.
Cs-137	Unknown.	Unknown.	T .55250000000000	CI	1966	1966	N			See continuation page.
Ce-144	Unknown.	Unknown.	T .01298000000000	CI	1966	1966	N			See continuation page.
Eu-154	Unknown.	Unknown.	T .00000801100000	CI	1966	1966	N			See continuation page.
Eu-155	Unknown.	Unknown.	T .02597000000000	CI	1966	1966	N			See continuation page.
U-234	Unknown.	Unknown.	T .00000580100000	CI	1966	1966	N			See continuation page.
U-235	Unknown.	Unknown.	T .00000012430000	CI	1966	1966	N			See continuation page.
U-236	Unknown.	Unknown.	T .00000221000000	CI	1966	1966	N			See continuation page.
Np-237	Unknown.	Unknown.	T .00000359100000	CI	1966	1966	N			See continuation page.

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Pu-238	Unknown.	Unknown.	T .00014920000000	CI	1966	1966	N			See continuation page.
Pu-239	Unknown.	Unknown.	T .00014920000000	CI	1966	1966	N			See continuation page.
Pu-240	Unknown.	Unknown.	T .00001575000000	CI	1966	1966	N			See continuation page.
Pu-241	Unknown.	Unknown.	T .01630000000000	CI	1966	1966	N			See continuation page.
Am-241	Unknown.	Unknown.	T .00007459000000	CI	1966	1966	N			See continuation page.
Cm-242	Unknown.	Unknown.	T .00007459000000	CI	1966	1966	N			See continuation page.
Cm-244	Unknown.	Unknown.	T .00006906000000	CI	1966	1966	N			See continuation page.
H-3	Unknown.	Unknown.	T .66560000000000	CI	1967	1967	N			See continuation page.
C-14	Unknown.	Unknown.	T .08929000000000	CI	1967	1967	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Fe-55	Unknown.	Unknown.	T 15.420000000000	CI	1967	1967	N			See continuation page.
Ni-59	Unknown.	Unknown.	T .00462700000000	CI	1967	1967	N			See continuation page.
Ni-63	Unknown.	Unknown.	T 2.5970000000000	CI	1967	1967	N			See continuation page.
Co-60	Unknown.	Unknown.	T 5.4380000000000	CI	1967	1967	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .00746800000000	CI	1967	1967	N			See continuation page.
Tc-99	Unknown.	Unknown.	T .00146100000000	CI	1967	1967	N			See continuation page.
I-129	Unknown.	Unknown.	T .00000037989000	CI	1967	1967	N			See continuation page.
Cs-137	Unknown.	Unknown.	T 1.6230000000000	CI	1967	1967	N			See continuation page.
Ce-144	Unknown.	Unknown.	T .03815000000000	CI	1967	1967	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-154	Unknown.	Unknown.	T .00002354000000	CI	1967	1967	N			See continuation page.
Eu-155	Unknown.	Unknown.	T .07630000000000	CI	1967	1967	N			See continuation page.
U-234	Unknown.	Unknown.	T .00001705000000	CI	1967	1967	N			See continuation page.
U-235	Unknown.	Unknown.	T .00000036530000	CI	1967	1967	N			See continuation page.
U-236	Unknown.	Unknown.	T .00000649400000	CI	1967	1967	N			See continuation page.
Np-237	Unknown.	Unknown.	T .00001055000000	CI	1967	1967	N			See continuation page.
Pu-238	Unknown.	Unknown.	T .00043830000000	CI	1967	1967	N			See continuation page.
Pu-239	Unknown.	Unknown.	T .00043830000000	CI	1967	1967	N			See continuation page.
Pu-240	Unknown.	Unknown.	T .00004627000000	CI	1967	1967	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-241	Unknown.	Unknown.	T .04789000000000	CI	1967	1967	N			See continuation page.
Am-241	Unknown.	Unknown.	T .00021920000000	CI	1967	1967	N			See continuation page.
Cm-242	Unknown.	Unknown.	T .00021920000000	CI	1967	1967	N			See continuation page.
Cm-244	Unknown.	Unknown.	T .00020290000000	CI	1967	1967	N			See continuation page.
H-3	Unknown.	Unknown.	T .26760000000000	CI	1968	1968	N			See continuation page.
C-14	Unknown.	Unknown.	T .03589000000000	CI	1968	1968	N			See continuation page.
Fe-55	Unknown.	Unknown.	T 6.1990000000000	CI	1968	1968	N			See continuation page.
Ni-59	Unknown.	Unknown.	T .00186000000000	CI	1968	1968	N			See continuation page.
Ni-63	Unknown.	Unknown.	T 1.0440000000000	CI	1968	1968	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

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For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Co-60	Unknown.	Unknown.	T 2.1860000000000	CI	1968	1968	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .00300200000000	CI	1968	1968	N			See continuation page.
Tc-99	Unknown.	Unknown.	T .00058730000000	CI	1968	1968	N			See continuation page.
I-129	Unknown.	Unknown.	T .00000015273000	CI	1968	1968	N			See continuation page.
Cs-137	Unknown.	Unknown.	T .65260000000000	CI	1968	1968	N			See continuation page.
Ce-144	Unknown.	Unknown.	T .01534000000000	CI	1968	1968	N			See continuation page.
Eu-154	Unknown.	Unknown.	T .00000946200000	CI	1968	1968	N			See continuation page.
Eu-155	Unknown.	Unknown.	T .03067000000000	CI	1968	1968	N			See continuation page.
U-234	Unknown.	Unknown.	T .00000685200000	CI	1968	1968	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-235	Unknown.	Unknown.	T .00000014680000	CI	1968	1968	N			See continuation page.
U-236	Unknown.	Unknown.	T .00000261000000	CI	1968	1968	N			See continuation page.
Np-237	Unknown.	Unknown.	T .00000424200000	CI	1968	1968	N			See continuation page.
Pu-238	Unknown.	Unknown.	T .00017620000000	CI	1968	1968	N			See continuation page.
Pu-239	Unknown.	Unknown.	T .00017620000000	CI	1968	1968	N			See continuation page.
Pu-240	Unknown.	Unknown.	T .00001860000000	CI	1968	1968	N			See continuation page.
Pu-241	Unknown.	Unknown.	T .01925000000000	CI	1968	1968	N			See continuation page.
Am-241	Unknown.	Unknown.	T .00008810000000	CI	1968	1968	N			See continuation page.
Cm-242	Unknown.	Unknown.	T .00008810000000	CI	1968	1968	N			See continuation page.

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Additional information or explanations (indicate pertinent contaminant)

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cm-244	Unknown.	Unknown.	T .00008157000000	CI	1968	1968	N			See continuation page.
H-3	Unknown.	Unknown.	T .59090000000000	CI	1969	1969	N			See continuation page.
C-14	Unknown.	Unknown.	T .07927000000000	CI	1969	1969	N			See continuation page.
Fe-55	Unknown.	Unknown.	T 13.690000000000	CI	1969	1969	N			See continuation page.
Ni-59	Unknown.	Unknown.	T .00410800000000	CI	1969	1969	N			See continuation page.
Ni-63	Unknown.	Unknown.	T 2.3060000000000	CI	1969	1969	N			See continuation page.
Co-60	Unknown.	Unknown.	T 4.8280000000000	CI	1969	1969	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .00663000000000	CI	1969	1969	N			See continuation page.
Tc-99	Unknown.	Unknown.	T .00129700000000	CI	1969	1969	N			See continuation page.

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Additional information or explanations (indicate pertinent contaminant)

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
I-129	Unknown.	Unknown.	T .00000033723000	CI	1969	1969	N			See continuation page.
Cs-137	Unknown.	Unknown.	T 1.4410000000000	CI	1969	1969	N			See continuation page.
Ce-144	Unknown.	Unknown.	T .03387000000000	CI	1969	1969	N			See continuation page.
Eu-154	Unknown.	Unknown.	T .00002090000000	CI	1969	1969	N			See continuation page.
Eu-155	Unknown.	Unknown.	T .06774000000000	CI	1969	1969	N			See continuation page.
U-234	Unknown.	Unknown.	T .00001513000000	CI	1969	1969	N			See continuation page.
U-235	Unknown.	Unknown.	T .00000032430000	CI	1969	1969	N			See continuation page.
U-236	Unknown.	Unknown.	T .00000576500000	CI	1969	1969	N			See continuation page.
Np-237	Unknown.	Unknown.	T .00000936800000	CI	1969	1969	N			See continuation page.

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Additional information or explanations (indicate pertinent contaminant)
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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-238	Unknown.	Unknown.	T .00038910000000	CI	1969	1969	N			See* continuation page.
Pu-239	Unknown.	Unknown.	T .00038910000000	CI	1969	1969	N			See continuation page.
Pu-240	Unknown.	Unknown.	T .00004108000000	CI	1969	1969	N			See continuation page.
Pu-241	Unknown.	Unknown.	T .04252000000000	CI	1969	1969	N			See continuation page.
Am-241	Unknown.	Unknown.	T .00019460000000	CI	1969	1969	N			See continuation page.
Cm-242	Unknown.	Unknown.	T .00019460000000	CI	1969	1969	N			See continuation page.
Cm-244	Unknown.	Unknown.	T .00018020000000	CI	1969	1969	N			See continuation page.
H-3	Unknown.	Unknown.	T 1.3120000000000	CI	1970	1970	N			See continuation page.
C-14	Unknown.	Unknown.	T .17600000000000	CI	1970	1970	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Fe-55	Unknown.	Unknown.	T 30.400000000000	CI	1970	1970	N			See continuation page.
Ni-59	Unknown.	Unknown.	T .00911900000000	CI	1970	1970	N			See continuation page.
Ni-63	Unknown.	Unknown.	T 5.1200000000000	CI	1970	1970	N			See continuation page.
Co-60	Unknown.	Unknown.	T 10.720000000000	CI	1970	1970	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .01472000000000	CI	1970	1970	N			See continuation page.
Tc-99	Unknown.	Unknown.	T .00288000000000	CI	1970	1970	N			See continuation page.
I-129	Unknown.	Unknown.	T .00000074871000	CI	1970	1970	N			See continuation page.
Cs-137	Unknown.	Unknown.	T 3.2000000000000	CI	1970	1970	N			See continuation page.
Ce-144	Unknown.	Unknown.	T .07519000000000	CI	1970	1970	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-154	Unknown.	Unknown.	T .00004640000000	CI	1970	1970	N			See continuation page.
Eu-155	Unknown.	Unknown.	T .15040000000000	CI	1970	1970	N			See continuation page.
U-234	Unknown.	Unknown.	T .00003360000000	CI	1970	1970	N			See continuation page.
U-235	Unknown.	Unknown.	T .00000071990000	CI	1970	1970	N			See continuation page.
U-236	Unknown.	Unknown.	T .00001280000000	CI	1970	1970	N			See continuation page.
Np-237	Unknown.	Unknown.	T .00002080000000	CI	1970	1970	N			See continuation page.
Pu-238	Unknown.	Unknown.	T .00086390000000	CI	1970	1970	N			See continuation page.
Pu-239	Unknown.	Unknown.	T .00086390000000	CI	1970	1970	N			See continuation page.
Pu-240	Unknown.	Unknown.	T .00009119000000	CI	1970	1970	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-241	Unknown.	Unknown.	T .09439000000000	CI	1970	1970	N			See continuation page.
Am-241	Unknown.	Unknown.	T .00043200000000	CI	1970	1970	N			See continuation page.
Cm-242	Unknown.	Unknown.	T .00043200000000	CI	1970	1970	N			See continuation page.
Cm-244	Unknown.	Unknown.	T .00040000000000	CI	1970	1970	N			See continuation page.

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1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [X] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)
Interviewees wish to remain anonymous.

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
A portion of, or all of the measurements, were assumed to be taken using a G-M detector which only measures gamma emitters; beta emitters have been added to the RWMIS activity based on scaling factors. Therefore, the total activity will be greater than that in RWMIS.

7. Major unknowns in inventories of contaminants:
MAP and MFP radionuclides were unidentified.

8. Key assumptions used to deal with the unknowns:
MAP radionuclides were chosen based on the cross sections and half lives. MFP radionuclides were chosen based on their fissionable product and half lives. On part D, no G-M counter correction is needed to entries for which upper and lower bounds are given. The presence of such bounds indicates that the estimate was based on weight, laboratory analysis, spectrometry, and/or mathematical calculations. The G-M counter correction is needed for entries for which no bounds are given, because such estimates were originally made using the G-M counter method.

Continuation of Part D Column or Question Number or Title Uncertainty basis.

A Geiger-Mueller counter was probably used to measure this item. Therefore, the true uncertainty is not known.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 201

1. Preparer: Amaro, C.

2. Date prepared: 08/30/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 603
(building number - use code from attached list)

5. Number of waste stream from this facility:
19H

6. Waste stream:
Concrete, metals and wood.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1975 Ending year 1981

9. Waste stream volume:
Amount 1685.6200 Units Cubic feet.
Check box: [ ] annual or [X] total over all years
Check box: [X] container volume or [ ] waste volume

10. Comments (specify number of pertinent question):

1. General physical form (see attached list)
Concrete, brick, and asphalt.
[X] other (specify)
10.

2. Details on physical form(particularly confinement related)
Waste is 50% concrete, 30% metals, 20% wood and miscellaneous materials.

3. Chemical form:
Exact form is unknown.

4. Inner packaging: [ ] plastic bag [X] plastic liner
[ ] metal liner [ ] none [ ] other (specify)

5. Waste container type (see attached list)
Cardboard box*.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
5. BXW.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed. to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
None.										

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Solid.	Unknown.	T .06499000000000	CI	1975	1975	N			See continuation page.
C-14	Solid.	Unknown.	T .00871800000000	CI	1975	1975	N			See continuation page.
Fe-55	Solid.	Unknown.	T 1.5060000000000	CI	1975	1975	N			See continuation page.
Ni-59	Solid.	Unknown.	T .00045180000000	CI	1975	1975	N			See continuation page.
Ni-63	Solid.	Unknown.	T .25360000000000	CI	1975	1975	N			See continuation page.
Co-60	Solid.	Unknown.	T .53100000000000	CI	1975	1975	N			See continuation page.
Sr-90	Solid.	Unknown.	T .00072920000000	CI	1975	1975	N			See continuation page.
Tc-99	Solid.	Unknown.	T .00014270000000	CI	1975	1975	N			See continuation page.
I-129	Solid.	Unknown.	T .00000003709000	CI	1975	1975	N			See continuation page.

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Additional information or explanations (indicate pertinent contaminant)

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Solid.	Unknown.	T .15850000000000	CI	1975	1975	N			See continuation page.
Ce-144	Solid.	Unknown.	T .00372500000000	CI	1975	1975	N			See continuation page.
Eu-154	Solid.	Unknown.	T .00000229800000	CI	1975	1975	N			See continuation page.
Eu-155	Solid.	Unknown.	T .00745000000000	CI	1975	1975	N			See continuation page.
U-234	Solid.	Unknown.	T .00000166400000	CI	1975	1975	N			See continuation page.
U-235	Solid.	Unknown.	T .00000003570000	CI	1975	1975	N			See continuation page.
U-236	Solid.	Unknown.	T .00000063410000	CI	1975	1975	N			See continuation page.
Np-237	Solid.	Unknown.	T .00000103000000	CI	1975	1975	N			See continuation page.
Pu-238	Solid.	Unknown.	T .00004280000000	CI	1975	1975	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Solid.	Unknown.	T .00004280000000	CI	1975	1975	N			See continuation page.
Pu-240	Solid.	Unknown.	T .00000451800000	CI	1975	1975	N			See continuation page.
Pu-241	Solid.	Unknown.	T .00467600000000	CI	1975	1975	N			See continuation page.
Am-241	Solid.	Unknown.	T .00002140000000	CI	1975	1975	N			See continuation page.
Cm-242	Solid.	Unknown.	T .00002140000000	CI	1975	1975	N			See continuation page.
Cm-244	Solid.	Unknown.	T .00001981000000	CI	1975	1975	N			See continuation page.
Co-58	Solid.	Unknown.	T .05000000000000	CI	1975	1975	N	-20%	+20%	See comment below.
Co-60	Solid.	Unknown.	T .55000000000000	CI	1975	1975	N	-20%	+20%	See comment below.
Cr-51	Solid.	Unknown.	T .20000000000000	CI	1975	1975	N	-20%	+20%	See comment below.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-134	Solid.	Unknown.	T .13000000000000	CI	1975	1975	N	-20%	+20%	See comment below.
Cs-137	Solid.	Unknown.	T .08000000000000	CI	1975	1975	N	-20%	+20%	See comment below.
Fe-59	Solid.	Unknown.	T .03000000000000	CI	1975	1975	N	-20%	+20%	See comment below.
Hf-181	Solid.	Unknown.	T .05000000000000	CI	1975	1975	N	-20%	+20%	See comment below.
I-131	Solid.	Unknown.	T .01000000000000	CI	1975	1975	N	-20%	+20%	See comment below.
La-140	Solid.	Unknown.	T .03000000000000	CI	1975	1975	N	-20%	+20%	See comment below.
Mn-54	Solid.	Unknown.	T .67000000000000	CI	1975	1975	N	-20%	+20%	See comment below.
Nb-95	Solid.	Unknown.	T .02000000000000	CI	1975	1975	N	-20%	+20%	See comment below.
Zr-95	Solid.	Unknown.	T .01000000000000	CI	1975	1975	N	-20%	+20%	See comment below.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Solid.	Unknown.	T 1.4330000000000	CI	1976	1976	N			See continuation page.
C-14	Solid.	Unknown.	T .19230000000000	CI	1976	1976	N			See continuation page.
Fe-55	Solid.	Unknown.	T 33.210000000000	CI	1976	1976	N			See continuation page.
Ni-59	Solid.	Unknown.	T .00996300000000	CI	1976	1976	N			See continuation page.
Ni-63	Solid.	Unknown.	T 5.5930000000000	CI	1976	1976	N			See continuation page.
Co-60	Solid.	Unknown.	T 11.710000000000	CI	1976	1976	N			See continuation page.
Sr-90	Solid.	Unknown.	T .01608000000000	CI	1976	1976	N			See continuation page.
Tc-99	Solid.	Unknown.	T .00314600000000	CI	1976	1976	N			See continuation page.
I-129	Solid.	Unknown.	T .00000081801000	CI	1976	1976	N			See continuation page.

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Cs-137	Solid.	Unknown.	T 3.4960000000000	CI	1976	1976	N			See continuation page.
Ce-144	Solid.	Unknown.	T .08215000000000	CI	1976	1976	N			See continuation page.
Eu-154	Solid.	Unknown.	T .00005069000000	CI	1976	1976	N			See continuation page.
Eu-155	Solid.	Unknown.	T .16430000000000	CI	1976	1976	N			See continuation page.
U-234	Solid.	Unknown.	T .00003671000000	CI	1976	1976	N			See continuation page.
U-235	Solid.	Unknown.	T .00000078660000	CI	1976	1976	N			See continuation page.
U-236	Solid.	Unknown.	T .00001398000000	CI	1976	1976	N			See continuation page.
Np-237	Solid.	Unknown.	T .00002272000000	CI	1976	1976	N			See continuation page.
Pu-238	Solid.	Unknown.	T .00094390000000	CI	1976	1976	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Solid.	Unknown.	T .00094390000000	CI	1976	1976	N			See continuation page.
Pu-240	Solid.	Unknown.	T .00009963000000	CI	1976	1976	N			See continuation page.
Pu-241	Solid.	Unknown.	T .10310000000000	CI	1976	1976	N			See continuation page.
Am-241	Solid.	Unknown.	T .00047190000000	CI	1976	1976	N			See continuation page.
Cm-242	Solid.	Unknown.	T .00047190000000	CI	1976	1976	N			See continuation page.
Cm-244	Solid.	Unknown.	T .00043700000000	CI	1976	1976	N			See continuation page.
H-3	Solid.	Unknown.	T 1.9440000000000	CI	1977	1977	N			See continuation page.
C-14	Solid.	Unknown.	T .26070000000000	CI	1977	1977	N			See continuation page.
Fe-55	Solid.	Unknown.	T 45.030000000000	CI	1977	1977	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Ni-59	Solid.	Unknown.	T .01351000000000	CI	1977	1977	N			See continuation page.
Ni-63	Solid.	Unknown.	T 7.5850000000000	CI	1977	1977	N			See continuation page.
Co-60	Solid.	Unknown.	T 15.880000000000	CI	1977	1977	N			See continuation page.
Sr-90	Solid.	Unknown.	T .02181000000000	CI	1977	1977	N			See continuation page.
Tc-99	Solid.	Unknown.	T .00426600000000	CI	1977	1977	N			See continuation page.
I-129	Solid.	Unknown.	T .00000110970000	CI	1977	1977	N			See continuation page.
Cs-137	Solid.	Unknown.	T 4.7410000000000	CI	1977	1977	N			See continuation page.
Ce-144	Solid.	Unknown.	T .11140000000000	CI	1977	1977	N			See continuation page.
Eu-154	Solid.	Unknown.	T .00006874000000	CI	1977	1977	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-155	Solid.	Unknown.	T .11180000000000	CI	1977	1977	N			See continuation page.
U-234	Solid.	Unknown.	T .00004978000000	CI	1977	1977	N			See continuation page.
U-235	Solid.	Unknown.	T .00000106700000	CI	1977	1977	N			See continuation page.
U-236	Solid.	Unknown.	T .00001869000000	CI	1977	1977	N			See continuation page.
Np-237	Solid.	Unknown.	T .00003081000000	CI	1977	1977	N			See continuation page.
Pu-238	Solid.	Unknown.	T .00128000000000	CI	1977	1977	N			See continuation page.
Pu-239	Solid.	Unknown.	T .00128000000000	CI	1977	1977	N			See continuation page.
Pu-240	Solid.	Unknown.	T .00013510000000	CI	1977	1977	N			See continuation page.
Pu-241	Solid.	Unknown.	T .13980000000000	CI	1977	1977	N			See continuation page.

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Am-241	Solid.	Unknown.	T .00064000000000	CI	1977	1977	N			See continuation page.
Cm-242	Solid.	Unknown.	T .00064000000000	CI	1977	1977	N			See continuation page.
Cm-244	Solid.	Unknown.	T .00059260000000	CI	1977	1977	N			See continuation page.
Cs-134	Solid.	Unknown.	T .00169490000000	CI	1978	1978	N	-20%	+20%	See comment below.
Cs-137	Solid.	Unknown.	T .02000000000000	CI	1978	1978	N	-20%	+20%	See continuation page.
H-3	Solid.	Unknown.	T .34880000000000	CI	1978	1978	N			See continuation page.
C-14	Solid.	Unknown.	T .04679000000000	CI	1978	1978	N			See continuation page.
Fe-55	Solid.	Unknown.	T 8.0820000000000	CI	1978	1978	N			See continuation page.
Ni-59	Solid.	Unknown.	T .00242500000000	CI	1978	1978	N			See continuation page.

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Ni-63	Solid.	Unknown.	T 1.3610000000000	CI	1978	1978	N			See continuation page.
Co-60	Solid.	Unknown.	T 2.8500000000000	CI	1978	1978	N			See continuation page.
Sr-90	Solid.	Unknown.	T .00391300000000	CI	1978	1978	N			See continuation page.
Tc-99	Solid.	Unknown.	T .00076570000000	CI	1978	1978	N			See continuation page.
I-129	Solid.	Unknown.	T .00000019908000	CI	1978	1978	N			See continuation page.
Cs-137	Solid.	Unknown.	T .85070000000000	CI	1978	1978	N			See continuation page.
Ce-144	Solid.	Unknown.	T .01999000000000	CI	1978	1978	N			See continuation page.
Eu-154	Solid.	Unknown.	T .00001234000000	CI	1978	1978	N			See continuation page.
Eu-155	Solid.	Unknown.	T .03999000000000	CI	1978	1978	N			See continuation page.

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U-234	Solid.	Unknown.	T .00000893300000	CI	1978	1978	N			See continuation page.
U-235	Solid.	Unknown.	T .00000019140000	CI	1978	1978	N			See continuation page.
U-236	Solid.	Unknown.	T .00000340300000	CI	1978	1978	N			See continuation page.
Np-237	Solid.	Unknown.	T .00000553000000	CI	1978	1978	N			See continuation page.
Pu-238	Solid.	Unknown.	T .00022970000000	CI	1978	1978	N			See continuation page.
Pu-239	Solid.	Unknown.	T .00022970000000	CI	1978	1978	N			See continuation page.
Pu-240	Solid.	Unknown.	T .00002425000000	CI	1978	1978	N			See continuation page.
Pu-241	Solid.	Unknown.	T .02510000000000	CI	1978	1978	N			See continuation page.
Am-241	Solid.	Unknown.	T .00011490000000	CI	1978	1978	N			See continuation page.

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Cm-242	Solid.	Unknown.	T .00011490000000	CI	1978	1978	N			See continuation page.
Cm-244	Solid.	Unknown.	T .00010630000000	CI	1978	1978	N			See continuation page.
H-3	Solid.	Unknown.	T 1.0110000000000	CI	1979	1979	N			See continuation page.
C-14	Solid.	Unknown.	T .13560000000000	CI	1979	1979	N			See continuation page.
Fe-55	Solid.	Unknown.	T 23.430000000000	CI	1979	1979	N			See continuation page.
Ni-59	Solid.	Unknown.	T .00702900000000	CI	1979	1979	N			See continuation page.
Ni-63	Solid.	Unknown.	T 3.9460000000000	CI	1979	1979	N			See continuation page.
Co-60	Solid.	Unknown.	T 8.2620000000000	CI	1979	1979	N			See continuation page.
Sr-90	Solid.	Unknown.	T .01134000000000	CI	1979	1979	N			See continuation page.

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Tc-99	Solid.	Unknown.	T .00222000000000	CI	1979	1979	N			See continuation page.
I-129	Solid.	Unknown.	T .00000057708000	CI	1979	1979	N			See continuation page.
Cs-137	Solid.	Unknown.	T 2.4660000000000	CI	1979	1979	N			See continuation page.
Ce-144	Solid.	Unknown.	T .05795000000000	CI	1979	1979	N			See continuation page.
Eu-154	Solid.	Unknown.	T .00003576000000	CI	1979	1979	N			See continuation page.
Eu-155	Solid.	Unknown.	T .11590000000000	CI	1979	1979	N			See continuation page.
U-234	Solid.	Unknown.	T .00002589000000	CI	1979	1979	N			See continuation page.
U-235	Solid.	Unknown.	T .00000055490000	CI	1979	1979	N			See continuation page.
U-236	Solid.	Unknown.	T .00000986500000	CI	1979	1979	N			See continuation page.

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Np-237	Solid.	Unknown.	T .00001603000000	CI	1979	1979	N			See continuation page.
Pu-238	Solid.	Unknown.	T .00066590000000	CI	1979	1979	N			See continuation page.
Pu-239	Solid.	Unknown.	T .00066590000000	CI	1979	1979	N			See continuation page.
Pu-240	Solid.	Unknown.	T .00007029000000	CI	1979	1979	N			See continuation page.
Pu-241	Solid.	Unknown.	T .07175000000000	CI	1979	1979	N			See continuation page.
Am-241	Solid.	Unknown.	T .00033290000000	CI	1979	1979	N			See continuation page.
Cm-242	Solid.	Unknown.	T .00033290000000	CI	1979	1979	N			See continuation page.
Cm-244	Solid.	Unknown.	T .00030830000000	CI	1979	1979	N			See continuation page.
Th-232	Solid.	Unknown.	T .00018010000000	CI	1979	1979	N	-20%	+20%	See comment below.

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H-3	Solid.	Unknown.	T .80020000000000	CI	1980	1980	N			See continuation page.
C-14	Solid.	Unknown.	T .10730000000000	CI	1980	1980	N			See continuation page.
Fe-55	Solid.	Unknown.	T 18.540000000000	CI	1980	1980	N			See continuation page.
Ni-59	Solid.	Unknown.	T .00556200000000	CI	1980	1980	N			See continuation page.
Ni-63	Solid.	Unknown.	T 3.1230000000000	CI	1980	1980	N			See continuation page.
Co-60	Solid.	Unknown.	T 6.5380000000000	CI	1980	1980	N			See continuation page.
Sr-90	Solid.	Unknown.	T .00897800000000	CI	1980	1980	N			See continuation page.
Tc-99	Solid.	Unknown.	T .00175700000000	CI	1980	1980	N			See continuation page.
I-129	Solid.	Unknown.	T .00000045666000	CI	1980	1980	N			See continuation page.

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Cs-137	Solid.	Unknown.	T 1.9520000000000	CI	1980	1980	N			See continuation page.
Ce-144	Solid.	Unknown.	T .04587000000000	CI	1980	1980	N			See continuation page.
Eu-154	Solid.	Unknown.	T .00002830000000	CI	1980	1980	N			See continuation page.
Eu-155	Solid.	Unknown.	T .09173000000000	CI	1980	1980	N			See continuation page.
U-234	Solid.	Unknown.	T .00002049000000	CI	1980	1980	N			See continuation page.
U-235	Solid.	Unknown.	T .00000043910000	CI	1980	1980	N			See continuation page.
U-236	Solid.	Unknown.	T .00000780700000	CI	1980	1980	N			See continuation page.
Np-237	Solid.	Unknown.	T .00001269000000	CI	1980	1980	N			See continuation page.
Pu-238	Solid.	Unknown.	T .00052700000000	CI	1980	1980	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Solid.	Unknown.	T .00052700000000	CI	1980	1980	N			See continuation page.
Pu-240	Solid.	Unknown.	T .00005562000000	CI	1980	1980	N			See continuation page.
Pu-241	Solid.	Unknown.	T .05758000000000	CI	1980	1980	N			See continuation page.
Am-241	Solid.	Unknown.	T .00026350000000	CI	1980	1980	N			See continuation page.
Cm-242	Solid.	Unknown.	T .00026350000000	CI	1980	1980	N			See continuation page.
Cm-244	Solid.	Unknown.	T .00014400000000	CI	1980	1980	N			See continuation page.
U-235	Solid.	Unknown.	T .00005992000000	CI	1980	1980	N	-20%	+20%	See comment below.
U-238	Solid.	Unknown.	T .00006460000000	CI	1980	1980	N	-20%	+20%	See comment below.
H-3	Solid.	Unknown.	T .57860000000000	CI	1981	1981	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
C-14	Solid.	Unknown.	T .07762000000000	CI	1981	1981	N			See continuation page.
Fe-55	Solid.	Unknown.	T 13.410000000000	CI	1981	1981	N			See continuation page.
Ni-59	Solid.	Unknown.	T .00402200000000	CI	1981	1981	N			See continuation page.
Ni-63	Solid.	Unknown.	T 2.2580000000000	CI	1981	1981	N			See continuation page.
Co-60	Solid.	Unknown.	T 4.7280000000000	CI	1981	1981	N			See continuation page.
Sr-90	Solid.	Unknown.	T .00649200000000	CI	1981	1981	N			See continuation page.
Tc-99	Solid.	Unknown.	T .00127000000000	CI	1981	1981	N			See continuation page.
I-129	Solid.	Unknown.	T .00000033021000	CI	1981	1981	N			See continuation page.
Cs-137	Solid.	Unknown.	T 1.4110000000000	CI	1981	1981	N			See continuation page.

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Additional information or explanations (indicate pertinent contaminant)

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Ce-144	Solid.	Unknown.	T .03316000000000	CI	1981	1981	N			See continuation page.
Eu-154	Solid.	Unknown.	T .00002046000000	CI	1981	1981	N			See continuation page.
Eu-155	Solid.	Unknown.	T .06633000000000	CI	1981	1981	N			See continuation page.
U-234	Solid.	Unknown.	T .00001482000000	CI	1981	1981	N			See continuation page.
U-235	Solid.	Unknown.	T .00000031750000	CI	1981	1981	N			See continuation page.
U-236	Solid.	Unknown.	T .00000564500000	CI	1981	1981	N			See continuation page.
Np-237	Solid.	Unknown.	T .00000917300000	CI	1981	1981	N			See continuation page.
Pu-238	Solid.	Unknown.	T .00038100000000	CI	1981	1981	N			See continuation page.
Pu-239	Solid.	Unknown.	T .00038100000000	CI	1981	1981	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-240	Solid.	Unknown.	T .00004022000000	CI	1981	1981	N			See continuation page.
Pu-241	Solid.	Unknown.	T .04163000000000	CI	1981	1981	N			See continuation page.
Am-241	Solid.	Unknown.	T .00019050000000	CI	1981	1981	N			See continuation page.
Cm-242	Solid.	Unknown.	T .00019050000000	CI	1981	1981	N			See continuation page.
Cm-244	Solid.	Unknown.	T .00017640000000	CI	1981	1981	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

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1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [X] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)
Interviewees wish to remain anonymous.

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
A portion of, or all of the measurements, were assumed to be taken using a G-M detector which only measures gamma emitters; beta emitters have been added to the RWMIS activity based on scaling factors. Therefore, the total activity will be greater than that in RWMIS.

7. Major unknowns in inventories of contaminants:
MAP and MFP radionuclides were unidentified.

8. Key assumptions used to deal with the unknowns:
MAP radionuclides were chosen based on their cross sections and half lives. MFP radionuclides were chosen based on their fissionable products and half lives. On part D, no G-M counter correction is needed to entries for which upper and lower bounds are given. The presence of such bounds indicates that the estimate was based on weight, laboratory analysis, spectrometry, and/or mathematical calculations. The G-M counter correction is needed for entries for which no bounds are given, because such estimates were originally made using the G-M counter method.

Continuation of Part D Column or Question Number or Title Uncertainty basis.

The method of analysis is not known. Radionuclide information was probably obtained using one or more of the following instruments: a Geiger-Mueller counter, a NaI detector, and a Germanium detector. Therefore, the true uncertainty is not known.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 200

1. Preparer: Amaro, C.

2. Date prepared: 08/28/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 603
(building number - use code from attached list)

5. Number of waste stream from this facility:
20H

6. Waste stream:
Wood.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1960 Ending year 1977

9. Waste stream volume:
Amount 1051.0130 Units Cubic feet.
Check box: [ ] annual or [X] total over all years
Check box: [X] container volume or [ ] waste volume

10. Comments (specify number of pertinent question):
4. Also 642, 670 and 632.

1. General physical form (see attached list)
Combustibles (paper, cloth, wood, etc.).
[ ] other (specify)

2. Details on physical form(particularly confinement related)
Wood.

3. Chemical form:
Unknown.

4. Inner packaging: [ ] plastic bag [X] plastic liner
[ ] metal liner [ ] none [ ] other (specify)

5. Waste container type (see attached list)
Cardboard box*.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
4. Because of multiple containers, some were probably lined with plastic.
5. BLM, "Other", and BXW. "Other" cannot be defined by the preparer of this report.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
None.										

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Particulate.	Unknown.	T 1.4640000000000	CI	1960	1960	N			See continuation page.
C-14	Particulate.	Unknown.	T .19630000000000	CI	1960	1960	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 33.910000000000	CI	1960	1960	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .01017000000000	CI	1960	1960	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 5.7120000000000	CI	1960	1960	N			See continuation page.
Co-60	Particulate.	Unknown.	T 11.960000000000	CI	1960	1960	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .01642000000000	CI	1960	1960	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00321300000000	CI	1960	1960	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000083538000	CI	1960	1960	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Particulate.	Unknown.	T 3.5700000000000	CI	1960	1960	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .08389000000000	CI	1960	1960	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00005176000000	CI	1960	1960	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .16780000000000	CI	1960	1960	N			See continuation page.
U-234	Particulate.	Unknown.	T .00003748000000	CI	1960	1960	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000080320000	CI	1960	1960	N			See continuation page.
U-236	Particulate.	Unknown.	T .00001428000000	CI	1960	1960	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00002320000000	CI	1960	1960	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00096390000000	CI	1960	1960	N			See continuation page.

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Pu-239	Particulate.	Unknown.	T .00096390000000	CI	1960	1960	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00010170000000	CI	1960	1960	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .10530000000000	CI	1960	1960	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00048190000000	CI	1960	1960	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00048190000000	CI	1960	1960	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00044620000000	CI	1960	1960	N			See continuation page.
H-3	Particulate.	Unknown.	T 17.490000000000	CI	1961	1961	N			See continuation page.
C-14	Particulate.	Unknown.	T 2.3460000000000	CI	1961	1961	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 405.30000000000	CI	1961	1961	N			See continuation page.

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Ni-59	Particulate.	Unknown.	T .12160000000000	CI	1961	1961	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 68.260000000000	CI	1961	1961	N			See continuation page.
Co-60	Particulate.	Unknown.	T 142.90000000000	CI	1961	1961	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .19620000000000	CI	1961	1961	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .03839000000000	CI	1961	1961	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000998100000	CI	1961	1961	N			See continuation page.
Cs-137	Particulate.	Unknown.	T 42.660000000000	CI	1961	1961	N			See continuation page.
Ce-144	Particulate.	Unknown.	T 1.0030000000000	CI	1961	1961	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00061860000000	CI	1961	1961	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-155	Particulate.	Unknown.	T 2.0050000000000	CI	1961	1961	N			See continuation page.
U-234	Particulate.	Unknown.	T .00044790000000	CI	1961	1961	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000959900000	CI	1961	1961	N			See continuation page.
U-236	Particulate.	Unknown.	T .00017060000000	CI	1961	1961	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00027730000000	CI	1961	1961	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .01152000000000	CI	1961	1961	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .01152000000000	CI	1961	1961	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00121600000000	CI	1961	1961	N			See continuation page.
Pu-241	Particulate.	Unknown.	T 1.2580000000000	CI	1961	1961	N			See continuation page.

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Am-241	Particulate.	Unknown.	T .00575900000000	CI	1961	1961	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00575900000000	CI	1961	1961	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00533300000000	CI	1961	1961	N			See continuation page.
H-3	Particulate.	Unknown.	T .45300000000000	CI	1962	1962	N			See continuation page.
C-14	Particulate.	Unknown.	T .06077000000000	CI	1962	1962	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 10.500000000000	CI	1962	1962	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00314900000000	CI	1962	1962	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 1.7680000000000	CI	1962	1962	N			See continuation page.
Co-60	Particulate.	Unknown.	T 3.7020000000000	CI	1962	1962	N			See continuation page.

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Sr-90	Particulate.	Unknown.	T .00508300000000	CI	1962	1962	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00099450000000	CI	1962	1962	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000025857000	CI	1962	1962	N			See continuation page.
Cs-137	Particulate.	Unknown.	T 1.1050000000000	CI	1962	1962	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .02597000000000	CI	1962	1962	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00001602000000	CI	1962	1962	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .05193000000000	CI	1962	1962	N			See continuation page.
U-234	Particulate.	Unknown.	T .00001160000000	CI	1962	1962	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000024860000	CI	1962	1962	N			See continuation page.

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U-236	Particulate.	Unknown.	T .00000442000000	CI	1962	1962	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00000718200000	CI	1962	1962	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00029830000000	CI	1962	1962	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00029830000000	CI	1962	1962	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00003149000000	CI	1962	1962	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .03260000000000	CI	1962	1962	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00014920000000	CI	1962	1962	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00014920000000	CI	1962	1962	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00013810000000	CI	1962	1962	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Particulate.	Unknown.	T .62460000000000	CI	1963	1963	N			See continuation page.
C-14	Particulate.	Unknown.	T .08378000000000	CI	1963	1963	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 14.470000000000	CI	1963	1963	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00434200000000	CI	1963	1963	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 2.4370000000000	CI	1963	1963	N			See continuation page.
Co-60	Particulate.	Unknown.	T 5.1030000000000	CI	1963	1963	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .00700700000000	CI	1963	1963	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00137100000000	CI	1963	1963	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000035649000	CI	1963	1963	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Particulate.	Unknown.	T 1.5230000000000	CI	1963	1963	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .03580000000000	CI	1963	1963	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00002209000000	CI	1963	1963	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .07160000000000	CI	1963	1963	N			See continuation page.
U-234	Particulate.	Unknown.	T .00001600000000	CI	1963	1963	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000034280000	CI	1963	1963	N			See continuation page.
U-236	Particulate.	Unknown.	T .00000609300000	CI	1963	1963	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00000990200000	CI	1963	1963	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00041130000000	CI	1963	1963	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Particulate.	Unknown.	T .00041130000000	CI	1963	1963	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00004342000000	CI	1963	1963	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .04494000000000	CI	1963	1963	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00020570000000	CI	1963	1963	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00020570000000	CI	1963	1963	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00019040000000	CI	1963	1963	N			See continuation page.
H-3	Particulate.	Unknown.	T .65080000000000	CI	1963	1963	N			See continuation page.
C-14	Particulate.	Unknown.	T .08731000000000	CI	1963	1963	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 15.080000000000	CI	1964	1964	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Ni-59	Particulate.	Unknown.	T .00452400000000	CI	1964	1964	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 2.5400000000000	CI	1964	1964	N			See continuation page.
Co-60	Particulate.	Unknown.	T 5.3180000000000	CI	1964	1964	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .00730200000000	CI	1964	1964	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00142900000000	CI	1964	1964	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000037143000	CI	1964	1964	N			See continuation page.
Cs-137	Particulate.	Unknown.	T 1.5870000000000	CI	1964	1964	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .03730000000000	CI	1964	1964	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00002302000000	CI	1964	1964	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-155	Particulate.	Unknown.	T .07461000000000	CI	1964	1964	N			See continuation page.
U-234	Particulate.	Unknown.	T .00001667000000	CI	1964	1964	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000035720000	CI	1964	1964	N			See continuation page.
U-236	Particulate.	Unknown.	T .00000635000000	CI	1964	1964	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00001032000000	CI	1964	1964	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00042860000000	CI	1964	1964	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00042860000000	CI	1964	1964	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00004524000000	CI	1964	1964	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .04683000000000	CI	1964	1964	N			See continuation page.

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Am-241	Particulate.	Unknown.	T .00021430000000	CI	1964	1964	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00021430000000	CI	1964	1964	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00019840000000	CI	1964	1964	N			See continuation page.
H-3	Particulate.	Unknown.	T 60.580000000000	CI	1965	1965	N			See continuation page.
C-14	Particulate.	Unknown.	T 8.1270000000000	CI	1965	1965	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 1404.0000000000	CI	1965	1965	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .42110000000000	CI	1965	1965	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 236.40000000000	CI	1965	1965	N			See continuation page.
Co-60	Particulate.	Unknown.	T 495.00000000000	CI	1965	1965	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Sr-90	Particulate.	Unknown.	T .67970000000000	CI	1965	1965	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .13300000000000	CI	1965	1965	N			See continuation page.
I-129	Particulate.	Unknown.	T .00003457800000	CI	1965	1965	N			See continuation page.
Cs-137	Particulate.	Unknown.	T 147.80000000000	CI	1965	1965	N			See continuation page.
Ce-144	Particulate.	Unknown.	T 3.4720000000000	CI	1965	1965	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00214200000000	CI	1965	1965	N			See continuation page.
Eu-155	Particulate.	Unknown.	T 6.9450000000000	CI	1965	1965	N			See continuation page.
U-234	Particulate.	Unknown.	T .00155100000000	CI	1965	1965	N			See continuation page.
U-235	Particulate.	Unknown.	T .00003325000000	CI	1965	1965	N			See continuation page.

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U-236	Particulate.	Unknown.	T .00059100000000	CI	1965	1965	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00096040000000	CI	1965	1965	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .03989000000000	CI	1965	1965	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .03989000000000	CI	1965	1965	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00421100000000	CI	1965	1965	N			See continuation page.
Pu-241	Particulate.	Unknown.	T 4.3590000000000	CI	1965	1965	N			See continuation page.
Am-241	Particulate.	Unknown.	T .01995000000000	CI	1965	1965	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .01995000000000	CI	1965	1965	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .01847000000000	CI	1965	1965	N			See continuation page.

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H-3	Particulate.	Unknown.	T .67130000000000	CI	1966	1966	N			See continuation page.
C-14	Particulate.	Unknown.	T .09006000000000	CI	1966	1966	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 15.560000000000	CI	1966	1966	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00466700000000	CI	1966	1966	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 2.6200000000000	CI	1966	1966	N			See continuation page.
Co-60	Particulate.	Unknown.	T 5.4850000000000	CI	1966	1966	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .00753200000000	CI	1966	1966	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00147400000000	CI	1966	1966	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000038313000	CI	1966	1966	N			See continuation page.

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Cs-137	Particulate.	Unknown.	T 1.6370000000000	CI	1966	1966	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .03848000000000	CI	1966	1966	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00002374000000	CI	1966	1966	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .07696000000000	CI	1966	1966	N			See continuation page.
U-234	Particulate.	Unknown.	T .00001719000000	CI	1966	1966	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000036840000	CI	1966	1966	N			See continuation page.
U-236	Particulate.	Unknown.	T .00000655000000	CI	1966	1966	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00001064000000	CI	1966	1966	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00044210000000	CI	1966	1966	N			See continuation page.

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Pu-239	Particulate.	Unknown.	T .00044210000000	CI	1966	1966	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00004667000000	CI	1966	1966	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .04830000000000	CI	1966	1966	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00022110000000	CI	1966	1966	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00022110000000	CI	1966	1966	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00020470000000	CI	1966	1966	N			See continuation page.
H-3	Particulate.	Unknown.	T 15.600000000000	CI	1967	1967	N			See continuation page.
C-14	Particulate.	Unknown.	T 2.0930000000000	CI	1967	1967	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 361.40000000000	CI	1967	1967	N			See continuation page.

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Ni-59	Particulate.	Unknown.	T .10840000000000	CI	1967	1967	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 60.870000000000	CI	1967	1967	N			See continuation page.
Co-60	Particulate.	Unknown.	T 127.50000000000	CI	1967	1967	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .17500000000000	CI	1967	1967	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .03424000000000	CI	1967	1967	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000890280000	CI	1967	1967	N			See continuation page.
Cs-137	Particulate.	Unknown.	T 38.050000000000	CI	1967	1967	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .89410000000000	CI	1967	1967	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00055170000000	CI	1967	1967	N			See continuation page.

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Eu-155	Particulate.	Unknown.	T 1.7880000000000	CI	1967	1967	N			See continuation page.
U-234	Particulate.	Unknown.	T .00039950000000	CI	1967	1967	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000856000000	CI	1967	1967	N			See continuation page.
U-236	Particulate.	Unknown.	T .00015220000000	CI	1967	1967	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00024730000000	CI	1967	1967	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .01027000000000	CI	1967	1967	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .01027000000000	CI	1967	1967	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00108400000000	CI	1967	1967	N			See continuation page.
Pu-241	Particulate.	Unknown.	T 1.1220000000000	CI	1967	1967	N			See continuation page.

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Am-241	Particulate.	Unknown.	T .00513600000000	CI	1967	1967	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00513600000000	CI	1967	1967	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00475600000000	CI	1967	1967	N			See continuation page.
H-3	Particulate.	Unknown.	T .33080000000000	CI	1968	1968	N			See continuation page.
C-14	Particulate.	Unknown.	T .04437000000000	CI	1968	1968	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 7.6640000000000	CI	1968	1968	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00229900000000	CI	1968	1968	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 1.2910000000000	CI	1968	1968	N			See continuation page.
Co-60	Particulate.	Unknown.	T 2.7020000000000	CI	1968	1968	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Sr-90	Particulate.	Unknown.	T .00371100000000	CI	1968	1968	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00072600000000	CI	1968	1968	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000018873000	CI	1968	1968	N			See continuation page.
Cs-137	Particulate.	Unknown.	T .80670000000000	CI	1968	1968	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .01896000000000	CI	1968	1968	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00001170000000	CI	1968	1968	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .03792000000000	CI	1968	1968	N			See continuation page.
U-234	Particulate.	Unknown.	T .00000847000000	CI	1968	1968	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000018150000	CI	1968	1968	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-236	Particulate.	Unknown.	T .00000322700000	CI	1968	1968	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00000524400000	CI	1968	1968	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00021780000000	CI	1968	1968	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00021780000000	CI	1968	1968	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00002299000000	CI	1968	1968	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .02380000000000	CI	1968	1968	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00010890000000	CI	1968	1968	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00010890000000	CI	1968	1968	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00010080000000	CI	1968	1968	N			See continuation page.

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U-235	Particulate.	Unknown.	T .00001378000000	CI	1968	1968	N	-20%	+20%	See comment below.
H-3	Particulate.	Unknown.	T 4798.0000000000	CI	1969	1969	N			See continuation page.
C-14	Particulate.	Unknown.	T 643.60000000000	CI	1969	1969	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 111200.00000000	CI	1969	1969	N			See continuation page.
Ni-59	Particulate.	Unknown.	T 33.350000000000	CI	1969	1969	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 18720.000000000	CI	1969	1969	N			See continuation page.
Co-60	Particulate.	Unknown.	T 39200.000000000	CI	1969	1969	N			See continuation page.
Sr-90	Particulate.	Unknown.	T 53.830000000000	CI	1969	1969	N			See continuation page.
Tc-99	Particulate.	Unknown.	T 10.530000000000	CI	1969	1969	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
I-129	Particulate.	Unknown.	T .00273780000000	CI	1969	1969	N			See continuation page.
Cs-137	Particulate.	Unknown.	T 11700.000000000	CI	1969	1969	N			See continuation page.
Ce-144	Particulate.	Unknown.	T 275.00000000000	CI	1969	1969	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .16970000000000	CI	1969	1969	N			See continuation page.
Eu-155	Particulate.	Unknown.	T 550.00000000000	CI	1969	1969	N			See continuation page.
U-234	Particulate.	Unknown.	T .12290000000000	CI	1969	1969	N			See continuation page.
U-235	Particulate.	Unknown.	T .00263300000000	CI	1969	1969	N			See continuation page.
U-236	Particulate.	Unknown.	T .04681000000000	CI	1969	1969	N			See continuation page.
Np-237	Particulate.	Unknown.	T .07606000000000	CI	1969	1969	N			See continuation page.

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Pu-238	Particulate.	Unknown.	T 3.1590000000000	CI	1969	1969	N			See continuation page.
Pu-239	Particulate.	Unknown.	T 3.1590000000000	CI	1969	1969	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .33350000000000	CI	1969	1969	N			See continuation page.
Pu-241	Particulate.	Unknown.	T 345.20000000000	CI	1969	1969	N			See continuation page.
Am-241	Particulate.	Unknown.	T 1.5800000000000	CI	1969	1969	N			See continuation page.
Cm-242	Particulate.	Unknown.	T 1.5800000000000	CI	1969	1969	N			See continuation page.
Cm-244	Particulate.	Unknown.	T 1.4630000000000	CI	1969	1969	N			See continuation page.
U-235	Particulate.	Unknown.	T .00014623000000	CI	1969	1969	N	-20%	+20%	See comment below.
H-3	Particulate.	Unknown.	T .02215000000000	CI	1970	1970	N			See continuation page.

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C-14	Particulate.	Unknown.	T .00297100000000	CI	1970	1970	N			See continuation page.
Fe-55	Particulate.	Unknown.	T .51320000000000	CI	1970	1970	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00015400000000	CI	1970	1970	N			See continuation page.
Ni-63	Particulate.	Unknown.	T .08644000000000	CI	1970	1970	N			See continuation page.
Co-60	Particulate.	Unknown.	T .18100000000000	CI	1970	1970	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .00024850000000	CI	1970	1970	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00004862000000	CI	1970	1970	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000001265000	CI	1970	1970	N			See continuation page.
Cs-137	Particulate.	Unknown.	T .05402000000000	CI	1970	1970	N			See continuation page.

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Ce-144	Particulate.	Unknown.	T .00127000000000	CI	1970	1970	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00000078330000	CI	1970	1970	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .00253900000000	CI	1970	1970	N			See continuation page.
U-234	Particulate.	Unknown.	T .00000056720000	CI	1970	1970	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000001220000	CI	1970	1970	N			See continuation page.
U-236	Particulate.	Unknown.	T .00000021610000	CI	1970	1970	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00000035120000	CI	1970	1970	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00001459000000	CI	1970	1970	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00001459000000	CI	1970	1970	N			See continuation page.

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Pu-240	Particulate.	Unknown.	T .00000154000000	CI	1970	1970	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .00159400000000	CI	1970	1970	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00000729300000	CI	1970	1970	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00000729300000	CI	1970	1970	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00000675300000	CI	1970	1970	N			See continuation page.
H-3	Particulate.	Unknown.	T .00000082000000	CI	1971	1971	N			See continuation page.
C-14	Particulate.	Unknown.	T .00000011000000	CI	1971	1971	N			See continuation page.
Fe-55	Particulate.	Unknown.	T .00001900000000	CI	1971	1971	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00000000570000	CI	1971	1971	N			See continuation page.

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Ni-63	Particulate.	Unknown.	T .00000320000000	CI	1971	1971	N			See continuation page.
Co-60	Particulate.	Unknown.	T .00000670000000	CI	1971	1971	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .00000000920000	CI	1971	1971	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00000000180000	CI	1971	1971	N			See continuation page.
I-129	Particulate.	Unknown.	Unknown.	CI	1971	1971	N			See continuation page.
Cs-137	Particulate.	Unknown.	T .00000200000000	CI	1971	1971	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .00000004700000	CI	1971	1971	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00000000010000	CI	1971	1971	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .00000009400000	CI	1971	1971	N			See continuation page.

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U-234	Particulate.	Unknown.	T .00000000010000	CI	1971	1971	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00000000010000	CI	1971	1971	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00000000050000	CI	1971	1971	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00000000050000	CI	1971	1971	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00000000010000	CI	1971	1971	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .00000005900000	CI	1971	1971	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00000000030000	CI	1971	1971	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00000000030000	CI	1971	1971	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00000000020000	CI	1971	1971	N			See continuation page.

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H-3	Particulate.	Unknown.	T .01617000000000	CI	1972	1972	N			See continuation page.
C-14	Particulate.	Unknown.	T .00216900000000	CI	1972	1972	N			See continuation page.
Fe-55	Particulate.	Unknown.	T .37470000000000	CI	1972	1972	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00011240000000	CI	1972	1972	N			See continuation page.
Ni-63	Particulate.	Unknown.	T .06311000000000	CI	1972	1972	N			See continuation page.
Co-60	Particulate.	Unknown.	T .13210000000000	CI	1972	1972	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .00018140000000	CI	1972	1972	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00003550000000	CI	1972	1972	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000000923000	CI	1972	1972	N			See continuation page.

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Cs-137	Particulate.	Unknown.	T .03944000000000	CI	1972	1972	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .00092690000000	CI	1972	1972	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00000057190000	CI	1972	1972	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .00185400000000	CI	1972	1972	N			See continuation page.
U-234	Particulate.	Unknown.	T .00000041420000	CI	1972	1972	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000000890000	CI	1972	1972	N			See continuation page.
U-236	Particulate.	Unknown.	T .00000015780000	CI	1972	1972	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00000025640000	CI	1972	1972	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00001065000000	CI	1972	1972	N			See continuation page.

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Pu-239	Particulate.	Unknown.	T .00001065000000	CI	1972	1972	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00000112400000	CI	1972	1972	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .00116400000000	CI	1972	1972	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00000532500000	CI	1972	1972	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00000532500000	CI	1972	1972	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00000493100000	CI	1972	1972	N			See continuation page.
H-3	Particulate.	Unknown.	T .00147200000000	CI	1973	1973	N			See continuation page.
C-14	Particulate.	Unknown.	T .00019740000000	CI	1973	1973	N			See continuation page.
Fe-55	Particulate.	Unknown.	T .03410000000000	CI	1973	1973	N			See continuation page.

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Ni-59	Particulate.	Unknown.	T .00001023000000	CI	1973	1973	N			See continuation page.
Ni-63	Particulate.	Unknown.	T .00574300000000	CI	1973	1973	N			See continuation page.
Co-60	Particulate.	Unknown.	T .01203000000000	CI	1973	1973	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .00001651000000	CI	1973	1973	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00000323100000	CI	1973	1973	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000000084000	CI	1973	1973	N			See continuation page.
Cs-137	Particulate.	Unknown.	T .00359000000000	CI	1973	1973	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .00008436000000	CI	1973	1973	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00000005200000	CI	1973	1973	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-155	Particulate.	Unknown.	T .00016870000000	CI	1973	1973	N			See continuation page.
U-234	Particulate.	Unknown.	T .00000003770000	CI	1973	1973	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000000080000	CI	1973	1973	N			See continuation page.
U-236	Particulate.	Unknown.	T .00000001440000	CI	1973	1973	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00000002330000	CI	1973	1973	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00000096920000	CI	1973	1973	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00000096920000	CI	1973	1973	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00000010230000	CI	1973	1973	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .00010590000000	CI	1973	1973	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Am-241	Particulate.	Unknown.	T .00000048460000	CI	1973	1973	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00000048460000	CI	1973	1973	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00000044870000	CI	1973	1973	N			See continuation page.
H-3	Particulate.	Unknown.	T .00754000000000	CI	1974	1974	N			See continuation page.
C-14	Particulate.	Unknown.	T .00101100000000	CI	1974	1974	N			See continuation page.
Fe-55	Particulate.	Unknown.	T .17470000000000	CI	1974	1974	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00005241000000	CI	1974	1974	N			See continuation page.
Ni-63	Particulate.	Unknown.	T .02940000000000	CI	1974	1974	N			See continuation page.
Co-60	Particulate.	Unknown.	T .06161000000000	CI	1974	1974	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Sr-90	Particulate.	Unknown.	T .00008459000000	CI	1974	1974	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00001655000000	CI	1974	1974	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000000430000	CI	1974	1974	N			See continuation page.
Cs-137	Particulate.	Unknown.	T .01839000000000	CI	1974	1974	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .00043220000000	CI	1974	1974	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00000026660000	CI	1974	1974	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .00086430000000	CI	1974	1974	N			See continuation page.
U-234	Particulate.	Unknown.	T .00000019310000	CI	1974	1974	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000000410000	CI	1974	1974	N			See continuation page.

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U-236	Particulate.	Unknown.	T .00000007360000	CI	1974	1974	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00000011950000	CI	1974	1974	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00000496500000	CI	1974	1974	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00000496500000	CI	1974	1974	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00000052410000	CI	1974	1974	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .00054250000000	CI	1974	1974	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00000248300000	CI	1974	1974	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00000248300000	CI	1974	1974	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00000229900000	CI	1974	1974	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Co-60	Particulate.	Unknown.	T .07000000000000	CI	1974	1974	N	-20%	+20%	See comment below.
Cr-51	Particulate.	Unknown.	T .63000000000000	CI	1974	1974	N	-20%	+20%	See comment below.
Fe-59	Particulate.	Unknown.	T .08000000000000	CI	1974	1974	N	-20%	+20%	See comment below.
H-3	Particulate.	Unknown.	T .05467000000000	CI	1975	1975	N			See continuation page.
C-14	Particulate.	Unknown.	T .00733400000000	CI	1975	1975	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 1.2670000000000	CI	1975	1975	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00038000000000	CI	1975	1975	N			See continuation page.
Ni-63	Particulate.	Unknown.	T .21330000000000	CI	1975	1975	N			See continuation page.
Co-60	Particulate.	Unknown.	T .44670000000000	CI	1975	1975	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Sr-90	Particulate.	Unknown.	T .00061340000000	CI	1975	1975	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00012000000000	CI	1975	1975	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000003120000	CI	1975	1975	N			See continuation page.
Cs-137	Particulate.	Unknown.	T .13330000000000	CI	1975	1975	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .00313300000000	CI	1975	1975	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00000193300000	CI	1975	1975	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .00626700000000	CI	1975	1975	N			See continuation page.
U-234	Particulate.	Unknown.	T .00000140000000	CI	1975	1975	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000003000000	CI	1975	1975	N			See continuation page.

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U-236	Particulate.	Unknown.	T .00000053340000	CI	1975	1975	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00000086670000	CI	1975	1975	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00003600000000	CI	1975	1975	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00003600000000	CI	1975	1975	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00000380000000	CI	1975	1975	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .00393400000000	CI	1975	1975	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00001800000000	CI	1975	1975	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00001800000000	CI	1975	1975	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00001667000000	CI	1975	1975	N			See continuation page.

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H-3	Particulate.	Unknown.	T .00000008200000	CI	1976	1976	N			See continuation page.
C-14	Particulate.	Unknown.	T .00000001100000	CI	1976	1976	N			See continuation page.
Fe-55	Particulate.	Unknown.	T .00000190000000	CI	1976	1976	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00000000060000	CI	1976	1976	N			See continuation page.
Ni-63	Particulate.	Unknown.	T .00000032000000	CI	1976	1976	N			See continuation page.
Co-60	Particulate.	Unknown.	T .00000067000000	CI	1976	1976	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .00000000090000	CI	1976	1976	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00000000020000	CI	1976	1976	N			See continuation page.
I-129	Particulate.	Unknown.	Unknown.	CI	1976	1976	N			See continuation page.

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Cs-137	Particulate.	Unknown.	T .00000020000000	CI	1976	1976	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .00000000470000	CI	1976	1976	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .00000000940000	CI	1976	1976	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00000000010000	CI	1976	1976	N			See continuation page.
Pu-239	Particulate.	Unknown.	T .00000000010000	CI	1976	1976	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .00000000590000	CI	1976	1976	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00000000010000	CI	1976	1976	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00000000010000	CI	1976	1976	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00000000010000	CI	1976	1976	N			See continuation page.

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H-3	Particulate.	Unknown.	T .25770000000000	CI	1977	1977	N			See continuation page.
C-14	Particulate.	Unknown.	T .03457000000000	CI	1977	1977	N			See continuation page.
Fe-55	Particulate.	Unknown.	T 5.9710000000000	CI	1977	1977	N			See continuation page.
Ni-59	Particulate.	Unknown.	T .00179100000000	CI	1977	1977	N			See continuation page.
Ni-63	Particulate.	Unknown.	T 1.0060000000000	CI	1977	1977	N			See continuation page.
Co-60	Particulate.	Unknown.	T 2.1060000000000	CI	1977	1977	N			See continuation page.
Sr-90	Particulate.	Unknown.	T .00289100000000	CI	1977	1977	N			See continuation page.
Tc-99	Particulate.	Unknown.	T .00056570000000	CI	1977	1977	N			See continuation page.
I-129	Particulate.	Unknown.	T .00000014706000	CI	1977	1977	N			See continuation page.

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Cs-137	Particulate.	Unknown.	T .62850000000000	CI	1977	1977	N			See continuation page.
Ce-144	Particulate.	Unknown.	T .01477000000000	CI	1977	1977	N			See continuation page.
Eu-154	Particulate.	Unknown.	T .00000911400000	CI	1977	1977	N			See continuation page.
Eu-155	Particulate.	Unknown.	T .02954000000000	CI	1977	1977	N			See continuation page.
U-234	Particulate.	Unknown.	T .00000660000000	CI	1977	1977	N			See continuation page.
U-235	Particulate.	Unknown.	T .00000014140000	CI	1977	1977	N			See continuation page.
U-236	Particulate.	Unknown.	T .00000251400000	CI	1977	1977	N			See continuation page.
Np-237	Particulate.	Unknown.	T .00000408600000	CI	1977	1977	N			See continuation page.
Pu-238	Particulate.	Unknown.	T .00016970000000	CI	1977	1977	N			See continuation page.

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Pu-239	Particulate.	Unknown.	T .00016970000000	CI	1977	1977	N			See continuation page.
Pu-240	Particulate.	Unknown.	T .00001791000000	CI	1977	1977	N			See continuation page.
Pu-241	Particulate.	Unknown.	T .01854000000000	CI	1977	1977	N			See continuation page.
Am-241	Particulate.	Unknown.	T .00008485000000	CI	1977	1977	N			See continuation page.
Cm-242	Particulate.	Unknown.	T .00008485000000	CI	1977	1977	N			See continuation page.
Cm-244	Particulate.	Unknown.	T .00007857000000	CI	1977	1977	N			See continuation page.

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1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [ ] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
A portion of, or all of the measurements, were assumed to be taken using a G-M detector which only measures gamma emitters; beta emitters have been added to the RWMIS activity based on scaling factors. Therefore, the total activity will be greater than that in RWMIS.

7. Major unknowns in inventories of contaminants:
MAP, MFP, and beta-gamma radionuclides were not known.

8. Key assumptions used to deal with the unknowns:
MFP radionuclides were chosen based on their fissionable products and half lives. MAP radionuclides were chosen based on their cross section and half lives. MAP and MFP radionuclides combined are the unidentified beta - gamma radionuclides. On part D, no G-M counter correction is needed to entries for which upper and lower bounds are given. The presence of such bounds indicates that the estimate was based on weight, laboratory analysis, spectrometry, and/or mathematical calculations. The G-M counter correction is needed for entries for which no bounds are given, because such estimates were originally made using the G-M counter method.

Continuation of Part D Column or Question Number or Title Uncertainty basis.

Because of the time spread, 1960-1977, the method of analysis is not known. Radionuclide information was obtained from a variety of methods such as a smear, a Geiger-Mueller counter, NaI and Germanium detectors. Therefore, the true uncertainty is not known.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 199

1. Preparer: Nieschmidt, Ernest

2. Date prepared: 08/30/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 603
(building number - use code from attached list)

5. Number of waste stream from this facility:
21H

6. Waste stream:
Construction materials, concrete, brick, sand, soil and asphalt.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1960 Ending year 1978

9. Waste stream volume:
Amount 399.0000 Units Cubic meters.
Check box: [ ] annual or [X] total over all years
Check box: [ ] container volume or [X] waste volume

10. Comments (specify number of pertinent question):

1. General physical form (see attached list)
Concrete, brick, and asphalt.
[ ] other (specify)

2. Details on physical form(particularly confinement related)
Blocks, chunks and rubble.

3. Chemical form:
Various, see below.

4. Inner packaging: [ ] plastic bag [X] plastic liner
[ ] metal liner [ ] none [ ] other (specify)

5. Waste container type (see attached list)
Wooden box.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
3. Chemical form concrete - calcium silicate with hydrated water. Asphalt - petroleum based.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
None.										

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Solid.	Oxide.	A 56.430000000000	CI	1960	1960	N			See comments (a,b) below.
C-14	Solid.	Oxide.	A 7.5700000000000	CI	1960	1960	N			See comment (b) below.
Fe-55	Solid.	Oxide.	A 1308.0000000000	CI	1960	1960	N			See comment (b) below.
Ni-59	Solid.	Oxide.	A .39230000000000	CI	1960	1960	N			See comment (b) below.
Ni-63	Solid.	Oxide.	A 220.20000000000	CI	1960	1960	N			See comment (b) below.
Co-60	Solid.	Oxide.	A 461.10000000000	CI	1960	1960	N			See comment (b) below.
Sr-90	Solid.	Oxide.	A .63320000000000	CI	1960	1960	N			See comment (b) below.
Tc-99	Solid.	Oxide.	A .12390000000000	CI	1960	1960	N			See comment (b) below.
I-129	Solid.	Oxide.	A .00003221100000	CI	1960	1960	N			See comment (b) below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
a. H signifies hydrogen, which is chemically bound in hydrogenous materials.
b. Basis for default uncertainty - method of measurement.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Solid.	Oxide.	A 137.60000000000	CI	1960	1960	N			See comment (b) below.
Ce-144	Solid.	Oxide.	A 3.2350000000000	CI	1960	1960	N			See comment (b) below.
Eu-154	Solid.	Oxide.	A .00199600000000	CI	1960	1960	N			See comment (b) below.
Eu-155	Solid.	Oxide.	A 6.4690000000000	CI	1960	1960	N			See comment (b) below.
U-234	Solid.	Oxide.	A .00144500000000	CI	1960	1960	N			See comment (b) below.
U-235	Solid.	Oxide.	A .00003097000000	CI	1960	1960	N			See comment (b) below.
U-236	Solid.	Oxide.	A .00055060000000	CI	1960	1960	N			See comment (b) below.
Np-237	Solid.	Oxide.	A .00089470000000	CI	1960	1960	N			See comment (b) below.
Pu-238	Solid.	Oxide.	A .03716000000000	CI	1960	1960	N			See comment (b) below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
a. H signifies hydrogen, which is chemically bound in hydrogenous materials.
b. Basis for default uncertainty - method of measurement.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Solid.	Oxide.	A .03716000000000	CI	1960	1960	N			See comment (b) below.
Pu-240	Solid.	Oxide.	A .00392300000000	CI	1960	1960	N			See comment (b) below.
Pu-241	Solid.	Oxide.	A 4.0600000000000	CI	1960	1960	N			See comment (b) below.
Am-241	Solid.	Oxide.	A .01858000000000	CI	1960	1960	N			See comment (b) below.
Cm-242	Solid.	Oxide.	A .01858000000000	CI	1960	1960	N			See comment (b) below.
Cm-244	Solid.	Oxide.	A .01721000000000	CI	1960	1960	N			See comment (b) below.
H-3	Solid.	Oxide.	A 2.6670000000000	CI	1962	1962	N			See comment (b) below.
C-14	Solid.	Oxide.	A .35780000000000	CI	1962	1962	N			See comment (b) below.
Fe-55	Solid.	Oxide.	A 61.800000000000	CI	1962	1962	N			See comment (b) below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
a. H signifies hydrogen, which is chemically bound in hydrogenous materials.
b. Basis for default uncertainty - method of measurement.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Ni-59	Solid.	Oxide.	A .01854000000000	CI	1962	1962	N			See comment (b) below.
Ni-63	Solid.	Oxide.	A 10.410000000000	CI	1962	1962	N			See comment (b) below.
Co-60	Solid.	Oxide.	A 21.790000000000	CI	1962	1962	N			See comment (b) below.
Sr-90	Solid.	Oxide.	A .02993000000000	CI	1962	1962	N			See comment (b) below.
Tc-99	Solid.	Oxide.	A .00585500000000	CI	1962	1962	N			See comment (b) below.
I-129	Solid.	Oxide.	A .00000152190000	CI	1962	1962	N			See comment (b) below.
Cs-137	Solid.	Oxide.	A 6.5060000000000	CI	1962	1962	N			See comment (b) below.
Ce-144	Solid.	Oxide.	A .15290000000000	CI	1962	1962	N			See comment (b) below.
Eu-154	Solid.	Oxide.	A .00009433000000	CI	1962	1962	N			See comment (b) below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
a. H signifies hydrogen, which is chemically bound in hydrogenous materials.
b. Basis for default uncertainty - method of measurement.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-155	Solid.	Oxide.	A .30580000000000	CI	1962	1962	N			See comment (b) below.
U-234	Solid.	Oxide.	A .00006831000000	CI	1962	1962	N			See comment (b) below.
U-235	Solid.	Oxide.	A .00000146400000	CI	1962	1962	N			See comment (b) below.
U-236	Solid.	Oxide.	A .00002602000000	CI	1962	1962	N			See comment (b) below.
Np-237	Solid.	Oxide.	A .00004229000000	CI	1962	1962	N			See comment (b) below.
Pu-238	Solid.	Oxide.	A .00175700000000	CI	1962	1962	N			See comment (b) below.
Pu-239	Solid.	Oxide.	A .00175700000000	CI	1962	1962	N			See comment (b) below.
Pu-240	Solid.	Oxide.	A .00018540000000	CI	1962	1962	N			See comment (b) below.
Pu-241	Solid.	Oxide.	A .19190000000000	CI	1962	1962	N			See comment (b) below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

a. H signifies hydrogen, which is chemically bound in hydrogenous materials.

b. Basis for default uncertainty - method of measurement.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Am-241	Solid.	Oxide.	A .00087830000000	CI	1962	1962	N			See comment (b) below.
Cm-242	Solid.	Oxide.	A .00087830000000	CI	1962	1962	N			See comment (b) below.
Cm-244	Solid.	Oxide.	A .00081320000000	CI	1962	1962	N			See comment (b) below.
H-3	Solid.	Oxide.	A .01813000000000	CI	1964	1964	N			See comment (b) below.
C-14	Solid.	Oxide.	A .00243200000000	CI	1964	1964	N			See comment (b) below.
Fe-55	Solid.	Oxide.	A .42010000000000	CI	1964	1964	N			See comment (b) below.
Ni-59	Solid.	Oxide.	A .00012600000000	CI	1964	1964	N			See comment (b) below.
Ni-63	Solid.	Oxide.	A .07075000000000	CI	1964	1964	N			See comment (b) below.
Co-60	Solid.	Oxide.	A .14810000000000	CI	1964	1964	N			See comment (b) below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
a. H signifies hydrogen, which is chemically bound in hydrogenous materials.
b. Basis for default uncertainty - method of measurement.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Sr-90	Solid.	Oxide.	A .00020340000000	CI	1964	1964	N			See comment (b) below.
Tc-99	Solid.	Oxide.	A .00003980000000	CI	1964	1964	N			See comment (b) below.
I-129	Solid.	Oxide.	A .00000001035000	CI	1964	1964	N			See comment (b) below.
Cs-137	Solid.	Oxide.	A 2.4220000000000	CI	1964	1964	N			See comment (b) below.
Ce-144	Solid.	Oxide.	A .00103900000000	CI	1964	1964	N			See comment (b) below.
Eu-154	Solid.	Oxide.	A .00000064120000	CI	1964	1964	N			See comment (b) below.
Eu-155	Solid.	Oxide.	A .00207800000000	CI	1964	1964	N			See comment (b) below.
U-234	Solid.	Oxide.	A .00000046430000	CI	1964	1964	N			See comment (b) below.
U-235	Solid.	Oxide.	A .00000000990000	CI	1964	1964	N			See comment (b) below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
a. H signifies hydrogen, which is chemically bound in hydrogenous materials.
b. Basis for default uncertainty - method of measurement.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-236	Solid.	Oxide.	A .00000017690000	CI	1964	1964	N			See comment (b) below.
Np-237	Solid.	Oxide.	A .00000028740000	CI	1964	1964	N			See comment (b) below.
Pu-238	Solid.	Oxide.	A .00001194000000	CI	1964	1964	N			See comment (b) below.
Pu-239	Solid.	Oxide.	A .00001194000000	CI	1964	1964	N			See comment (b) below.
Pu-240	Solid.	Oxide.	A .00000126000000	CI	1964	1964	N			See comment (b) below.
Pu-241	Solid.	Oxide.	A .00130400000000	CI	1964	1964	N			See comment (b) below.
Am-241	Solid.	Oxide.	A .00000597000000	CI	1964	1964	N			See comment (b) below.
Cm-242	Solid.	Oxide.	A .00000596000000	CI	1964	1964	N			See comment (b) below.
Cm-244	Solid.	Oxide.	A .00000552700000	CI	1964	1964	N			See comment (b) below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

a. H signifies hydrogen, which is chemically bound in hydrogenous materials.

b. Basis for default uncertainty - method of measurement.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Solid.	Oxide.	A 50050.000000000	CI	1978	1978	N			See comment (b) below.
C-14	Solid.	Oxide.	A 6714.0000000000	CI	1978	1978	N			See comment (b) below.
Fe-55	Solid.	Oxide.	A 1160000.0000000	CI	1978	1978	N			See comment (b) below.
Ni-59	Solid.	Oxide.	A 347.90000000000	CI	1978	1978	N			See comment (b) below.
Ni-63	Solid.	Oxide.	A 195300.00000000	CI	1978	1978	N			See comment (b) below.
Co-60	Solid.	Oxide.	A 409000.00000000	CI	1978	1978	N			See comment (b) below.
Sr-90	Solid.	Oxide.	A 561.60000000000	CI	1978	1978	N			See comment (b) below.
Tc-99	Solid.	Oxide.	A 109.90000000000	CI	1978	1978	N			See comment (b) below.
I-129	Solid.	Oxide.	A .02856600000000	CI	1978	1978	N			See comment (b) below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

a. H signifies hydrogen, which is chemically bound in hydrogenous materials.

b. Basis for default uncertainty - method of measurement.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Solid.	Oxide.	A 122100.00000000	CI	1978	1978	N			See comment (b) below.
Ce-144	Solid.	Oxide.	A 2869.0000000000	CI	1978	1978	N			See comment (b) below.
Eu-154	Solid.	Oxide.	A 1.7700000000000	CI	1978	1978	N			See comment (b) below.
Eu-155	Solid.	Oxide.	A 5738.0000000000	CI	1978	1978	N			See comment (b) below.
U-234	Solid.	Oxide.	A 1.2820000000000	CI	1978	1978	N			See comment (b) below.
U-235	Solid.	Oxide.	A .02747000000000	CI	1978	1978	N			See comment (b) below.
U-236	Solid.	Oxide.	A .48830000000000	CI	1978	1978	N			See comment (b) below.
Np-237	Solid.	Oxide.	A .79350000000000	CI	1978	1978	N			See comment (b) below.
Pu-238	Solid.	Oxide.	A 32.960000000000	CI	1978	1978	N			See comment (b) below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

a. H signifies hydrogen, which is chemically bound in hydrogenous materials.

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For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Solid.	Oxide.	A 32.960000000000	CI	1978	1978	N			See comment (b) below.
Pu-240	Solid.	Oxide.	A 3.4790000000000	CI	1978	1978	N			See comment (b) below.
Pu-241	Solid.	Oxide.	A 3601.0000000000	CI	1978	1978	N			See comment (b) below.
Am-241	Solid.	Oxide.	A 16.480000000000	CI	1978	1978	N			See comment (b) below.
Cm-242	Solid.	Oxide.	A 16.480000000000	CI	1978	1978	N			See comment (b) below.
Cm-244	Solid.	Oxide.	A 15.260000000000	CI	1978	1978	N			See comment (b) below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

a. H signifies hydrogen, which is chemically bound in hydrogenous materials.

b. Basis for default uncertainty - method of measurement.

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [ ] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
A portion of, or all of the measurements, were assumed to be taken using a G-M detector which only measures gamma emitters; beta emitters have been added to the RWMIS activity based on scaling factors. Therefore, the total activity will be greater than that in RWMIS.

7. Major unknowns in inventories of contaminants:
Assume oxides on concrete.

8. Key assumptions used to deal with the unknowns:
On part D, no G-M counter correction is needed to entries for which upper and lower bounds are given. The presence of such bounds indicates that the estimate was based on weight, laboratory analysis, spectrometry, and/or mathematical calculations. The G-M counter correction is needed for entries for which no bounds are given, because such estimates were originally made using the G-M counter method.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 198

1. Preparer: Amaro, C.

2. Date prepared: 09/01/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 603
(building number - use code from attached list)

5. Number of waste stream from this facility:
22H

6. Waste stream:
Rags, floor sweepings and glassware.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1971 Ending year 1983

9. Waste stream volume:
Amount 1204.0978 Units Cubic feet.
Check box: [ ] annual or [X] total over all years
Check box: [X] container volume or [ ] waste volume

10. Comments (specify number of pertinent question):
4. Also 604, 614, 624, 632, 642, 647, 653, 657, 662, and 670.

1. General physical form (see attached list)
Combustibles (paper, cloth, wood, etc.).
[X] other (specify)
42.

2. Details on physical form(particularly confinement related)
Plant waste is 40% rags, 40% floor sweepings and 20% glassware.

3. Chemical form:
Unknown.

4. Inner packaging: [ ] plastic bag [X] plastic liner
[ ] metal liner [ ] none [ ] other (specify)

5. Waste container type (see attached list)
Cardboard box*.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
4. Because of the multiple containers, it is only assumed they are lined with plastic.
5. BLX, BXW, "Other" and BLM. "Other" cannot be defined by the preparer.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
None.										

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Unknown.	Unknown.	T 1.2240000000000	CI	1971	1971	N			See continuation page.
C-14	Unknown.	Unknown.	T .16420000000000	CI	1971	1971	N			See continuation page.
Fe-55	Unknown.	Unknown.	T 28.360000000000	CI	1971	1971	N			See continuation page.
Ni-59	Unknown.	Unknown.	T .00850900000000	CI	1971	1971	N			See continuation page.
Ni-63	Unknown.	Unknown.	T 4.7770000000000	CI	1971	1971	N			See continuation page.
Co-60	Unknown.	Unknown.	T 10.000000000000	CI	1971	1971	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .01373000000000	CI	1971	1971	N			See continuation page.
Tc-99	Unknown.	Unknown.	T .00268700000000	CI	1971	1971	N			See continuation page.
I-129	Unknown.	Unknown.	T .00000069867000	CI	1971	1971	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Unknown.	Unknown.	T 2.9860000000000	CI	1971	1971	N			See continuation page.
Ce-144	Unknown.	Unknown.	T .07016000000000	CI	1971	1971	N			See continuation page.
Eu-154	Unknown.	Unknown.	T .00004329000000	CI	1971	1971	N			See continuation page.
Eu-155	Unknown.	Unknown.	T .14030000000000	CI	1971	1971	N			See continuation page.
U-234	Unknown.	Unknown.	T .00003135000000	CI	1971	1971	N			See continuation page.
U-235	Unknown.	Unknown.	T .00000067180000	CI	1971	1971	N			See continuation page.
U-236	Unknown.	Unknown.	T .00001194000000	CI	1971	1971	N			See continuation page.
Np-237	Unknown.	Unknown.	T .00001941000000	CI	1971	1971	N			See continuation page.
Pu-238	Unknown.	Unknown.	T .00080610000000	CI	1971	1971	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Unknown.	Unknown.	T .00080610000000	CI	1971	1971	N			See continuation page.
Pu-240	Unknown.	Unknown.	T .00008509000000	CI	1971	1971	N			See continuation page.
Pu-241	Unknown.	Unknown.	T .08807000000000	CI	1971	1971	N			See continuation page.
Am-241	Unknown.	Unknown.	T .00040310000000	CI	1971	1971	N			See continuation page.
Cm-242	Unknown.	Unknown.	T .00040310000000	CI	1971	1971	N			See continuation page.
Cm-244	Unknown.	Unknown.	T .00037320000000	CI	1971	1971	N			See continuation page.
Ba-140	Unknown.	Unknown.	T .09000000000000	CI	1971	1971	N	-20%	+20%	See comment below.
La-140	Unknown.	Unknown.	T .09000000000000	CI	1971	1971	N	-20%	+20%	See comment below.
Ce-141	Unknown.	Unknown.	T .05000000000000	CI	1971	1971	N	-20%	+20%	See comment below.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Co-58	Unknown.	Unknown.	T .94000000000000	CI	1971	1971	N	-20%	+20%	See comment below.
Co-60	Unknown.	Unknown.	T 2.3900000000000	CI	1971	1971	N	-20%	+20%	See comment below.
Hf-181	Unknown.	Unknown.	T .28000000000000	CI	1971	1971	N	-20%	+20%	See comment below.
I-131	Unknown.	Unknown.	T 1.4100000000000	CI	1971	1971	N	-20%	+20%	See comment below.
I-133	Unknown.	Unknown.	T .05000000000000	CI	1971	1971	N	-20%	+20%	See comment below.
Mn-54	Unknown.	Unknown.	T .12000000000000	CI	1971	1971	N	-20%	+20%	See comment below.
Mn-56	Unknown.	Unknown.	T 1.4800000000000	CI	1971	1971	N	-20%	+20%	See comment below.
U-235	Unknown.	Unknown.	T .00000041040000	CI	1971	1971	N	-20%	+20%	See comment below.
H-3	Unknown.	Unknown.	T .74190000000000	CI	1972	1972	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
C-14	Unknown.	Unknown.	T .09953000000000	CI	1972	1972	N			See continuation page.
Fe-55	Unknown.	Unknown.	T 17.190000000000	CI	1972	1972	N			See continuation page.
Ni-59	Unknown.	Unknown.	T .00515700000000	CI	1972	1972	N			See continuation page.
Ni-63	Unknown.	Unknown.	T 2.8950000000000	CI	1972	1972	N			See continuation page.
Co-60	Unknown.	Unknown.	T 6.0620000000000	CI	1972	1972	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .00832400000000	CI	1972	1972	N			See continuation page.
Tc-99	Unknown.	Unknown.	T .00162900000000	CI	1972	1972	N			See continuation page.
I-129	Unknown.	Unknown.	T .00000042345000	CI	1972	1972	N			See continuation page.
Cs-137	Unknown.	Unknown.	T 1.8100000000000	CI	1972	1972	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Ce-144	Unknown.	Unknown.	T .04253000000000	CI	1972	1972	N			See continuation page.
Eu-154	Unknown.	Unknown.	T .00002624000000	CI	1972	1972	N			See continuation page.
Eu-155	Unknown.	Unknown.	T .08505000000000	CI	1972	1972	N			See continuation page.
U-234	Unknown.	Unknown.	T .00001900000000	CI	1972	1972	N			See continuation page.
U-235	Unknown.	Unknown.	T .00000040720000	CI	1972	1972	N			See continuation page.
U-236	Unknown.	Unknown.	T .00000723800000	CI	1972	1972	N			See continuation page.
Np-237	Unknown.	Unknown.	T .00001176000000	CI	1972	1972	N			See continuation page.
Pu-238	Unknown.	Unknown.	T .00048860000000	CI	1972	1972	N			See continuation page.
Pu-239	Unknown.	Unknown.	T .00048860000000	CI	1972	1972	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-240	Unknown.	Unknown.	T .00005157000000	CI	1972	1972	N			See continuation page.
Pu-241	Unknown.	Unknown.	T .05338000000000	CI	1972	1972	N			See continuation page.
Am-241	Unknown.	Unknown.	T .00024430000000	CI	1972	1972	N			See continuation page.
Cm-242	Unknown.	Unknown.	T .00024430000000	CI	1972	1972	N			See continuation page.
Cm-244	Unknown.	Unknown.	T .00022620000000	CI	1972	1972	N			See continuation page.
Ra-226	Unknown.	Unknown.	T 1.2500000000000	CI	1972	1972	N	-20%	+20%	See comment below.
H-3	Unknown.	Unknown.	T .63680000000000	CI	1973	1973	N			See continuation page.
C-14	Unknown.	Unknown.	T .08542000000000	CI	1973	1973	N			See continuation page.
Fe-55	Unknown.	Unknown.	T 14.760000000000	CI	1973	1973	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Ni-59	Unknown.	Unknown.	T .00442700000000	CI	1973	1973	N			See continuation page.
Ni-63	Unknown.	Unknown.	T 2.4850000000000	CI	1973	1973	N			See continuation page.
Co-60	Unknown.	Unknown.	T 5.2030000000000	CI	1973	1973	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .00714500000000	CI	1973	1973	N			See continuation page.
Tc-99	Unknown.	Unknown.	T .00139800000000	CI	1973	1973	N			See continuation page.
I-129	Unknown.	Unknown.	T .00000036342000	CI	1973	1973	N			See continuation page.
Cs-137	Unknown.	Unknown.	T 1.5530000000000	CI	1973	1973	N			See continuation page.
Ce-144	Unknown.	Unknown.	T .03650000000000	CI	1973	1973	N			See continuation page.
Eu-154	Unknown.	Unknown.	T .00002252000000	CI	1973	1973	N			See continuation page.

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Eu-155	Unknown.	Unknown.	T .07300000000000	CI	1973	1973	N			See continuation page.
U-234	Unknown.	Unknown.	T .00001631000000	CI	1973	1973	N			See continuation page.
U-235	Unknown.	Unknown.	T .00000034950000	CI	1973	1973	N			See continuation page.
U-236	Unknown.	Unknown.	T .00000621300000	CI	1973	1973	N			See continuation page.
Pu-241	Unknown.	Unknown.	T .04582000000000	CI	1973	1973	N			See continuation page.
Np-237	Unknown.	Unknown.	T .00000037400000	CI	1973	1973	N			See continuation page.
Pu-238	Unknown.	Unknown.	T .00158100000000	CI	1973	1973	N			See continuation page.
Pu-239	Unknown.	Unknown.	T .00000680000000	CI	1973	1973	N			See continuation page.
Pu-240	Unknown.	Unknown.	T .00000408000000	CI	1973	1973	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samp les?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-242	Unknown.	Unknown.	T .00000004250000	CI	1973	1973	N			See continuation page.
Am-241	Unknown.	Unknown.	T .00000476000000	CI	1973	1973	N			See continuation page.
Cm-242	Unknown.	Unknown.	T .00002720000000	CI	1973	1973	N			See continuation page.
Cm-244	Unknown.	Unknown.	T .00007480000000	CI	1973	1973	N			See continuation page.
C-14	Unknown.	Unknown.	T .34000000000000	CI	1973	1973	N	-20%	+20%	See comment below.
Cr-51	Unknown.	Unknown.	T 3.0400000000000	CI	1973	1973	N	-20%	+20%	See comment below.
Fe-59	Unknown.	Unknown.	T .38000000000000	CI	1973	1973	N	-20%	+20%	See comment below.
H-3	Unknown.	Unknown.	T .27820000000000	CI	1974	1974	N			See continuation page.
C-14	Unknown.	Unknown.	T .03732000000000	CI	1974	1974	N			See continuation page.

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Fe-55	Unknown.	Unknown.	T 6.4470000000000	CI	1974	1974	N			See continuation page.
Ni-59	Unknown.	Unknown.	T .00193400000000	CI	1974	1974	N			See continuation page.
Ni-63	Unknown.	Unknown.	T 1.0860000000000	CI	1974	1974	N			See continuation page.
Co-60	Unknown.	Unknown.	T 2.2730000000000	CI	1974	1974	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .00312200000000	CI	1974	1974	N			See continuation page.
Tc-99	Unknown.	Unknown.	T .00061070000000	CI	1974	1974	N			See continuation page.
I-129	Unknown.	Unknown.	T .00000015876000	CI	1974	1974	N			See continuation page.
Cs-137	Unknown.	Unknown.	T .67860000000000	CI	1974	1974	N			See continuation page.
Ce-144	Unknown.	Unknown.	T .01595000000000	CI	1974	1974	N			See continuation page.

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Eu-154	Unknown.	Unknown.	T .00000984000000	CI	1974	1974	N			See continuation page.
Eu-155	Unknown.	Unknown.	T .03189000000000	CI	1974	1974	N			See continuation page.
U-234	Unknown.	Unknown.	T .00000712500000	CI	1974	1974	N			See continuation page.
U-235	Unknown.	Unknown.	T .00000015270000	CI	1974	1974	N			See continuation page.
U-236	Unknown.	Unknown.	T .00000271400000	CI	1974	1974	N			See continuation page.
Np-237	Unknown.	Unknown.	T .00000441100000	CI	1974	1974	N			See continuation page.
Pu-238	Unknown.	Unknown.	T .00018320000000	CI	1974	1974	N			See continuation page.
Pu-239	Unknown.	Unknown.	T .00018320000000	CI	1974	1974	N			See continuation page.
Pu-240	Unknown.	Unknown.	T .00001934000000	CI	1974	1974	N			See continuation page.

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Pu-241	Unknown.	Unknown.	T .02002000000000	CI	1974	1974	N			See continuation page.
Am-241	Unknown.	Unknown.	T .00009161000000	CI	1974	1974	N			See continuation page.
Cm-242	Unknown.	Unknown.	T .00009161000000	CI	1974	1974	N			See continuation page.
Cm-244	Unknown.	Unknown.	T .00008482000000	CI	1974	1974	N			See continuation page.
Ce-141	Unknown.	Unknown.	T .03000000000000	CI	1974	1974	N	-20%	+20%	See comment below.
Co-60	Unknown.	Unknown.	T 2.7000000000000	CI	1974	1974	N	-20%	+20%	See comment below.
Cr-51	Unknown.	Unknown.	T 2.6700000000000	CI	1974	1974	N	-20%	+20%	See comment below.
Cs-137	Unknown.	Unknown.	T .05000000000000	CI	1974	1974	N	-20%	+20%	See comment below.
Fe-59	Unknown.	Unknown.	T .33000000000000	CI	1974	1974	N	-20%	+20%	See comment below.

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Mn-54	Unknown.	Unknown.	T .07000000000000	CI	1974	1974	N	-20%	+20%	See comment below.
Zn-65	Unknown.	Unknown.	T .11000000000000	CI	1974	1974	N	-20%	+20%	See comment below.
H-3	Unknown.	Unknown.	T .16620000000000	CI	1975	1975	N			See continuation page.
C-14	Unknown.	Unknown.	T .02229000000000	CI	1975	1975	N			See continuation page.
Fe-55	Unknown.	Unknown.	T 3.8510000000000	CI	1975	1975	N			See continuation page.
Ni-59	Unknown.	Unknown.	T .00115500000000	CI	1975	1975	N			See continuation page.
Ni-63	Unknown.	Unknown.	T .64860000000000	CI	1975	1975	N			See continuation page.
Co-60	Unknown.	Unknown.	T 1.3580000000000	CI	1975	1975	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .00186500000000	CI	1975	1975	N			See continuation page.

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Tc-99	Unknown.	Unknown.	T .00036480000000	CI	1975	1975	N			See continuation page.
I-129	Unknown.	Unknown.	T .00000009486000	CI	1975	1975	N			See continuation page.
Cs-137	Unknown.	Unknown.	T .40530000000000	CI	1975	1975	N			See continuation page.
Ce-144	Unknown.	Unknown.	T .00952600000000	CI	1975	1975	N			See continuation page.
Eu-154	Unknown.	Unknown.	T .00000587800000	CI	1975	1975	N			See continuation page.
Eu-155	Unknown.	Unknown.	T .01905000000000	CI	1975	1975	N			See continuation page.
U-234	Unknown.	Unknown.	T .00000425600000	CI	1975	1975	N			See continuation page.
U-235	Unknown.	Unknown.	T .00000009120000	CI	1975	1975	N			See continuation page.
U-236	Unknown.	Unknown.	T .00000162100000	CI	1975	1975	N			See continuation page.

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Np-237	Unknown.	Unknown.	T .00000263500000	CI	1975	1975	N			See continuation page.
Pu-238	Unknown.	Unknown.	T .00010940000000	CI	1975	1975	N			See continuation page.
Pu-239	Unknown.	Unknown.	T .00010940000000	CI	1975	1975	N			See continuation page.
Pu-240	Unknown.	Unknown.	T .00001155000000	CI	1975	1975	N			See continuation page.
Pu-241	Unknown.	Unknown.	T .01196000000000	CI	1975	1975	N			See continuation page.
Am-241	Unknown.	Unknown.	T .00005472000000	CI	1975	1975	N			See continuation page.
Cm-242	Unknown.	Unknown.	T .00005472000000	CI	1975	1975	N			See continuation page.
Cm-244	Unknown.	Unknown.	T .00005067000000	CI	1975	1975	N			See continuation page.
H-3	Unknown.	Unknown.	T .17810000000000	CI	1976	1976	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
C-14	Unknown.	Unknown.	T .02389000000000	CI	1976	1976	N			See continuation page.
Fe-55	Unknown.	Unknown.	T 4.1270000000000	CI	1976	1976	N			See continuation page.
Ni-59	Unknown.	Unknown.	T .00123800000000	CI	1976	1976	N			See continuation page.
Ni-63	Unknown.	Unknown.	T .69500000000000	CI	1976	1976	N			See continuation page.
Co-60	Unknown.	Unknown.	T 1.4550000000000	CI	1976	1976	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .00199800000000	CI	1976	1976	N			See continuation page.
Tc-99	Unknown.	Unknown.	T .00039090000000	CI	1976	1976	N			See continuation page.
I-129	Unknown.	Unknown.	T .00000010161000	CI	1976	1976	N			See continuation page.
Cs-137	Unknown.	Unknown.	T .43440000000000	CI	1976	1976	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Ce-144	Unknown.	Unknown.	T .01021000000000	CI	1976	1976	N			See continuation page.
Eu-154	Unknown.	Unknown.	T .00000629800000	CI	1976	1976	N			See continuation page.
Eu-155	Unknown.	Unknown.	T .02042000000000	CI	1976	1976	N			See continuation page.
U-234	Unknown.	Unknown.	T .00000456100000	CI	1976	1976	N			See continuation page.
U-235	Unknown.	Unknown.	T .00000009770000	CI	1976	1976	N			See continuation page.
U-236	Unknown.	Unknown.	T .00000173800000	CI	1976	1976	N			See continuation page.
Np-237	Unknown.	Unknown.	T .00000282300000	CI	1976	1976	N			See continuation page.
Pu-238	Unknown.	Unknown.	T .00011730000000	CI	1976	1976	N			See continuation page.
Pu-239	Unknown.	Unknown.	T .00011730000000	CI	1976	1976	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-240	Unknown.	Unknown.	T .00001238000000	CI	1976	1976	N			See continuation page.
Pu-241	Unknown.	Unknown.	T .01281000000000	CI	1976	1976	N			See continuation page.
Am-241	Unknown.	Unknown.	T .00005864000000	CI	1976	1976	N			See continuation page.
Cm-242	Unknown.	Unknown.	T .00005864000000	CI	1976	1976	N			See continuation page.
Cm-244	Unknown.	Unknown.	T .00005430000000	CI	1976	1976	N			See continuation page.
H-3	Unknown.	Unknown.	T .02636000000000	CI	1977	1977	N			See continuation page.
C-14	Unknown.	Unknown.	T .00353600000000	CI	1977	1977	N			See continuation page.
Fe-55	Unknown.	Unknown.	T .61070000000000	CI	1977	1977	N			See continuation page.
Ni-59	Unknown.	Unknown.	T .00018320000000	CI	1977	1977	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Ni-63	Unknown.	Unknown.	T .10290000000000	CI	1977	1977	N			See continuation page.
Co-60	Unknown.	Unknown.	T .21530000000000	CI	1977	1977	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .00029570000000	CI	1977	1977	N			See continuation page.
Tc-99	Unknown.	Unknown.	T .00005785000000	CI	1977	1977	N			See continuation page.
I-129	Unknown.	Unknown.	T .00000001504000	CI	1977	1977	N			See continuation page.
Cs-137	Unknown.	Unknown.	T .06428000000000	CI	1977	1977	N			See continuation page.
Ce-144	Unknown.	Unknown.	T .00151100000000	CI	1977	1977	N			See continuation page.
Eu-154	Unknown.	Unknown.	T .00000093210000	CI	1977	1977	N			See continuation page.
Eu-155	Unknown.	Unknown.	T .00302100000000	CI	1977	1977	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-234	Unknown.	Unknown.	T .00000067500000	CI	1977	1977	N			See continuation page.
U-235	Unknown.	Unknown.	T .00000001450000	CI	1977	1977	N			See continuation page.
U-236	Unknown.	Unknown.	T .00000025710000	CI	1977	1977	N			See continuation page.
Np-237	Unknown.	Unknown.	T .00000041780000	CI	1977	1977	N			See continuation page.
Pu-238	Unknown.	Unknown.	T .00001736000000	CI	1977	1977	N			See continuation page.
Pu-239	Unknown.	Unknown.	T .00001736000000	CI	1977	1977	N			See continuation page.
Pu-240	Unknown.	Unknown.	T .00000183200000	CI	1977	1977	N			See continuation page.
Pu-241	Unknown.	Unknown.	T .00189600000000	CI	1977	1977	N			See continuation page.
Am-241	Unknown.	Unknown.	T .00000867800000	CI	1977	1977	N			See continuation page.

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Cm-242	Unknown.	Unknown.	T .00000867800000	CI	1977	1977	N			See continuation page.
Cm-244	Unknown.	Unknown.	T .00000803500000	CI	1977	1977	N			See continuation page.
H-3	Unknown.	Unknown.	T .02299000000000	CI	1978	1978	N			See continuation page.
C-14	Unknown.	Unknown.	T .00308400000000	CI	1978	1978	N			See continuation page.
Fe-55	Unknown.	Unknown.	T .53260000000000	CI	1978	1978	N			See continuation page.
Ni-59	Unknown.	Unknown.	T .00015980000000	CI	1978	1978	N			See continuation page.
Ni-63	Unknown.	Unknown.	T .08971000000000	CI	1978	1978	N			See continuation page.
Co-60	Unknown.	Unknown.	T .18780000000000	CI	1978	1978	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .00025790000000	CI	1978	1978	N			See continuation page.

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Tc-99	Unknown.	Unknown.	T .00005046000000	CI	1978	1978	N			See continuation page.
I-129	Unknown.	Unknown.	T .00000001312000	CI	1978	1978	N			See continuation page.
Cs-137	Unknown.	Unknown.	T .05607000000000	CI	1978	1978	N			See continuation page.
Ce-144	Unknown.	Unknown.	T .00131800000000	CI	1978	1978	N			See continuation page.
Eu-154	Unknown.	Unknown.	T .00000081300000	CI	1978	1978	N			See continuation page.
Eu-155	Unknown.	Unknown.	T .00263500000000	CI	1978	1978	N			See continuation page.
U-234	Unknown.	Unknown.	T .00000058870000	CI	1978	1978	N			See continuation page.
U-235	Unknown.	Unknown.	T .00000001260000	CI	1978	1978	N			See continuation page.
U-236	Unknown.	Unknown.	T .00000022430000	CI	1978	1978	N			See continuation page.

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Np-237	Unknown.	Unknown.	T .00000036440000	CI	1978	1978	N			See continuation page.
Pu-238	Unknown.	Unknown.	T .00001514000000	CI	1978	1978	N			See continuation page.
Pu-239	Unknown.	Unknown.	T .00001514000000	CI	1978	1978	N			See continuation page.
Pu-240	Unknown.	Unknown.	T .00000159800000	CI	1978	1978	N			See continuation page.
Pu-241	Unknown.	Unknown.	T .00165400000000	CI	1978	1978	N			See continuation page.
Am-241	Unknown.	Unknown.	T .00000756900000	CI	1978	1978	N			See continuation page.
Cm-242	Unknown.	Unknown.	T .00000756900000	CI	1978	1978	N			See continuation page.
Cm-244	Unknown.	Unknown.	T .00000700800000	CI	1978	1978	N			See continuation page.
Co-60	Unknown.	Unknown.	T 5108.4000000000	CI	1978	1978	N	-20%	+20%	See comment below.

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Sc-46	Unknown.	Unknown.	T 51.600000000000	CI	1978	1978	N	-20%	+20%	See comment below.
H-3	Unknown.	Unknown.	T .02721000000000	CI	1979	1979	N			See continuation page.
C-14	Unknown.	Unknown.	T .00365100000000	CI	1979	1979	N			See continuation page.
Fe-55	Unknown.	Unknown.	T .63060000000000	CI	1979	1979	N			See continuation page.
Ni-59	Unknown.	Unknown.	T .00018920000000	CI	1979	1979	N			See continuation page.
Ni-63	Unknown.	Unknown.	T .10620000000000	CI	1979	1979	N			See continuation page.
Co-60	Unknown.	Unknown.	T .22240000000000	CI	1979	1979	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .00030530000000	CI	1979	1979	N			See continuation page.
Tc-99	Unknown.	Unknown.	T .00005974000000	CI	1979	1979	N			See continuation page.

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I-129	Unknown.	Unknown.	T .00000001553000	CI	1979	1979	N			See continuation page.
Cs-137	Unknown.	Unknown.	T .06638000000000	CI	1979	1979	N			See continuation page.
Ce-144	Unknown.	Unknown.	T .00156000000000	CI	1979	1979	N			See continuation page.
Eu-154	Unknown.	Unknown.	T .00000096240000	CI	1979	1979	N			See continuation page.
Eu-155	Unknown.	Unknown.	T .00312000000000	CI	1979	1979	N			See continuation page.
U-234	Unknown.	Unknown.	T .00000069690000	CI	1979	1979	N			See continuation page.
U-235	Unknown.	Unknown.	T .00000001490000	CI	1979	1979	N			See continuation page.
U-236	Unknown.	Unknown.	T .00000026550000	CI	1979	1979	N			See continuation page.
Np-237	Unknown.	Unknown.	T .00000043140000	CI	1979	1979	N			See continuation page.

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Pu-238	Unknown.	Unknown.	T .00001792000000	CI	1979	1979	N			See continuation page.
Pu-239	Unknown.	Unknown.	T .00001792000000	CI	1979	1979	N			See continuation page.
Pu-240	Unknown.	Unknown.	T .00000189200000	CI	1979	1979	N			See continuation page.
Pu-241	Unknown.	Unknown.	T .00195800000000	CI	1979	1979	N			See continuation page.
Am-241	Unknown.	Unknown.	T .00000896100000	CI	1979	1979	N			See continuation page.
Cm-242	Unknown.	Unknown.	T .00000896100000	CI	1979	1979	N			See continuation page.
Cm-244	Unknown.	Unknown.	T .00000829700000	CI	1979	1979	N			See continuation page.
H-3	Unknown.	Unknown.	T .07240000000000	CI	1980	1980	N			See continuation page.
C-14	Unknown.	Unknown.	T .00971300000000	CI	1980	1980	N			See continuation page.

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Fe-55	Unknown.	Unknown.	T 1.6780000000000	CI	1980	1980	N			See continuation page.
Ni-59	Unknown.	Unknown.	T .00050330000000	CI	1980	1980	N			See continuation page.
Ni-63	Unknown.	Unknown.	T .28250000000000	CI	1980	1980	N			See continuation page.
Co-60	Unknown.	Unknown.	T .59160000000000	CI	1980	1980	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .00081230000000	CI	1980	1980	N			See continuation page.
Tc-99	Unknown.	Unknown.	T .00015890000000	CI	1980	1980	N			See continuation page.
I-129	Unknown.	Unknown.	T .00000004132000	CI	1980	1980	N			See continuation page.
Cs-137	Unknown.	Unknown.	T .17660000000000	CI	1980	1980	N			See continuation page.
Ce-144	Unknown.	Unknown.	T .00415000000000	CI	1980	1980	N			See continuation page.

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Eu-154	Unknown.	Unknown.	T .00000256100000	CI	1980	1980	N			See continuation page.
Eu-155	Unknown.	Unknown.	T .00830000000000	CI	1980	1980	N			See continuation page.
U-234	Unknown.	Unknown.	T .00000185400000	CI	1980	1980	N			See continuation page.
U-235	Unknown.	Unknown.	T .00000003970000	CI	1980	1980	N			See continuation page.
U-236	Unknown.	Unknown.	T .00000070460000	CI	1980	1980	N			See continuation page.
Np-237	Unknown.	Unknown.	T .00000114800000	CI	1980	1980	N			See continuation page.
Pu-238	Unknown.	Unknown.	T .00004768000000	CI	1980	1980	N			See continuation page.
Pu-239	Unknown.	Unknown.	T .00004768000000	CI	1980	1980	N			See continuation page.
Pu-240	Unknown.	Unknown.	T .00000503300000	CI	1980	1980	N			See continuation page.

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Pu-241	Unknown.	Unknown.	T .00520900000000	CI	1980	1980	N			See continuation page.
Am-241	Unknown.	Unknown.	T .00002384000000	CI	1980	1980	N			See continuation page.
Cm-242	Unknown.	Unknown.	T .00002384000000	CI	1980	1980	N			See continuation page.
Cm-244	Unknown.	Unknown.	T .00002207000000	CI	1980	1980	N			See continuation page.
H-3	Unknown.	Unknown.	T .02130000000000	CI	1981	1981	N			See continuation page.
C-14	Unknown.	Unknown.	T .00285700000000	CI	1981	1981	N			See continuation page.
Fe-55	Unknown.	Unknown.	T .49340000000000	CI	1981	1981	N			See continuation page.
Ni-59	Unknown.	Unknown.	T .00014800000000	CI	1981	1981	N			See continuation page.
Ni-63	Unknown.	Unknown.	T .08310000000000	CI	1981	1981	N			See continuation page.

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Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Co-60	Unknown.	Unknown.	T .17400000000000	CI	1981	1981	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .00023890000000	CI	1981	1981	N			See continuation page.
Tc-99	Unknown.	Unknown.	T .00004675000000	CI	1981	1981	N			See continuation page.
I-129	Unknown.	Unknown.	T .00000001215000	CI	1981	1981	N			See continuation page.
Cs-137	Unknown.	Unknown.	T .05194000000000	CI	1981	1981	N			See continuation page.
Ce-144	Unknown.	Unknown.	T .00122100000000	CI	1981	1981	N			See continuation page.
Eu-154	Unknown.	Unknown.	T .00000075310000	CI	1981	1981	N			See continuation page.
Eu-155	Unknown.	Unknown.	T .00244100000000	CI	1981	1981	N			See continuation page.
U-234	Unknown.	Unknown.	T .00000054540000	CI	1981	1981	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. for example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-235	Unknown.	Unknown.	T .00000001170000	CI	1981	1981	N			See continuation page.
U-236	Unknown.	Unknown.	T .00000020780000	CI	1981	1981	N			See continuation page.
Np-237	Unknown.	Unknown.	T .00000033760000	CI	1981	1981	N			See continuation page.
Pu-238	Unknown.	Unknown.	T .00001402000000	CI	1981	1981	N			See continuation page.
Pu-239	Unknown.	Unknown.	T .00001402000000	CI	1981	1981	N			See continuation page.
Pu-240	Unknown.	Unknown.	T .00000148000000	CI	1981	1981	N			See continuation page.
Pu-241	Unknown.	Unknown.	T .00153200000000	CI	1981	1981	N			See continuation page.
Am-241	Unknown.	Unknown.	T .00000701200000	CI	1981	1981	N			See continuation page.
Cm-242	Unknown.	Unknown.	T .00000701200000	CI	1981	1981	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cm-244	Unknown.	Unknown.	T .00000649200000	CI	1981	1981	N			See continuation page.
H-3	Unknown.	Unknown.	T .02301000000000	CI	1982	1982	N			See continuation page.
C-14	Unknown.	Unknown.	T .00308700000000	CI	1982	1982	N			See continuation page.
Fe-55	Unknown.	Unknown.	T .53310000000000	CI	1982	1982	N			See continuation page.
Ni-59	Unknown.	Unknown.	T .00015990000000	CI	1982	1982	N			See continuation page.
Ni-63	Unknown.	Unknown.	T .08979000000000	CI	1982	1982	N			See continuation page.
Co-60	Unknown.	Unknown.	T .18800000000000	CI	1982	1982	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .00025820000000	CI	1982	1982	N			See continuation page.
Tc-99	Unknown.	Unknown.	T .00005051000000	CI	1982	1982	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
I-129	Unknown.	Unknown.	T .00000001313000	CI	1982	1982	N			See continuation page.
Cs-137	Unknown.	Unknown.	T .05612000000000	CI	1982	1982	N			See continuation page.
Ce-144	Unknown.	Unknown.	T .00131900000000	CI	1982	1982	N			See continuation page.
Eu-154	Unknown.	Unknown.	T .00000081370000	CI	1982	1982	N			See continuation page.
Eu-155	Unknown.	Unknown.	T .00263800000000	CI	1982	1982	N			See continuation page.
U-234	Unknown.	Unknown.	T .00000058930000	CI	1982	1982	N			See continuation page.
U-235	Unknown.	Unknown.	T .00000001260000	CI	1982	1982	N			See continuation page.
U-236	Unknown.	Unknown.	T .00000022450000	CI	1982	1982	N			See continuation page.
Np-237	Unknown.	Unknown.	T .00000036480000	CI	1982	1982	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samp les?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-238	Unknown.	Unknown.	T .00001515000000	CI	1982	1982	N			See continuation page.
Pu-239	Unknown.	Unknown.	T .00001515000000	CI	1982	1982	N			See continuation page.
Pu-240	Unknown.	Unknown.	T .00000159900000	CI	1982	1982	N			See continuation page.
Pu-241	Unknown.	Unknown.	T .00165600000000	CI	1982	1982	N			See continuation page.
Am-241	Unknown.	Unknown.	T .00000757600000	CI	1982	1982	N			See continuation page.
Cm-242	Unknown.	Unknown.	T .00000757600000	CI	1982	1982	N			See continuation page.
Cm-244	Unknown.	Unknown.	T .00000701500000	CI	1982	1982	N			See continuation page.
H-3	Unknown.	Unknown.	T .00580600000000	CI	1983	1983	N			See continuation page.
C-14	Unknown.	Unknown.	T .00077890000000	CI	1983	1983	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Fe-55	Unknown.	Unknown.	T .13450000000000	CI	1983	1983	N			See continuation page.
Ni-59	Unknown.	Unknown.	T .00004036000000	CI	1983	1983	N			See continuation page.
Ni-63	Unknown.	Unknown.	T .02266000000000	CI	1983	1983	N			See continuation page.
Co-60	Unknown.	Unknown.	T .04744000000000	CI	1983	1983	N			See continuation page.
Sr-90	Unknown.	Unknown.	T .00006514000000	CI	1983	1983	N			See continuation page.
Tc-99	Unknown.	Unknown.	T .00001275000000	CI	1983	1983	N			See continuation page.
I-129	Unknown.	Unknown.	T .00000000331000	CI	1983	1983	N			See continuation page.
Cs-137	Unknown.	Unknown.	T .01416000000000	CI	1983	1983	N			See continuation page.
Ce-144	Unknown.	Unknown.	T .00033280000000	CI	1983	1983	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-154	Unknown.	Unknown.	T .00000020530000	CI	1983	1983	N			See continuation page.
Eu-155	Unknown.	Unknown.	T .00066560000000	CI	1983	1983	N			See continuation page.
U-234	Unknown.	Unknown.	T .00000014870000	CI	1983	1983	N			See continuation page.
U-235	Unknown.	Unknown.	T .00000000320000	CI	1983	1983	N			See continuation page.
U-236	Unknown.	Unknown.	T .00000005660000	CI	1983	1983	N			See continuation page.
Np-237	Unknown.	Unknown.	T .00000009200000	CI	1983	1983	N			See continuation page.
Pu-238	Unknown.	Unknown.	T .00000382400000	CI	1983	1983	N			See continuation page.
Pu-239	Unknown.	Unknown.	T .00000382400000	CI	1983	1983	N			See continuation page.
Pu-240	Unknown.	Unknown.	T .00000040360000	CI	1983	1983	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-241	Unknown.	Unknown.	T .00041780000000	CI	1983	1983	N			See continuation page.
Am-241	Unknown.	Unknown.	T .00000191200000	CI	1983	1983	N			See continuation page.
Cm-242	Unknown.	Unknown.	T .00000191200000	CI	1983	1983	N			See continuation page.
Cm-244	Unknown.	Unknown.	T .00000177000000	CI	1983	1983	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [X] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)
Interviewees wish to remain anonymous.

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
A portion of, or all of the measurements, were assumed to be taken using a G-M detector which only measures gamma emitters; beta emitters have been added to the RWMIS activity based on scaling factors. Therefore, the total activity will be greater than that in RWMIS.

7. Major unknowns in inventories of contaminants:
MAP, MFP, unidentified beta and gamma.

8. Key assumptions used to deal with the unknowns:
MAP radionuclides were chosen based on their cross sections and half lives. MFP radionuclides were chosen based on their fissionable products and half lives. Unidentified beta are MAP and MFP radionuclides. The unidentified gamma was chosen due to the area's reactors. On part D, no G-M counter correction is needed to entries for which upper and lower bounds are given. The presence of such bounds indicates that the estimate was based on weight, laboratory analysis, spectrometry, and/or mathematical calculations. The G-M counter correction is needed for entries for which no bounds are given, because such estimates were originally made using the G-M counter method.

Continuation of Part D Column or Question Number or Title Uncertainty basis.

Because of the time spread, 1971-1983, the method of analysis is not known. Radionuclide information was obtained from a variety of methods such as a smear, a Geiger-Mueller counter, NaI and Germanium detectors. Therefore, the true uncertainty is not known.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 208

1. Preparer: Amaro, C.

2. Date prepared: 09/08/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 603
(building number - use code from attached list)

5. Number of waste stream from this facility:
23H

6. Waste stream:
Terphenyl (Santo-wax).

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1965 Ending year 1965

9. Waste stream volume:
Amount 100.0000 Units Gallons.
Check box: [ ] annual or [X] total over all years
Check box: [X] container volume or [ ] waste volume

10. Comments (specify number of pertinent question):

1. General physical form (see attached list)

[X] other (specify)
Terphenyl.

2. Details on physical form(particularly confinement related)
Santo-wax was an organic moderator used in loops.

3. Chemical form:
Terphenyl.

4. Inner packaging: [ ] plastic bag [ ] plastic liner
[ ] metal liner [ ] none [X] other (specify)
Unknown.

5. Waste container type (see attached list)
Metal barrel*.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
5. BXC.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
26140-60-3 Terphenyl	Wax.	C18H14.	A 447201.60000000	GM	1965	1965	N			See comment below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
Best guess of former TRA employee.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Wax.	C18H14.	T .00071880000000	CI	1965	1965	N			See continuation page.
C-14	Wax.	C18H14.	T .00009643000000	CI	1965	1965	N			See continuation page.
Fe-55	Wax.	C18H14.	T .01666000000000	CI	1965	1965	N			See continuation page.
Ni-59	Wax.	C18H14.	T .00000499700000	CI	1965	1965	N			See continuation page.
Ni-63	Wax.	C18H14.	T .00280500000000	CI	1965	1965	N			See continuation page.
Co-60	Wax.	C18H14.	T .00587300000000	CI	1965	1965	N			See continuation page.
Sr-90	Wax.	C18H14.	T .00000806500000	CI	1965	1965	N			See continuation page.
Tc-99	Wax.	C18H14.	T .00000157800000	CI	1965	1965	N			See continuation page.
I-129	Wax.	C18H14.	T .00000000041000	CI	1965	1965	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Wax.	C18H14.	T .00175300000000	CI	1965	1965	N			See continuation page.
Ce-144	Wax.	C18H14.	T .00004120000000	CI	1965	1965	N			See continuation page.
Eu-154	Wax.	C18H14.	T .00000002540000	CI	1965	1965	N			See continuation page.
Eu-155	Wax.	C18H14.	T .00008240000000	CI	1965	1965	N			See continuation page.
U-234	Wax.	C18H14.	T .00000001840000	CI	1965	1965	N			See continuation page.
U-235	Wax.	C18H14.	T .00000000040000	CI	1965	1965	N			See continuation page.
U-236	Wax.	C18H14.	T .00000000700000	CI	1965	1965	N			See continuation page.
Np-237	Wax.	C18H14.	T .00000001140000	CI	1965	1965	N			See continuation page.
Pu-238	Wax.	C18H14.	T .00000047340000	CI	1965	1965	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Wax.	C18H14.	T .00000047340000	CI	1965	1965	N			See continuation page.
Pu-240	Wax.	C18H14.	T .00000005000000	CI	1965	1965	N			See continuation page.
Pu-241	Wax.	C18H14.	T .00005172000000	CI	1965	1965	N			See continuation page.
Am-241	Wax.	C18H14.	T .00000023670000	CI	1965	1965	N			See continuation page.
Cm-242	Wax.	C18H14.	T .00000023670000	CI	1965	1965	N			See continuation page.
Cm-244	Wax.	C18H14.	T .00000021920000	CI	1965	1965	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [ ] interview
[ ] expert judgment [X] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)
Letter from P.D. Randolph to Bob Nitshke dated December 17, 1992.

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
A portion of, or all of the measurements, were assumed to be taken using a G-M detector which only measures gamma emitters; beta emitters have been added to the RWMIS activity based on scaling factors. Therefore, the total activity will be greater than that in RWMIS.

7. Major unknowns in inventories of contaminants:
MAP and MFP were unidentified.

8. Key assumptions used to deal with the unknowns:
MAP radionuclides were chosen based on their half lives and cross sections. MFP products were chosen based on their fissionable products and half lives. On part D, no G-M counter correction is needed to entries for which upper and lower bounds are given. The presence of such bounds indicates that the estimate was based on weight, laboratory analysis, spectrometry, and/or mathematical calculations. The G-M counter correction is needed for entries for which no bounds are given, because such estimates were originally made using the G-M counter method.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 197

1. Preparer: Amaro, C.

2. Date prepared: 09/01/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 603
(building number - use code from attached list)

5. Number of waste stream from this facility:
24H

6. Waste stream:
Gas bottles.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1964 Ending year 1964

9. Waste stream volume:
Amount 6.1736 Units Cubic feet.
Check box: [ ] annual or [X] total over all years
Check box: [ ] container volume or [X] waste volume

10. Comments (specify number of pertinent question):

1. General physical form (see attached list)

[X] other (specify)
Gas bottles.

2. Details on physical form(particularly confinement related)
Gas bottles (steel).

3. Chemical form:

4. Inner packaging: [ ] plastic bag [ ] plastic liner
[ ] metal liner [X] none [ ] other (specify)

5. Waste container type (see attached list)
Other.

6. Other characteristics of interest:
At least one of the gas bottles had ammonia.

7. Comments (specify number of pertinent question):
7. "Other" is the gas bottle itself.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
7664417 Ammonia	Liquid.	NH3.	A 777500.00000000	GM	1964	1964	N			See comment below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

One entry, from RWMIS, said a gas bottle with ammonia, and no other information could be obtained. The entire shipment was entered as having ammonia.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Metal.	Unknown.	T .00563800000000	CI	1964	1964	N			See continuation page.
C-14	Metal.	Unknown.	T .00075630000000	CI	1964	1964	N			See continuation page.
Fe-55	Metal.	Unknown.	T .13060000000000	CI	1964	1964	N			See continuation page.
Ni-59	Metal.	Unknown.	T .00003919000000	CI	1964	1964	N			See continuation page.
Ni-63	Metal.	Unknown.	T .02200000000000	CI	1964	1964	N			See continuation page.
Co-60	Metal.	Unknown.	T .04607000000000	CI	1964	1964	N			See continuation page.
Sr-90	Metal.	Unknown.	T .00006325000000	CI	1964	1964	N			See continuation page.
Tc-99	Metal.	Unknown.	T .00001238000000	CI	1964	1964	N			See continuation page.
I-129	Metal.	Unknown.	T .00000000322000	CI	1964	1964	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Metal.	Unknown.	T .01375000000000	CI	1964	1964	N			See continuation page.
Ce-144	Metal.	Unknown.	T .00032310000000	CI	1964	1964	N			See continuation page.
Eu-154	Metal.	Unknown.	T .00000019940000	CI	1964	1964	N			See continuation page.
Eu-155	Metal.	Unknown.	T .00064630000000	CI	1964	1964	N			See continuation page.
U-234	Metal.	Unknown.	T .00000014440000	CI	1964	1964	N			See continuation page.
U-235	Metal.	Unknown.	T .00000000310000	CI	1964	1964	N			See continuation page.
U-236	Metal.	Unknown.	T .00000005500000	CI	1964	1964	N			See continuation page.
Np-237	Metal.	Unknown.	T .00000008940000	CI	1964	1964	N			See continuation page.
Pu-238	Metal.	Unknown.	T .00000371300000	CI	1964	1964	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Metal.	Unknown.	T .00000371300000	CI	1964	1964	N			See continuation page.
Pu-240	Metal.	Unknown.	T .00000039190000	CI	1964	1964	N			See continuation page.
Pu-241	Metal.	Unknown.	T .00040570000000	CI	1964	1964	N			See continuation page.
Am-241	Metal.	Unknown.	T .00000185600000	CI	1964	1964	N			See continuation page.
Cm-242	Metal.	Unknown.	T .00000185600000	CI	1964	1964	N			See continuation page.
Cm-244	Metal.	Unknown.	T .00000171900000	CI	1964	1964	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [ ] interview
[ ] expert judgment [X] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)
Letter from P.D. Randolph on December 17, 1992 to Bob Nitshke.

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
A portion of, or all of the measurements, were assumed to be taken using a G-M detector which only measures gamma emitters; beta emitters have been added to the RWMIS activity based on scaling factors. Therefore, the total activity will be greater than that in RWMIS.

7. Major unknowns in inventories of contaminants:
MAP and MFP were unidentified.

8. Key assumptions used to deal with the unknowns:
MAP radionuclides were chosen based on their cross sections and half lives. MFP radionuclides were chosen based on their fissionable products and half lives. On part D, no G-M counter correction is needed to entries for which upper and lower bounds are given. The presence of such bounds indicates that the estimate was based on weight, laboratory analysis, spectrometry, and/or mathematical calculations. The G-M counter correction is needed for entries for which no bounds are given, because such estimates were originally made using the G-M counter method.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 144

1. Preparer: Amaro, C.

2. Date prepared: 08/27/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 603
(building number - use code from attached list)

5. Number of waste stream from this facility:
25H

6. Waste stream:
Sodium.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1960 Ending year 1960

9. Waste stream volume:
Amount 0.4531 Units Cubic feet.
Check box: [ ] annual or [X] total over all years
Check box: [X] container volume or [ ] waste volume

10. Comments (specify number of pertinent question):

1. General physical form (see attached list)

[X] other (specify)
Sodium.

2. Details on physical form(particularly confinement related)
Sodium is a solid at temperatures below 100 degrees Celsius.

3. Chemical form:
Na - metal.

4. Inner packaging: [ ] plastic bag [X] plastic liner
[ ] metal liner [ ] none [ ] other (specify)

5. Waste container type (see attached list)
Other.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
5. "Other", which cannot be defined by the preparer.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
7440-23-5 Sodium	Solid.	Na - Metal.	A 68040.000000000	GM	1960	1960	N	-10%	+10%	See comment below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

Weight is taken from RWMIS. All shipments must be weighted prior to shipment. A 10% error was assigned because the particular scale used may have been read incorrectly.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samp les?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Solid.	N/A.	T 8.2010000000000	CI	1960	1960	N	-50%	+50%	See comment below.
C-14	Solid.	N/A.	T 1.1000000000000	CI	1960	1960	N	-50%	+50%	See comment below.
Fe-55	Solid.	N/A.	T 190.00000000000	CI	1960	1960	N	-50%	+50%	See comment below.
Ni-59	Solid.	N/A.	T .05700000000000	CI	1960	1960	N	-50%	+50%	See comment below.
Ni-63	Solid.	N/A.	T 32.000000000000	CI	1960	1960	N	-50%	+50%	See comment below.
Co-60	Solid.	N/A.	T 67.000000000000	CI	1960	1960	N	-50%	+50%	See comment below.
Sr-90	Solid.	N/A.	T .09201000000000	CI	1960	1960	N	-50%	+50%	See comment below.
Tc-99	Solid.	N/A.	T .01800000000000	CI	1960	1960	N	-50%	+50%	See comment below.
I-129	Solid.	N/A.	T .00000468000000	CI	1960	1960	N	-50%	+50%	See comment below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

Although the sample column says "N", a sample was probably analyzed by the Radiation Measurements Lab (RML) at TRA. A sodium iodide (NaI) detector was therefore used to count the sample. Because the NaI detectors have broad peaks, radionuclides may have been masked. The total activity is correct but individual radionuclide activity may be incorrect, therefore a 50% error was assigned.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Solid.	N/A.	T 20.000000000000	CI	1960	1960	N	-50%	+50%	See comment below.
Ce-144	Solid.	N/A.	T .47000000000000	CI	1960	1960	N	-50%	+50%	See comment below.
Eu-154	Solid.	N/A.	T .00029000000000	CI	1960	1960	N	-50%	+50%	See comment below.
Eu-155	Solid.	N/A.	T .94010000000000	CI	1960	1960	N	-50%	+50%	See comment below.
U-234	Solid.	N/A.	T .00021000000000	CI	1960	1960	N	-50%	+50%	See comment below.
U-235	Solid.	N/A.	T .00000450000000	CI	1960	1960	N	-50%	+50%	See comment below.
U-236	Solid.	N/A.	T .00008001000000	CI	1960	1960	N	-50%	+50%	See comment below.
Np-237	Solid.	N/A.	T .00013000000000	CI	1960	1960	N	-50%	+50%	See comment below.
Pu-238	Solid.	N/A.	T .00540000000000	CI	1960	1960	N	-50%	+50%	See comment below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

Although the sample column says "N", a sample was probably analyzed by the Radiation Measurements Lab (RML) at TRA. A sodium iodide (NaI) detector was therefore used to count the sample. Because the NaI detectors have broad peaks, radionuclides may have been masked. The total activity is correct but individual radionuclide activity may be incorrect, therefore a 50% error was assigned.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Solid.	N/A.	T .00540000000000	CI	1960	1960	N	-50%	+50%	See comment below.
Pu-240	Solid.	N/A.	T .00057000000000	CI	1960	1960	N	-50%	+50%	See comment below.
Pu-241	Solid.	N/A.	T .59000000000000	CI	1960	1960	N	-50%	+50%	See comment below.
Am-241	Solid.	N/A.	T .00270000000000	CI	1960	1960	N	-50%	+50%	See comment below.
Cm-242	Solid.	N/A.	T .00270000000000	CI	1960	1960	N	-50%	+50%	See comment below.
Cm-244	Solid.	N/A.	T .00250000000000	CI	1960	1960	N	-50%	+50%	See comment below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

Although the sample column says "N", a sample was probably analyzed by the Radiation Measurements Lab (RML) at TRA. A sodium iodide (NaI) detector was therefore used to count the sample. Because the NaI detectors have broad peaks, radionuclides may have been masked. The total activity is correct but individual radionuclide activity may be incorrect, therefore a 50% error was assigned.

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [X] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)
Interviewees wish to remain anonymous.

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
A portion of, or all of the measurements, were assumed to be taken using a G-M detector which only measures gamma emitters; beta emitters have been added to the RWMIS activity based on scaling factors. Therefore, the total activity will be greater than that in RWMIS.

7. Major unknowns in inventories of contaminants:
MAP and MFP were unknown.

8. Key assumptions used to deal with the unknowns:
MAP radionuclides were chosen based on the cross sections and half lives. MFP products were chosen based on their fission products and half lives.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 232

1. Preparer: Amaro, C.

2. Date prepared: 03/09/94

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 603
(building number - use code from attached list)

5. Number of waste stream from this facility:
26H

6. Waste stream:
Lead.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1960 Ending year 1983

9. Waste stream volume:
Amount 115.4900 Units Cubic feet.
Check box: [ ] annual or [X] total over all years
Check box: [X] container volume or [ ] waste volume

10. Comments (specify number of pertinent question):

1. General physical form (see attached list)
Lead.
[ ] other (specify)

2. Details on physical form(particularly confinement related)

3. Chemical form:
Lead.

4. Inner packaging: [ ] plastic bag [X] plastic liner
[ ] metal liner [ ] none [ ] other (specify)

5. Waste container type (see attached list)
Wooden box.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
5. "Other" and BXC; "Other" cannot be defined by the preparer of this report.
6. Some items were probably enclosed in a plastic liner or bag, however, some shipments probably weren't.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
7439-92-1 Lead	Metal.	Lead.	A 7619900.0000000	GM	1960	1960	N			
7439-92-1 Lead	Metal.	Lead.	A 771100.00000000	GM	1962	1962	N			
7439-92-1 Lead	Metal.	Lead.	A 18140.000000000	GM	1965	1965	N			
7439-92-1 Lead	Metal.	Lead.	A 7711000.0000000	GM	1968	1968	N			
7439-92-1 Lead	Metal.	Lead.	A 6532000.0000000	GM	1970	1970	N			
7439-92-1 Lead	Metal.	Lead.	A 9165100.0000000	GM	1971	1971	N			
7439-92-1 Lead	Metal.	Lead.	A 12519300.000000	GM	1972	1972	N			
7439-92-1 Lead	Metal.	Lead.	A 5436000.0000000	GM	1974	1974	N			
7439-92-1 Lead	Metal.	Lead.	A 14786200.000000	GM	1976	1976	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
7439-92-1 Lead	Metal.	Lead.	A 70080000.000000	GM	1980	1980	N			
7439-92-1 Lead	Metal.	Lead.	A 573800.00000000	GM	1981	1981	N			
7439-92-1 Lead	Metal.	Lead.	A 1134000.5000000	GM	1982	1982	N			
7439-92-1 Lead	Metal.	Lead.	A 1270520.0000000	GM	1983	1983	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

* Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Metal.	PbO.	T .41770000000000	CI	1960	1960	N			See continuation page.
C-14	Metal.	PbO.	T .05604000000000	CI	1960	1960	N			See continuation page.
Fe-55	Metal.	PbO.	T 9.6790000000000	CI	1960	1960	N			See continuation page.
Ni-59	Metal.	PbO.	T .00290400000000	CI	1960	1960	N			See continuation page.
Ni-63	Metal.	PbO.	T 1.6300000000000	CI	1960	1960	N			See continuation page.
Co-60	Metal.	PbO.	T 3.4130000000000	CI	1960	1960	N			See continuation page.
Sr-90	Metal.	PbO.	T .00468700000000	CI	1960	1960	N			See continuation page.
Tc-99	Metal.	PbO.	T .00091700000000	CI	1960	1960	N			See continuation page.
I-129	Metal.	PbO.	T .00000023841000	CI	1960	1960	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error). Additional radionuclides (e.g. U-234, U-235, U-236, Pu-238, Pu-239, Pu-240, C-14) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Metal.	PbO.	T 1.0190000000000	CI	1960	1960	N			See continuation page.
Ce-144	Metal.	PbO.	T .02394000000000	CI	1960	1960	N			See continuation page.
Eu-154	Metal.	PbO.	T .00001477000000	CI	1960	1960	N			See continuation page.
Eu-155	Metal.	PbO.	T .04789000000000	CI	1960	1960	N			See continuation page.
U-234	Metal.	PbO.	T .00001070000000	CI	1960	1960	N			See continuation page.
U-235	Metal.	PbO.	T .00000022930000	CI	1960	1960	N			See continuation page.
U-236	Metal.	PbO.	T .00000407600000	CI	1960	1960	N			See continuation page.
Np-237	Metal.	PbO.	T .00000662300000	CI	1960	1960	N			See continuation page.
Pu-238	Metal.	PbO.	T .00027510000000	CI	1960	1960	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error). Additional radionuclides (e.g. U-234, U-235, U-236, Pu-238, Pu-239, Pu-240, C-14) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Metal.	PbO.	T .00027510000000	CI	1960	1960	N			See continuation page.
Pu-240	Metal.	PbO.	T .00002904000000	CI	1960	1960	N			See continuation page.
Pu-241	Metal.	PbO.	T .03006000000000	CI	1960	1960	N			See continuation page.
Am-241	Metal.	PbO.	T .00013760000000	CI	1960	1960	N			See continuation page.
Cm-242	Metal.	PbO.	T .00013760000000	CI	1960	1960	N			See continuation page.
Cm-244	Metal.	PbO.	T .00012740000000	CI	1960	1960	N			See continuation page.
H-3	Metal.	PbO.	T .00000820000000	CI	1962	1962	N			See continuation page.
C-14	Metal.	PbO.	T .00000110000000	CI	1962	1962	N			See continuation page.
Fe-55	Metal.	PbO.	T .00019000000000	CI	1962	1962	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error). Additional radionuclides (e.g. U-234, U-235, U-236, Pu-238, Pu-239, Pu-240, C-14) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Ni-59	Metal.	PbO.	T .00000005700000	CI	1962	1962	N			See continuation page.
Ni-63	Metal.	PbO.	T .00003200000000	CI	1962	1962	N			See continuation page.
Co-60	Metal.	PbO.	T .00006700000000	CI	1962	1962	N			See continuation page.
Sr-90	Metal.	PbO.	T .00000009200000	CI	1962	1962	N			See continuation page.
Tc-99	Metal.	PbO.	T .00000001800000	CI	1962	1962	N			See continuation page.
I-129	Metal.	PbO.	Unknown.	CI	1962	1962	N			See continuation page.
Cs-137	Metal.	PbO.	T .00002000000000	CI	1962	1962	N			See continuation page.
Ce-144	Metal.	PbO.	T .00000047000000	CI	1962	1962	N			See continuation page.
Eu-154	Metal.	PbO.	T .00000000030000	CI	1962	1962	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-155	Metal.	PbO.	T .00000094000000	CI	1962	1962	N			See continuation page.
U-234	Metal.	PbO.	T .00000000020000	CI	1962	1962	N			See continuation page.
U-236	Metal.	PbO.	T .00000000010000	CI	1962	1962	N			See continuation page.
Np-237	Metal.	PbO.	T .00000000010000	CI	1962	1962	N			See continuation page.
Pu-238	Metal.	PbO.	T .00000000540000	CI	1962	1962	N			See continuation page.
Pu-239	Metal.	PbO.	T .00000000540000	CI	1962	1962	N			See continuation page.
Pu-240	Metal.	PbO.	T .00000000060000	CI	1962	1962	N			See continuation page.
Pu-241	Metal.	PbO.	T .00000059000000	CI	1962	1962	N			See continuation page.
Am-241	Metal.	PbO.	T .00000000270000	CI	1962	1962	N			See continuation page.

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Cm-242	Metal.	PbO.	T .00000000270000	CI	1962	1962	N			See continuation page.
Cm-244	Metal.	PbO.	T .00000000250000	CI	1962	1962	N			See continuation page.
H-3	Metal.	PbO.	T .00009020000000	CI	1965	1965	N			See continuation page.
C-14	Metal.	PbO.	T .00001210000000	CI	1965	1965	N			See continuation page.
Fe-55	Metal.	PbO.	T .00209000000000	CI	1965	1965	N			See continuation page.
Ni-59	Metal.	PbO.	T .00000062700000	CI	1965	1965	N			See continuation page.
Ni-63	Metal.	PbO.	T .00035200000000	CI	1965	1965	N			See continuation page.
Co-60	Metal.	PbO.	T .00073700000000	CI	1965	1965	N			See continuation page.
Sr-90	Metal.	PbO.	T .00000101200000	CI	1965	1965	N			See continuation page.

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Tc-99	Metal.	PbO.	T .00000019800000	CI	1965	1965	N			See continuation page.
I-129	Metal.	PbO.	T .00000000005000	CI	1965	1965	N			See continuation page.
Cs-137	Metal.	PbO.	T .00022000000000	CI	1965	1965	N			See continuation page.
Ce-144	Metal.	PbO.	T .00000517000000	CI	1965	1965	N			See continuation page.
Eu-154	Metal.	PbO.	T .00000000320000	CI	1965	1965	N			See continuation page.
Eu-155	Metal.	PbO.	T .00001034000000	CI	1965	1965	N			See continuation page.
U-234	Metal.	PbO.	T .00000000230000	CI	1965	1965	N			See continuation page.
U-235	Metal.	PbO.	T .00000000010000	CI	1965	1965	N			See continuation page.
U-236	Metal.	PbO.	T .00000000090000	CI	1965	1965	N			See continuation page.

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Np-237	Metal.	PbO.	T .00000000140000	CI	1965	1965	N			See continuation page.
Pu-238	Metal.	PbO.	T .00000005940000	CI	1965	1965	N			See continuation page.
Pu-239	Metal.	PbO.	T .00000005940000	CI	1965	1965	N			See continuation page.
Pu-240	Metal.	PbO.	T .00000000630000	CI	1965	1965	N			See continuation page.
Pu-241	Metal.	PbO.	T .00000649000000	CI	1965	1965	N			See continuation page.
Am-241	Metal.	PbO.	T .00000002970000	CI	1965	1965	N			See continuation page.
Cm-242	Metal.	PbO.	T .00000002970000	CI	1965	1965	N			See continuation page.
Cm-244	Metal.	PbO.	T .00000002750000	CI	1965	1965	N			See continuation page.
H-3	Metal.	PbO.	T .00008200000000	CI	1968	1968	N			See continuation page.

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C-14	Metal.	PbO.	T .00001100000000	CI	1968	1968	N			See continuation page.
Fe-55	Metal.	PbO.	T .00190000000000	CI	1968	1968	N			See continuation page.
Ni-59	Metal.	PbO.	T .00000057000000	CI	1968	1968	N			See continuation page.
Ni-63	Metal.	PbO.	T .00032000000000	CI	1968	1968	N			See continuation page.
Co-60	Metal.	PbO.	T .00067000000000	CI	1968	1968	N			See continuation page.
Sr-90	Metal.	PbO.	T .00000092000000	CI	1968	1968	N			See continuation page.
Tc-99	Metal.	PbO.	T .00000018000000	CI	1968	1968	N			See continuation page.
I-129	Metal.	PbO.	T .00000000005000	CI	1968	1968	N			See continuation page.
Cs-137	Metal.	PbO.	T .00020000000000	CI	1968	1968	N			See continuation page.

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Ce-144	Metal.	PbO.	T .00000470000000	CI	1968	1968	N			See continuation page.
Eu-154	Metal.	PbO.	T .00000000290000	CI	1968	1968	N			See continuation page.
Eu-155	Metal.	PbO.	T .00000940000000	CI	1968	1968	N			See continuation page.
U-234	Metal.	PbO.	T .00000000210000	CI	1968	1968	N			See continuation page.
U-235	Metal.	PbO.	T .00000000010000	CI	1968	1968	N			See continuation page.
U-236	Metal.	PbO.	T .00000000080000	CI	1968	1968	N			See continuation page.
Np-237	Metal.	PbO.	T .00000000130000	CI	1968	1968	N			See continuation page.
Pu-238	Metal.	PbO.	T .00000005400000	CI	1968	1968	N			See continuation page.
Pu-239	Metal.	PbO.	T .00000005400000	CI	1968	1968	N			See continuation page.

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Pu-240	Metal.	PbO.	T .00000000570000	CI	1968	1968	N			See continuation page.
Pu-241	Metal.	PbO.	T .00000590000000	CI	1968	1968	N			See continuation page.
Am-241	Metal.	PbO.	T .00000002700000	CI	1968	1968	N			See continuation page.
Cm-242	Metal.	PbO.	T .00000002700000	CI	1968	1968	N			See continuation page.
Cm-244	Metal.	PbO.	T .00000002500000	CI	1968	1968	N			See continuation page.
H-3	Metal.	PbO.	T .16450000000000	CI	1970	1970	N			See continuation page.
C-14	Metal.	PbO.	T .02207000000000	CI	1970	1970	N			See continuation page.
Fe-55	Metal.	PbO.	T 3.8130000000000	CI	1970	1970	N			See continuation page.
Ni-59	Metal.	PbO.	T .00114400000000	CI	1970	1970	N			See continuation page.

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Ni-63	Metal.	PbO.	T .64210000000000	CI	1970	1970	N			See continuation page.
Co-60	Metal.	PbO.	T 1.3440000000000	CI	1970	1970	N			See continuation page.
Sr-90	Metal.	PbO.	T .00184600000000	CI	1970	1970	N			See continuation page.
Tc-99	Metal.	PbO.	T .00036120000000	CI	1970	1970	N			See continuation page.
I-129	Metal.	PbO.	T .00000009387000	CI	1970	1970	N			See continuation page.
Cs-137	Metal.	PbO.	T .40130000000000	CI	1970	1970	N			See continuation page.
Ce-144	Metal.	PbO.	T .00943100000000	CI	1970	1970	N			See continuation page.
Eu-154	Metal.	PbO.	T .00000581900000	CI	1970	1970	N			See continuation page.
Eu-155	Metal.	PbO.	T .01886000000000	CI	1970	1970	N			See continuation page.

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U-234	Metal.	PbO.	T .00000421400000	CI	1970	1970	N			See continuation page.
U-235	Metal.	PbO.	T .00000009030000	CI	1970	1970	N			See continuation page.
U-236	Metal.	PbO.	T .00000160500000	CI	1970	1970	N			See continuation page.
Np-237	Metal.	PbO.	T .00000260900000	CI	1970	1970	N			See continuation page.
Pu-238	Metal.	PbO.	T .00010840000000	CI	1970	1970	N			See continuation page.
Pu-239	Metal.	PbO.	T .00010840000000	CI	1970	1970	N			See continuation page.
Pu-240	Metal.	PbO.	T .00001144000000	CI	1970	1970	N			See continuation page.
Pu-241	Metal.	PbO.	T .01184000000000	CI	1970	1970	N			See continuation page.
Am-241	Metal.	PbO.	T .00005418000000	CI	1970	1970	N			See continuation page.

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Cm-242	Metal.	PbO.	T .00005418000000	CI	1970	1970	N			See continuation page.
Cm-244	Metal.	PbO.	T .00005017000000	CI	1970	1970	N			See continuation page.
H-3	Metal.	PbO.	T .03745000000000	CI	1971	1971	N			See continuation page.
C-14	Metal.	PbO.	T .00502400000000	CI	1971	1971	N			See continuation page.
Fe-55	Metal.	PbO.	T .86780000000000	CI	1971	1971	N			See continuation page.
Ni-59	Metal.	PbO.	T .00026030000000	CI	1971	1971	N			See continuation page.
Ni-63	Metal.	PbO.	T .14620000000000	CI	1971	1971	N			See continuation page.
Co-60	Metal.	PbO.	T .30600000000000	CI	1971	1971	N			See continuation page.
Sr-90	Metal.	PbO.	T .00042020000000	CI	1971	1971	N			See continuation page.

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Tc-99	Metal.	PbO.	T .00008221000000	CI	1971	1971	N			See continuation page.
I-129	Metal.	PbO.	T .00000002138000	CI	1971	1971	N			See continuation page.
Cs-137	Metal.	PbO.	T .09134000000000	CI	1971	1971	N			See continuation page.
Ce-144	Metal.	PbO.	T .00214700000000	CI	1971	1971	N			See continuation page.
Eu-154	Metal.	PbO.	T .00000132400000	CI	1971	1971	N			See continuation page.
Eu-155	Metal.	PbO.	T .00429300000000	CI	1971	1971	N			See continuation page.
U-234	Metal.	PbO.	T .00000095910000	CI	1971	1971	N			See continuation page.
U-235	Metal.	PbO.	T .00000002060000	CI	1971	1971	N			See continuation page.
U-236	Metal.	PbO.	T .00000036540000	CI	1971	1971	N			See continuation page.

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Np-237	Metal.	PbO.	T .00000059370000	CI	1971	1971	N			See continuation page.
Pu-238	Metal.	PbO.	T .00002466000000	CI	1971	1971	N			See continuation page.
Pu-239	Metal.	PbO.	T .00002466000000	CI	1971	1971	N			See continuation page.
Pu-240	Metal.	PbO.	T .00000260300000	CI	1971	1971	N			See continuation page.
Pu-241	Metal.	PbO.	T .00269500000000	CI	1971	1971	N			See continuation page.
Am-241	Metal.	PbO.	T .00001233000000	CI	1971	1971	N			See continuation page.
Cm-242	Metal.	PbO.	T .00001233000000	CI	1971	1971	N			See continuation page.
Cm-244	Metal.	PbO.	T .00001142000000	CI	1971	1971	N			See continuation page.
Pu-240	Metal.	PbO.	T .00089999000000	CI	1971	1971	N	-20%	+20%	See comment below.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samp les?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-241	Metal.	PbO.	T .00009999900000	CI	1971	1971	N	-20%	+20%	See comment below.
H-3	Metal.	PbO.	T .00580400000000	CI	1972	1972	N			See continuation page.
C-14	Metal.	PbO.	T .00077850000000	CI	1972	1972	N			See continuation page.
Fe-55	Metal.	PbO.	T .13450000000000	CI	1972	1972	N			See continuation page.
Ni-59	Metal.	PbO.	T .00004034000000	CI	1972	1972	N			See continuation page.
Ni-63	Metal.	PbO.	T .02265000000000	CI	1972	1972	N			See continuation page.
Co-60	Metal.	PbO.	T .04742000000000	CI	1972	1972	N			See continuation page.
Sr-90	Metal.	PbO.	T .00006511000000	CI	1972	1972	N			See continuation page.
Tc-99	Metal.	PbO.	T .00001274000000	CI	1972	1972	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
I-129	Metal.	PbO.	T .00000000331000	CI	1972	1972	N			See continuation page.
Cs-137	Metal.	PbO.	T .01416000000000	CI	1972	1972	N			See continuation page.
Ce-144	Metal.	PbO.	T .00033260000000	CI	1972	1972	N			See continuation page.
Eu-154	Metal.	PbO.	T .00000020530000	CI	1972	1972	N			See continuation page.
Eu-155	Metal.	PbO.	T .00066530000000	CI	1972	1972	N			See continuation page.
U-234	Metal.	PbO.	T .00000014860000	CI	1972	1972	N			See continuation page.
U-235	Metal.	PbO.	T .00000000320000	CI	1972	1972	N			See continuation page.
U-236	Metal.	PbO.	T .00000005660000	CI	1972	1972	N			See continuation page.
Np-237	Metal.	PbO.	T .00000009200000	CI	1972	1972	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-238	Metal.	PbO.	T .00000382200000	CI	1972	1972	N			See continuation page.
Pu-239	Metal.	PbO.	T .00000382200000	CI	1972	1972	N			See continuation page.
Pu-240	Metal.	PbO.	T .00000040340000	CI	1972	1972	N			See continuation page.
Pu-241	Metal.	PbO.	T .00041760000000	CI	1972	1972	N			See continuation page.
Am-241	Metal.	PbO.	T .00000191100000	CI	1972	1972	N			See continuation page.
Cm-242	Metal.	PbO.	T .00000191100000	CI	1972	1972	N			See continuation page.
Cm-244	Metal.	PbO.	T .00000176900000	CI	1972	1972	N			See continuation page.
H-3	Metal.	PbO.	T .00003280000000	CI	1974	1974	N			See continuation page.
C-14	Metal.	PbO.	T .00000440000000	CI	1974	1974	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Fe-55	Metal.	PbO.	T .00076000000000	CI	1974	1974	N			See continuation page.
Ni-59	Metal.	PbO.	T .00000022800000	CI	1974	1974	N			See continuation page.
Ni-63	Metal.	PbO.	T .00012800000000	CI	1974	1974	N			See continuation page.
Co-60	Metal.	PbO.	T .00026800000000	CI	1974	1974	N			See continuation page.
Sr-90	Metal.	PbO.	T .00000036800000	CI	1974	1974	N			See continuation page.
Tc-99	Metal.	PbO.	T .00000007200000	CI	1974	1974	N			See continuation page.
I-129	Metal.	PbO.	T .00000000002000	CI	1974	1974	N			See continuation page.
Cs-137	Metal.	PbO.	T .00008000000000	CI	1974	1974	N			See continuation page.
Ce-144	Metal.	PbO.	T .00000188000000	CI	1974	1974	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error). Additional radionuclides (e.g. U-234, U-235, U-236, Pu-238, Pu-239, Pu-240, C-14) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

* Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-154	Metal.	PbO.	T .00000000120000	CI	1974	1974	N			See continuation page.
Eu-155	Metal.	PbO.	T .00000376000000	CI	1974	1974	N			See continuation page.
U-234	Metal.	PbO.	T .00000000080000	CI	1974	1974	N			See continuation page.
U-235	Metal.	PbO.	T .00000000010000	CI	1974	1974	N			See continuation page.
U-236	Metal.	PbO.	T .00000000030000	CI	1974	1974	N			See continuation page.
Np-237	Metal.	PbO.	T .00000000050000	CI	1974	1974	N			See continuation page.
Pu-238	Metal.	PbO.	T .00000002160000	CI	1974	1974	N			See continuation page.
Pu-239	Metal.	PbO.	T .00000002160000	CI	1974	1974	N			See continuation page.
Pu-240	Metal.	PbO.	T 20.000000000000	CI	1974	1974	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-241	Metal.	PbO.	T .00000236000000	CI	1974	1974	N			See continuation page.
Am-241	Metal.	PbO.	T .00001080000000	CI	1974	1974	N			See continuation page.
Cm-242	Metal.	PbO.	T .00001080000000	CI	1974	1974	N			See continuation page.
Cm-244	Metal.	PbO.	T .00000001000000	CI	1974	1974	N			See continuation page.
H-3	Metal.	PbO.	T .08309000000000	CI	1976	1976	N			See continuation page.
C-14	Metal.	PbO.	T .01115000000000	CI	1976	1976	N			See continuation page.
Fe-55	Metal.	PbO.	T 1.9250000000000	CI	1976	1976	N			See continuation page.
Ni-59	Metal.	PbO.	T .00057760000000	CI	1976	1976	N			See continuation page.
Ni-63	Metal.	PbO.	T .32430000000000	CI	1976	1976	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samp les?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Co-60	Metal.	PbO.	T .67890000000000	CI	1976	1976	N			See continuation page.
Sr-90	Metal.	PbO.	T .00093230000000	CI	1976	1976	N			See continuation page.
Tc-99	Metal.	PbO.	T .00018240000000	CI	1976	1976	N			See continuation page.
I-129	Metal.	PbO.	T .00000004742000	CI	1976	1976	N			See continuation page.
Cs-137	Metal.	PbO.	T .20270000000000	CI	1976	1976	N			See continuation page.
Ce-144	Metal.	PbO.	T .00476300000000	CI	1976	1976	N			See continuation page.
Eu-154	Metal.	PbO.	T .00000293900000	CI	1976	1976	N			See continuation page.
Eu-155	Metal.	PbO.	T .00952500000000	CI	1976	1976	N			See continuation page.
U-234	Metal.	PbO.	T .00000212800000	CI	1976	1976	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

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* Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-235	Metal.	PbO.	T .00000004560000	CI	1976	1976	N			See continuation page.
U-236	Metal.	PbO.	T .00000081070000	CI	1976	1976	N			See continuation page.
Np-237	Metal.	PbO.	T .00000131700000	CI	1976	1976	N			See continuation page.
Pu-238	Metal.	PbO.	T .00005472000000	CI	1976	1976	N			See continuation page.
Pu-239	Metal.	PbO.	T .00005472000000	CI	1976	1976	N			See continuation page.
Pu-240	Metal.	PbO.	T .00000577600000	CI	1976	1976	N			See continuation page.
Pu-241	Metal.	PbO.	T .00597900000000	CI	1976	1976	N			See continuation page.
Am-241	Metal.	PbO.	T .00002736000000	CI	1976	1976	N			See continuation page.
Cm-242	Metal.	PbO.	T .00002736000000	CI	1976	1976	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cm-244	Metal.	PbO.	T .00002533000000	CI	1976	1976	N			See continuation page.
H-3	Metal.	PbO.	T .00000000010000	CI	1980	1980	N			See continuation page.
Fe-55	Metal.	PbO.	T .00000000030000	CI	1980	1980	N			See continuation page.
Ni-63	Metal.	PbO.	T .00000000010000	CI	1980	1980	N			See continuation page.
Co-60	Metal.	PbO.	T .00000000010000	CI	1980	1980	N			See continuation page.
Cs-137	Metal.	PbO.	T .00000000010000	CI	1980	1980	N			See continuation page.
Co-60	Metal.	PbO.	T .00000000160000	CI	1980	1980	N	-20%	+20%	See comment below.
Sr-90	Metal.	PbO.	T .00000000470000	CI	1980	1980	N	-20%	+20%	See comment below.
Co-60	Metal.	PbO.	T 2.5000000000000	CI	1981	1981	N	-20%	+20%	See comment below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Sr-90	Metal.	PbO.	T 2.5000000000000	CI	1981	1981	N	-20%	+20%	See comment below.
H-3	Metal.	PbO.	T .00008200000000	CI	1982	1982	N			See continuation page.
C-14	Metal.	PbO.	T .00001100000000	CI	1982	1982	N			See continuation page.
Fe-55	Metal.	PbO.	T .00190000000000	CI	1982	1982	N			See continuation page.
Ni-59	Metal.	PbO.	T .00000057000000	CI	1982	1982	N			See continuation page.
Ni-63	Metal.	PbO.	T .00032000000000	CI	1982	1982	N			See continuation page.
Co-60	Metal.	PbO.	T .00067000000000	CI	1982	1982	N			See continuation page.
Sr-90	Metal.	PbO.	T .00000092000000	CI	1982	1982	N			See continuation page.
Tc-99	Metal.	PbO.	T .00000018000000	CI	1982	1982	N			See continuation page.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
I-129	Metal.	PbO.	T .00000000005000	CI	1982	1982	N			See continuation page.
Cs-137	Metal.	PbO.	T .00020000000000	CI	1982	1982	N			See continuation page.
Ce-144	Metal.	PbO.	T .00000470000000	CI	1982	1982	N			See continuation page.
Eu-154	Metal.	PbO.	T .00000000290000	CI	1982	1982	N			See continuation page.
Eu-155	Metal.	PbO.	T .00000940000000	CI	1982	1982	N			See continuation page.
U-234	Metal.	PbO.	T .00000000210000	CI	1982	1982	N			See continuation page.
U-235	Metal.	PbO.	T .00000000010000	CI	1982	1982	N			See continuation page.
U-236	Metal.	PbO.	T .00000000080000	CI	1982	1982	N			See continuation page.
Np-237	Metal.	PbO.	T .00000000130000	CI	1982	1982	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error). Additional radionuclides (e.g. U-234, U-235, U-236, Pu-238, Pu-239, Pu-240, C-14) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-238	Metal.	PbO.	T .00000005400000	CI	1982	1982	N			See continuation page.
Pu-239	Metal.	PbO.	T .00000005400000	CI	1982	1982	N			See continuation page.
Pu-240	Metal.	PbO.	T .00000000570000	CI	1982	1982	N			See continuation page.
Pu-241	Metal.	PbO.	T .00000590000000	CI	1982	1982	N			See continuation page.
Am-241	Metal.	PbO.	T .00000002700000	CI	1982	1982	N			See continuation page.
Cm-242	Metal.	PbO.	T .00000002700000	CI	1982	1982	N			See continuation page.
Cm-244	Metal.	PbO.	T .00000002500000	CI	1982	1982	N			See continuation page.
Co-60	Metal.	PbO.	T 89.480000000000	CI	1983	1983	N	-20%	+20%	See comment below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error). Additional radionuclides (e.g. U-234, U-235, U-236, Pu-238, Pu-239, Pu-240, C-14) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [ ] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
A portion of, or all of the measurements, were assumed to be taken using a G-M detector which only measures gamma emitters; beta emitters have been added to the RWMIS activity based on scaling factors. Therefore, the total activity will be greater than that in RWMIS.

7. Major unknowns in inventories of contaminants:
MAP and MFP.

8. Key assumptions used to deal with the unknowns:

Continuation of Part _____ Column or Question Number or Title _____

Because of the time spread, 1960-1983, the method of analysis is not known. Radionuclide information was obtained from a variety of methods such as a smear, a Geiger-Mueller counter, NaI and Germanium detectors. Therefore, the true uncertainty is not known.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 158

1. Preparer: Amaro, C.

2. Date prepared: 08/25/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 604
(building number - use code from attached list)

5. Number of waste stream from this facility:
1H

6. Waste stream:
Uranium powder.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1971 Ending year 1974

9. Waste stream volume:
Amount 5.0972 Units Cubic feet.
Check box: [ ] annual or [X] total over all years
Check box: [X] container volume or [ ] waste volume

10. Comments (specify number of pertinent question):
4. Also 614.

1. General physical form (see attached list)

[X] other (specify)
UALX powder.

2. Details on physical form(particularly confinement related)
Uranium in powder form (UALX) or enriched U powder.
Pyrophoric.

3. Chemical form:
UALX and U.

4. Inner packaging: [ ] plastic bag [X] plastic liner
[ ] metal liner [ ] none [ ] other (specify)

5. Waste container type (see attached list)
Cardboard box.

6. Other characteristics of interest:
Pyrophoric.

7. Comments (specify number of pertinent question):

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
None.										

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-235	Powder.	UALX.	A .00008670000000	CI	1971	1971	N	-20%	+20%	See comment below.
U-238	Powder.	UALX.	A .00000454000000	CI	1971	1971	N	-20%	+20%	See comment below.
U-234	Powder.	UALX.	A .00037100000000	CI	1971	1971	N	-20%	+20%	See comment below.
U-236	Powder.	UALX.	A .00000158000000	CI	1971	1971	N	-20%	+20%	See comment below.
U-235	Powder.	U-235.	A .00000642000000	CI	1971	1971	N	-20%	+20%	See comment below.
U-235	Powder.	UALX.	A .00000812000000	CI	1972	1972	N	-20%	+20%	See comment below.
U-238	Powder.	UALX.	A .00001770000000	CI	1972	1972	N	-20%	+20%	See comment below.
U-235	Powder.	Enriched U.	A .00000408700000	CI	1972	1972	N	-20%	+20%	See comment below.
U-238	Powder.	Enriched U.	A .00000004995000	CI	1972	1972	N	-20%	+20%	See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-235	Powder.	UALX.	A .00004460000000	CI	1973	1973	N	-20%	+20%	See continuation page.
U-238	Powder.	UALX.	A .00000024600000	CI	1973	1973	N	-20%	+20%	See continuation page.
U-235	Powder.	UALX.	A .00010900000000	CI	1973	1973	N	-20%	+20%	See continuation page.
U-238	Powder.	UALX.	A .00001100000000	CI	1973	1973	N	-20%	+20%	See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [ ] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[X] no
[ ] yes

6. If yes, explain why:

7. Major unknowns in inventories of contaminants:
None.

8. Key assumptions used to deal with the unknowns:
On part D, no G-M counter correction is needed to entries for which upper and lower bounds are given. The presence of such bounds indicates that the estimate was based on weight, laboratory analysis, spectrometry, and/or mathematical calculations. The G-M counter correction is needed for entries for which no bounds are given, because such estimates were originally made using the G-M counter method.

Continuation of Part C Column or Question Number or Title Uncertainty basis.

For records indicated as qualified on this page:
The gram quantity total was probably weighted at TRA. The error was probably 20% but the preparer used a conservative estimate. Weights should be good to 10 lbs.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 149

1. Preparer: Amaro, C.

2. Date prepared: 08/25/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 614
(building number - use code from attached list)

5. Number of waste stream from this facility:
1H

6. Waste stream:
Capsules of graphite Ni, and scrap U-235.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1972 Ending year 1975

9. Waste stream volume:
Amount 0.3681 Units Cubic feet.
Check box: [ ] annual or [X] total over all years
Check box: [X] container volume or [ ] waste volume

10. Comments (specify number of pertinent question):

1. General physical form (see attached list)

[X] other (specify)
Capsules.

2. Details on physical form(particularly confinement related)
Graphite Ni and U-235.

3. Chemical form:
NiC and U-235.

4. Inner packaging: [ ] plastic bag [X] plastic liner
[ ] metal liner [ ] none [ ] other (specify)

5. Waste container type (see attached list)
Cardboard box*.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
5. "Other", which cannot be defined by the preparer.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
None.										

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-235	Capsule.	CNi.	A .00000860300000	CI	1972	1972	N	-20%	+20%	See comment below.
U-238	Capsule.	CNi.	A .00000000333000	CI	1972	1972	N	-20%	+20%	See comment below.
U-235	Capsule.	U-235.	A .00002782000000	CI	1975	1975	N	-20%	+20%	See comment below.
U-238	Capsule.	U-235.	A .00000016320000	CI	1975	1975	N	-20%	+20%	See comment below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [X] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)
Interviewees wish to remain anonymous.

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[X] no
[ ] yes

6. If yes, explain why:

7. Major unknowns in inventories of contaminants:
None identified.

8. Key assumptions used to deal with the unknowns:
On part D, no G-M counter correction is needed to entries for which upper and lower bounds are given. The presence of such bounds indicates that the estimate was based on weight, laboratory analysis, spectrometry, and/or mathematical calculations. The G-M counter correction is needed for entries for which no bounds are given, because such estimates were originally made using the G-M counter method.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 194

1. Preparer: Amaro, C.

2. Date prepared: 09/01/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 614
(building number - use code from attached list)

5. Number of waste stream from this facility:
2H

6. Waste stream:
Continuous air tank.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1979 Ending year 1979

9. Waste stream volume:
Amount 5.0970 Units Cubic feet.
Check box: [ ] annual or [X] total over all years
Check box: [ ] container volume or [X] waste volume

10. Comments (specify number of pertinent question):

1. General physical form (see attached list)

[X] other (specify)
Continuous air tank.

2. Details on physical form(particularly confinement related)
Air tank.

3. Chemical form:
Metallic.

4. Inner packaging: [ ] plastic bag [ ] plastic liner
[ ] metal liner [X] none [ ] other (specify)

5. Waste container type (see attached list)
Other.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
5. "Other" is the tank itself.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
None.										

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Solid.	Metallic.	T .00233500000000	CI	1979	1979	N			See comment below.
C-14	Solid.	Metallic.	T .00031330000000	CI	1979	1979	N			See comment below.
Fe-55	Solid.	Metallic.	T .05411000000000	CI	1979	1979	N			See comment below.
Ni-59	Solid.	Metallic.	T .00001623000000	CI	1979	1979	N			See comment below.
Ni-63	Solid.	Metallic.	T .00911400000000	CI	1979	1979	N			See comment below.
Co-60	Solid.	Metallic.	T .01908000000000	CI	1979	1979	N			See comment below.
Sr-90	Solid.	Metallic.	T .00002620000000	CI	1979	1979	N			See comment below.
Tc-99	Solid.	Metallic.	T .00000512700000	CI	1979	1979	N			See comment below.
I-129	Solid.	Metallic.	T .00001481000000	CI	1979	1979	N			See comment below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
The waste was probably analyzed but the preparer cannot prove it, therefore, the sample column is marked "N". A Geiger-Mueller counter or a portable NaI detector were probably used. The preparer's belief is that the activity is too low by a factor of 2.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Solid.	Metallic.	T .00569600000000	CI	1979	1979	N			See comment below.
Ce-144	Solid.	Metallic.	T .00013390000000	CI	1979	1979	N			See comment below.
Eu-154	Solid.	Metallic.	T .00000008260000	CI	1979	1979	N			See comment below.
Eu-155	Solid.	Metallic.	T .00026770000000	CI	1979	1979	N			See comment below.
U-234	Solid.	Metallic.	T .00000005980000	CI	1979	1979	N			See comment below.
U-235	Solid.	Metallic.	T .00000000130000	CI	1979	1979	N			See comment below.
U-236	Solid.	Metallic.	T .00000002280000	CI	1979	1979	N			See comment below.
Np-237	Solid.	Metallic.	T .00000003700000	CI	1979	1979	N			See comment below.
Pu-238	Solid.	Metallic.	T .00000153800000	CI	1979	1979	N			See comment below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The waste was probably analyzed but the preparer cannot prove it, therefore, the sample column is marked "N". A Geiger-Mueller counter or a portable NaI detector were probably used. The preparer's belief is that the activity is too low by a factor of 2.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Solid.	Metallic.	T .00000153800000	CI	1979	1979	N			See comment below.
Pu-240	Solid.	Metallic.	T .00000016230000	CI	1979	1979	N			See comment below.
Pu-241	Solid.	Metallic.	T .00016800000000	CI	1979	1979	N			See comment below.
Am-241	Solid.	Metallic.	T .00000076900000	CI	1979	1979	N			See comment below.
Cm-242	Solid.	Metallic.	T .00000076900000	CI	1979	1979	N			See comment below.
Cm-244	Solid.	Metallic.	T .00000071200000	CI	1979	1979	N			See comment below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The waste was probably analyzed but the preparer cannot prove it, therefore, the sample column is marked "N". A Geiger-Mueller counter or a portable NaI detector were probably used. The preparer's belief is that the activity is too low by a factor of 2.

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [ ] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
A portion of, or all of the measurements, were assumed to be taken using a G-M detector which only measures gamma emitters; beta emitters have been added to the RWMIS activity based on scaling factors. Therefore, the total activity will be greater than that in RWMIS.

7. Major unknowns in inventories of contaminants:
MAP and MFP were unidentified.

8. Key assumptions used to deal with the unknowns:
MAP radionuclides were chosen based on their cross sections and half lives. MFP radionuclides were chosen based on their fissionable products and half lives. On part D, no G-M counter correction is needed to entries for which upper and lower bounds are given. The presence of such bounds indicates that the estimate was based on weight, laboratory analysis, spectrometry, and/or mathematical calculations. The G-M counter correction is needed for entries for which no bounds are given, because such estimates were originally made using the G-M counter method.

Continuation of Part _____ Column or Question Number or Title _____

Because of the configuration of this item, the analysis method is questionable. The radionuclide content may have been determined using smears or a Geiger-Mueller counter. The true uncertainty is not known.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 205

1. Preparer: Nieschmidt, Ernest

2. Date prepared: 08/30/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 632
(building number - use code from attached list)

5. Number of waste stream from this facility:
1H

6. Waste stream:
Core structural pieces.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1962 Ending year 1983

9. Waste stream volume:
Amount 60.7100 Units Cubic meters.
Check box: [ ] annual or [X] total over all years
Check box: [ ] container volume or [X] waste volume

10. Comments (specify number of pertinent question):

1. General physical form (see attached list)
Other core,reactor vessel,loop component
[ ] other (specify)

2. Details on physical form(particularly confinement related)
Scrap metal pieces from core.

3. Chemical form:
Metals.

4. Inner packaging: [ ] plastic bag [X] plastic liner
[ ] metal liner [ ] none [ ] other (specify)

5. Waste container type (see attached list)
Wooden box.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
None.										

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Solid.	H.	A .00577100000000	CI	1962	1962	N			
C-14	Solid.	H.	A .00077420000000	CI	1962	1962	N			
Fe-55	Solid.	H.	A .13370000000000	CI	1962	1962	N			
Ni-59	Solid.	H.	A .00004012000000	CI	1962	1962	N			
Ni-63	Solid.	H.	A .02252000000000	CI	1962	1962	N			
Co-60	Solid.	H.	A .04716000000000	CI	1962	1962	N			
Sr-90	Solid.	H.	A .00006475000000	CI	1962	1962	N			
Tc-99	Solid.	H.	A .00001267000000	CI	1962	1962	N			
I-129	Solid.	H.	A .00000000329000	CI	1962	1962	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
H signifies hydrogen absorbed in metal.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Solid.	H.	A .01408000000000	CI	1962	1962	N			
Ce-144	Solid.	H.	A .00033080000000	CI	1962	1962	N			
Eu-154	Solid.	H.	A .00000020410000	CI	1962	1962	N			
Eu-155	Solid.	H.	A .00066160000000	CI	1962	1962	N			
U-234	Solid.	H.	A .00000014780000	CI	1962	1962	N			
U-235	Solid.	H.	A .00000000320000	CI	1962	1962	N			
U-236	Solid.	H.	A .00000005630000	CI	1962	1962	N			
Np-237	Solid.	H.	A .00000009150000	CI	1962	1962	N			
Pu-238	Solid.	H.	A .00000380100000	CI	1962	1962	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
H signifies hydrogen absorbed in metal.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Solid.	H.	A .00000380100000	CI	1962	1962	N			
Pu-240	Solid.	H.	A .00000040120000	CI	1962	1962	N			
Pu-241	Solid.	H.	A .00041530000000	CI	1962	1962	N			
Am-241	Solid.	H.	A .00000190000000	CI	1962	1962	N			
Cm-242	Solid.	H.	A .00000190000000	CI	1962	1962	N			
Cm-244	Solid.	H.	A .00000176000000	CI	1962	1962	N			
H-3	Solid.	H.	A 257.80000000000	CI	1964	1964	N			
C-14	Solid.	H.	A 34.580000000000	CI	1964	1964	N			
Fe-55	Solid.	H.	A 5972.0000000000	CI	1964	1964	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
H signifies hydrogen absorbed in metal.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Ni-59	Solid.	H.	A 1.7920000000000	CI	1964	1964	N			
Ni-63	Solid.	H.	A 1006.0000000000	CI	1964	1964	N			
Co-60	Solid.	H.	A 2106.0000000000	CI	1964	1964	N			
Sr-90	Solid.	H.	A 2.8920000000000	CI	1964	1964	N			
Tc-99	Solid.	H.	A .56580000000000	CI	1964	1964	N			
I-129	Solid.	H.	A .00014715000000	CI	1964	1964	N			
Cs-137	Solid.	H.	A 628.70000000000	CI	1964	1964	N			
Ce-144	Solid.	H.	A 14.770000000000	CI	1964	1964	N			
Eu-154	Solid.	H.	A .00911600000000	CI	1964	1964	N			

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-155	Solid.	H.	A 29.550000000000	CI	1964	1964	N			
U-234	Solid.	H.	A .00660100000000	CI	1964	1964	N			
U-235	Solid.	H.	A .00014150000000	CI	1964	1964	N			
U-236	Solid.	H.	A .00251500000000	CI	1964	1964	N			
Np-237	Solid.	H.	A .00408600000000	CI	1964	1964	N			
Pu-238	Solid.	H.	A .16970000000000	CI	1964	1964	N			
Pu-239	Solid.	H.	A .16970000000000	CI	1964	1964	N			
Pu-240	Solid.	H.	A .01792000000000	CI	1964	1964	N			
Pu-241	Solid.	H.	A 18.550000000000	CI	1964	1964	N			

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Am-241	Solid.	H.	A .08487000000000	CI	1964	1964	N			
Cm-242	Solid.	H.	A .08487000000000	CI	1964	1964	N			
Cm-244	Solid.	H.	A .07858000000000	CI	1964	1964	N			
H-3	Solid.	H.	A 4.2870000000000	CI	1966	1966	N			
C-14	Solid.	H.	A .57510000000000	CI	1966	1966	N			
Fe-55	Solid.	H.	A 99.340000000000	CI	1966	1966	N			
Ni-59	Solid.	H.	A .02980000000000	CI	1966	1966	N			
Ni-63	Solid.	H.	A 16.730000000000	CI	1966	1966	N			
Co-60	Solid.	H.	A 35.030000000000	CI	1966	1966	N			

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Sr-90	Solid.	H.	A .04810000000000	CI	1966	1966	N			
Tc-99	Solid.	H.	A .00941100000000	CI	1966	1966	N			
I-129	Solid.	H.	A .00000244710000	CI	1966	1966	N			
Cs-137	Solid.	H.	A 10.460000000000	CI	1966	1966	N			
Ce-144	Solid.	H.	A .24570000000000	CI	1966	1966	N			
Eu-154	Solid.	H.	A .00015160000000	CI	1966	1966	N			
Eu-155	Solid.	H.	A .49150000000000	CI	1966	1966	N			
U-234	Solid.	H.	A .00010980000000	CI	1966	1966	N			
U-235	Solid.	H.	A .00000235300000	CI	1966	1966	N			

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-236	Solid.	H.	A .00004183000000	CI	1966	1966	N			
Np-237	Solid.	H.	A .00006797000000	CI	1966	1966	N			
Pu-238	Solid.	H.	A .00282300000000	CI	1966	1966	N			
Pu-239	Solid.	H.	A .00282300000000	CI	1966	1966	N			
Pu-240	Solid.	H.	A .00029800000000	CI	1966	1966	N			
Pu-241	Solid.	H.	A .30850000000000	CI	1966	1966	N			
Am-241	Solid.	H.	A .00141200000000	CI	1966	1966	N			
Cm-242	Solid.	H.	A .00141200000000	CI	1966	1966	N			
Cm-244	Solid.	H.	A .00130700000000	CI	1966	1966	N			

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H-3	Solid.	H.	A .20660000000000	CI	1969	1969	N			
C-14	Solid.	H.	A .02772000000000	CI	1969	1969	N			
Fe-55	Solid.	H.	A 4.7880000000000	CI	1969	1969	N			
Ni-59	Solid.	H.	A .00143600000000	CI	1969	1969	N			
Ni-63	Solid.	H.	A .80640000000000	CI	1969	1969	N			
Co-60	Solid.	H.	A 1.6880000000000	CI	1969	1969	N			
Sr-90	Solid.	H.	A .00231800000000	CI	1969	1969	N			
Tc-99	Solid.	H.	A .00045360000000	CI	1969	1969	N			
I-129	Solid.	H.	A .00000011790000	CI	1969	1969	N			

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Cs-137	Solid.	H.	A .50400000000000	CI	1969	1969	N			
Ce-144	Solid.	H.	A .01184000000000	CI	1969	1969	N			
Eu-154	Solid.	H.	A .00000730800000	CI	1969	1969	N			
Eu-155	Solid.	H.	A .02369000000000	CI	1969	1969	N			
U-234	Solid.	H.	A .00000529200000	CI	1969	1969	N			
U-235	Solid.	H.	A .00000011340000	CI	1969	1969	N			
U-236	Solid.	H.	A .00000201600000	CI	1969	1969	N			
Np-237	Solid.	H.	A .00000327600000	CI	1969	1969	N			
Pu-238	Solid.	H.	A .00013610000000	CI	1969	1969	N			

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Pu-239	Solid.	H.	A .00013610000000	CI	1969	1969	N			
Pu-240	Solid.	H.	A .00001436000000	CI	1969	1969	N			
Pu-241	Solid.	H.	A .01487000000000	CI	1969	1969	N			
Am-241	Solid.	H.	A .00006804000000	CI	1969	1969	N			
Cm-242	Solid.	H.	A .00006804000000	CI	1969	1969	N			
Cm-244	Solid.	H.	A .00006300000000	CI	1969	1969	N			
H-3	Solid.	H.	A 4.0920000000000	CI	1970	1970	N			
C-14	Solid.	H.	A .54890000000000	CI	1970	1970	N			
Fe-55	Solid.	H.	A 94.810000000000	CI	1970	1970	N			

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Ni-59	Solid.	H.	A .02844000000000	CI	1970	1970	N			
Ni-63	Solid.	H.	A 15.970000000000	CI	1970	1970	N			
Co-60	Solid.	H.	A 33.430000000000	CI	1970	1970	N			
Sr-90	Solid.	H.	A .04591000000000	CI	1970	1970	N			
Tc-99	Solid.	H.	A .00898200000000	CI	1970	1970	N			
I-129	Solid.	H.	A .00000233550000	CI	1970	1970	N			
Cs-137	Solid.	H.	A 9.9800000000000	CI	1970	1970	N			
Ce-144	Solid.	H.	A .23450000000000	CI	1970	1970	N			
Eu-154	Solid.	H.	A .00014470000000	CI	1970	1970	N			

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-155	Solid.	H.	A .46910000000000	CI	1970	1970	N			
U-234	Solid.	H.	A .00010480000000	CI	1970	1970	N			
U-235	Solid.	H.	A .00000224600000	CI	1970	1970	N			
U-236	Solid.	H.	A .00003992000000	CI	1970	1970	N			
Np-237	Solid.	H.	A .00006487000000	CI	1970	1970	N			
Pu-238	Solid.	H.	A .00269500000000	CI	1970	1970	N			
Pu-239	Solid.	H.	A .00269500000000	CI	1970	1970	N			
Pu-240	Solid.	H.	A .00028440000000	CI	1970	1970	N			
Pu-241	Solid.	H.	A .29440000000000	CI	1970	1970	N			

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Am-241	Solid.	H.	A .00134700000000	CI	1970	1970	N			
Cm-242	Solid.	H.	A .00134700000000	CI	1970	1970	N			
Cm-244	Solid.	H.	A .00124800000000	CI	1970	1970	N			
H-3	Solid.	H.	A 3417.0000000000	CI	1972	1972	N			
C-14	Solid.	H.	A 458.40000000000	CI	1972	1972	N			
Fe-55	Solid.	H.	A 79180.000000000	CI	1972	1972	N			
Ni-59	Solid.	H.	A 23.750000000000	CI	1972	1972	N			
Ni-63	Solid.	H.	A 13340.000000000	CI	1972	1972	N			
Co-60	Solid.	H.	A 27920.000000000	CI	1972	1972	N			

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Sr-90	Solid.	H.	A 38.340000000000	CI	1972	1972	N			
Tc-99	Solid.	H.	A 7.5020000000000	CI	1972	1972	N			
I-129	Solid.	H.	A .00195030000000	CI	1972	1972	N			
Cs-137	Solid.	H.	A 8335.0000000000	CI	1972	1972	N			
Ce-144	Solid.	H.	A 195.90000000000	CI	1972	1972	N			
Eu-154	Solid.	H.	A .12090000000000	CI	1972	1972	N			
Eu-155	Solid.	H.	A 391.70000000000	CI	1972	1972	N			
U-234	Solid.	H.	A .08752000000000	CI	1972	1972	N			
U-235	Solid.	H.	A .00187500000000	CI	1972	1972	N			

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U-236	Solid.	H.	A .03334000000000	CI	1972	1972	N			
Np-237	Solid.	H.	A .05418000000000	CI	1972	1972	N			
Pu-238	Solid.	H.	A 2.2500000000000	CI	1972	1972	N			
Pu-239	Solid.	H.	A 2.2500000000000	CI	1972	1972	N			
Pu-240	Solid.	H.	A .23750000000000	CI	1972	1972	N			
Pu-241	Solid.	H.	A 245.90000000000	CI	1972	1972	N			
Am-241	Solid.	H.	A 1.1250000000000	CI	1972	1972	N			
Cm-242	Solid.	H.	A 1.1250000000000	CI	1972	1972	N			
Cm-244	Solid.	H.	A 1.0420000000000	CI	1972	1972	N			

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H-3	Solid.	H.	A 98.770000000000	CI	1973	1973	N			
C-14	Solid.	H.	A 13.250000000000	CI	1973	1973	N			
Fe-55	Solid.	H.	A 2289.0000000000	CI	1973	1973	N			
Ni-59	Solid.	H.	A .68660000000000	CI	1973	1973	N			
Ni-63	Solid.	H.	A 385.50000000000	CI	1973	1973	N			
Co-60	Solid.	H.	A 807.10000000000	CI	1973	1973	N			
Sr-90	Solid.	H.	A 1.1080000000000	CI	1973	1973	N			
Tc-99	Solid.	H.	A .21680000000000	CI	1973	1973	N			
I-129	Solid.	H.	A .00005637600000	CI	1973	1973	N			

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Cs-137	Solid.	H.	A 240.90000000000	CI	1973	1973	N			
Ce-144	Solid.	H.	A 5.6610000000000	CI	1973	1973	N			
Eu-154	Solid.	H.	A .00349300000000	CI	1973	1973	N			
Eu-155	Solid.	H.	A 11.320000000000	CI	1973	1973	N			
U-234	Solid.	H.	A .00253000000000	CI	1973	1973	N			
U-235	Solid.	H.	A .00005421000000	CI	1973	1973	N			
U-236	Solid.	H.	A .00096360000000	CI	1973	1973	N			
Np-237	Solid.	H.	A .00156600000000	CI	1973	1973	N			
Pu-238	Solid.	H.	A .06505000000000	CI	1973	1973	N			

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Pu-239	Solid.	H.	A .06505000000000	CI	1973	1973	N			
Pu-240	Solid.	H.	A .00686600000000	CI	1973	1973	N			
Pu-241	Solid.	H.	A 7.1070000000000	CI	1973	1973	N			
Am-241	Solid.	H.	A .03252000000000	CI	1973	1973	N			
Cm-242	Solid.	H.	A .03252000000000	CI	1973	1973	N			
Cm-244	Solid.	H.	A .03011000000000	CI	1973	1973	N			
H-3	Solid.	H.	A 42.450000000000	CI	1978	1978	N			
C-14	Solid.	H.	A 5.6940000000000	CI	1978	1978	N			
Fe-55	Solid.	H.	A 983.50000000000	CI	1978	1978	N			

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Ni-59	Solid.	H.	A .29510000000000	CI	1978	1978	N			
Ni-63	Solid.	H.	A 165.60000000000	CI	1978	1978	N			
Co-60	Solid.	H.	A 346.80000000000	CI	1978	1978	N			
Sr-90	Solid.	H.	A .47620000000000	CI	1978	1978	N			
Tc-99	Solid.	H.	A .09318000000000	CI	1978	1978	N			
I-129	Solid.	H.	A .00002422800000	CI	1978	1978	N			
Cs-137	Solid.	H.	A 103.50000000000	CI	1978	1978	N			
Ce-144	Solid.	H.	A 2.4330000000000	CI	1978	1978	N			
Eu-154	Solid.	H.	A .00150100000000	CI	1978	1978	N			

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-155	Solid.	H.	A 4.8660000000000	CI	1978	1978	N			
U-234	Solid.	H.	A .00108700000000	CI	1978	1978	N			
U-235	Solid.	H.	A .00002329000000	CI	1978	1978	N			
U-236	Solid.	H.	A .00041410000000	CI	1978	1978	N			
Np-237	Solid.	H.	A .00067290000000	CI	1978	1978	N			
Pu-238	Solid.	H.	A .02795000000000	CI	1978	1978	N			
Pu-239	Solid.	H.	A .02795000000000	CI	1978	1978	N			
Pu-240	Solid.	H.	A .00295100000000	CI	1978	1978	N			
Pu-241	Solid.	H.	A 3.0540000000000	CI	1978	1978	N			

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Am-241	Solid.	H.	A .01398000000000	CI	1978	1978	N			
Cm-242	Solid.	H.	A .01398000000000	CI	1978	1978	N			
Cm-244	Solid.	H.	A .01294000000000	CI	1978	1978	N			
H-3	Solid.	H.	A 2.4730000000000	CI	1979	1979	N			
C-14	Solid.	H.	A .33180000000000	CI	1979	1979	N			
Fe-55	Solid.	H.	A 57.310000000000	CI	1979	1979	N			
Ni-59	Solid.	H.	A .01719000000000	CI	1979	1979	N			
Ni-63	Solid.	H.	A 9.6530000000000	CI	1979	1979	N			
Co-60	Solid.	H.	A 20.210000000000	CI	1979	1979	N			

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Additional information or explanations (indicate pertinent contaminant)
H signifies hydrogen absorbed in metal.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Sr-90	Solid.	H.	A .02775000000000	CI	1979	1979	N			
Tc-99	Solid.	H.	A .00543000000000	CI	1979	1979	N			
I-129	Solid.	H.	A .00000141210000	CI	1979	1979	N			
Cs-137	Solid.	H.	A 6.0330000000000	CI	1979	1979	N			
Ce-144	Solid.	H.	A .14180000000000	CI	1979	1979	N			
Eu-154	Solid.	H.	A .00008748000000	CI	1979	1979	N			
Eu-155	Solid.	H.	A .28350000000000	CI	1979	1979	N			
U-234	Solid.	H.	A .00006335000000	CI	1979	1979	N			
U-235	Solid.	H.	A .00000135700000	CI	1979	1979	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
H signifies hydrogen absorbed in metal.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-236	Solid.	H.	A .00002413000000	CI	1979	1979	N			
Np-237	Solid.	H.	A .00003921000000	CI	1979	1979	N			
Pu-238	Solid.	H.	A .00162900000000	CI	1979	1979	N			
Pu-239	Solid.	H.	A .00162900000000	CI	1979	1979	N			
Pu-240	Solid.	H.	A .00017190000000	CI	1979	1979	N			
Pu-241	Solid.	H.	A .17800000000000	CI	1979	1979	N			
Am-241	Solid.	H.	A .00081440000000	CI	1979	1979	N			
Cm-242	Solid.	H.	A .00081440000000	CI	1979	1979	N			
Cm-244	Solid.	H.	A .00075410000000	CI	1979	1979	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
H signifies hydrogen absorbed in metal.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Solid.	H.	A 485.30000000000	CI	1981	1981	N			
C-14	Solid.	H.	A 65.100000000000	CI	1981	1981	N			
Fe-55	Solid.	H.	A 11240.000000000	CI	1981	1981	N			
Ni-59	Solid.	H.	A 3.3730000000000	CI	1981	1981	N			
Ni-63	Solid.	H.	A 1894.0000000000	CI	1981	1981	N			
Co-60	Solid.	H.	A 3965.0000000000	CI	1981	1981	N			
Sr-90	Solid.	H.	A 5.4450000000000	CI	1981	1981	N			
Tc-99	Solid.	H.	A 1.0650000000000	CI	1981	1981	N			
I-129	Solid.	H.	A .00027693000000	CI	1981	1981	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
H signifies hydrogen absorbed in metal.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Solid.	H.	A 1184.0000000000	CI	1981	1981	N			
Ce-144	Solid.	H.	A 27.820000000000	CI	1981	1981	N			
Eu-154	Solid.	H.	A .01716000000000	CI	1981	1981	N			
Eu-155	Solid.	H.	A 55.630000000000	CI	1981	1981	N			
U-234	Solid.	H.	A .01243000000000	CI	1981	1981	N			
U-235	Solid.	H.	A .00026630000000	CI	1981	1981	N			
U-236	Solid.	H.	A .00473500000000	CI	1981	1981	N			
Np-237	Solid.	H.	A .00769400000000	CI	1981	1981	N			
Pu-238	Solid.	H.	A .31960000000000	CI	1981	1981	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
H signifies hydrogen absorbed in metal.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Solid.	H.	A .31960000000000	CI	1981	1981	N			
Pu-240	Solid.	H.	A .03373000000000	CI	1981	1981	N			
Pu-241	Solid.	H.	A 34.920000000000	CI	1981	1981	N			
Am-241	Solid.	H.	A .15980000000000	CI	1981	1981	N			
Cm-242	Solid.	H.	A .15980000000000	CI	1981	1981	N			
Cm-244	Solid.	H.	A .14800000000000	CI	1981	1981	N			
H-3	Solid.	H.	A .98940000000000	CI	1983	1983	N			
C-14	Solid.	H.	A .13270000000000	CI	1983	1983	N			
Fe-55	Solid.	H.	A 22.920000000000	CI	1983	1983	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
H signifies hydrogen absorbed in metal.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Ni-59	Solid.	H.	A .00687700000000	CI	1983	1983	N			
Ni-63	Solid.	H.	A 3.8610000000000	CI	1983	1983	N			
Co-60	Solid.	H.	A 8.0840000000000	CI	1983	1983	N			
Sr-90	Solid.	H.	A .01110000000000	CI	1983	1983	N			
Tc-99	Solid.	H.	A .00217200000000	CI	1983	1983	N			
I-129	Solid.	H.	A .00000056466000	CI	1983	1983	N			
Cs-137	Solid.	H.	A 2.4130000000000	CI	1983	1983	N			
Ce-144	Solid.	H.	A .05671000000000	CI	1983	1983	N			
Eu-154	Solid.	H.	A .00003499000000	CI	1983	1983	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
H signifies hydrogen absorbed in metal.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-155	Solid.	H.	A .11340000000000	CI	1983	1983	N			
U-234	Solid.	H.	A .00002534000000	CI	1983	1983	N			
U-235	Solid.	H.	A .00000054300000	CI	1983	1983	N			
U-236	Solid.	H.	A .00000965300000	CI	1983	1983	N			
Np-237	Solid.	H.	A .00001569000000	CI	1983	1983	N			
Pu-238	Solid.	H.	A .00065150000000	CI	1983	1983	N			
Pu-239	Solid.	H.	A .00065150000000	CI	1983	1983	N			
Pu-240	Solid.	H.	A .00006877000000	CI	1983	1983	N			
Pu-241	Solid.	H.	A .07119000000000	CI	1983	1983	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
H signifies hydrogen absorbed in metal.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Am-241	Solid.	H.	A .00032580000000	CI	1983	1983	N			
Cm-242	Solid.	H.	A .00032580000000	CI	1983	1983	N			•
Cm-244	Solid.	H.	A .00030160000000	CI	1983	1983	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
H signifies hydrogen absorbed in metal.

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [ ] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
A portion of, or all of the measurements, were assumed to be taken using a G-M detector which only measures gamma emitters; beta emitters have been added to the RWMIS activity based on scaling factors. Therefore, the total activity will be greater than that in RWMIS.

7. Major unknowns in inventories of contaminants:
Method of measurement.

8. Key assumptions used to deal with the unknowns:

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 154

1. Preparer: Amaro, C.

2. Date prepared: 08/27/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 642
(building number - use code from attached list)

5. Number of waste stream from this facility:
1H

6. Waste stream:
Fission chambers with foils.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1969 Ending year 1975

9. Waste stream volume:
Amount 0.0849 Units Cubic feet.
Check box: [ ] annual or [X] total over all years
Check box: [ ] container volume or [X] waste volume

10. Comments (specify number of pertinent question):
4. Also 647 and 654.

1. General physical form (see attached list)

[X] other (specify)
Fission chambers and foils.

2. Details on physical form(particularly confinement related)
Pu-241 and U-235 fission chambers with foils.

3. Chemical form:
Metals.

4. Inner packaging: [ ] plastic bag [ ] plastic liner
[ ] metal liner [ ] none [ ] other (specify)

5. Waste container type (see attached list)
Other.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
5. The preparer has talked to various TRA employees (old timers). No one can remember this shipment, therefore, "Other" cannot be identified.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samp les?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
None.										

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-241	Solid.	Metallic.	A 1.5450000000000	CI	1969	1969	N	-5%	+5%	See comment below.
U-235	Solid.	Metallic.	A .00000258900000	CI	1975	1975	N	-5%	+5%	See comment below.
U-238	Solid.	Metallic.	A .00000003000000	CI	1975	1975	N	-5%	+5%	See comment below.
U-235	Solid.	Metallic.	A .00000475100000	CI	1977	1977	N	-5%	+5%	See comment below.
U-238	Solid.	Metallic.	A .00000005900000	CI	1977	1977	N	-5%	+5%	See comment below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

Activities of fission chambers are well known, therefore, no sample needs to be counted to determine the activity. The activity is probably very good, so a 5% error was assigned.

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [ ] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[X] no
[ ] yes

6. If yes, explain why:

7. Major unknowns in inventories of contaminants:
None.

8. Key assumptions used to deal with the unknowns:

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 191

1. Preparer: Amaro, C.

2. Date prepared: 09/04/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 642
(building number - use code from attached list)

5. Number of waste stream from this facility:
2H

6. Waste stream:
Insulation.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1962 Ending year 1975

9. Waste stream volume:
Amount _____ Units Cubic feet.
Check box: [ ] annual or [X] total over all years
Check box: [X] container volume or [ ] waste volume

10. Comments (specify number of pertinent question):
4. Also 706.

1. General physical form (see attached list)

[X] other (specify)
Insulation.

2. Details on physical form(particularly confinement related)

3. Chemical form:
Unknown.

4. Inner packaging: [ ] plastic bag [X] plastic liner
[ ] metal liner [ ] none [ ] other (specify)

5. Waste container type (see attached list)
Cardboard box*.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
5. BXW.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
None.										

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Insulation.	Unknown.	T .00569300000000	CI	1962	1962	N			See continuation page.
C-14	Insulation.	Unknown.	T .00076370000000	CI	1962	1962	N			See continuation page.
Fe-55	Insulation.	Unknown.	T .13190000000000	CI	1962	1962	N			See continuation page.
Ni-59	Insulation.	Unknown.	T .00003957000000	CI	1962	1962	N			See continuation page.
Ni-63	Insulation.	Unknown.	T .02222000000000	CI	1962	1962	N			See continuation page.
Co-60	Insulation.	Unknown.	T .04652000000000	CI	1962	1962	N			See continuation page.
Sr-90	Insulation.	Unknown.	T .00006387000000	CI	1962	1962	N			See continuation page.
Tc-99	Insulation.	Unknown.	T .00001250000000	CI	1962	1962	N			See continuation page.
I-129	Insulation.	Unknown.	T .00000000325000	CI	1962	1962	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Insulation.	Unknown.	T .01389000000000	CI	1962	1962	N			See continuation page.
Ce-144	Insulation.	Unknown.	T .00032630000000	CI	1962	1962	N			See continuation page.
Eu-154	Insulation.	Unknown.	T .00000020130000	CI	1962	1962	N			See continuation page.
Eu-155	Insulation.	Unknown.	T .00065260000000	CI	1962	1962	N			See continuation page.
U-234	Insulation.	Unknown.	T .00000014580000	CI	1962	1962	N			See continuation page.
U-235	Insulation.	Unknown.	T .00000000310000	CI	1962	1962	N			See continuation page.
U-236	Insulation.	Unknown.	T .00000005550000	CI	1962	1962	N			See continuation page.
Np-237	Insulation.	Unknown.	T .00000009030000	CI	1962	1962	N			See continuation page.
Pu-238	Insulation.	Unknown.	T .00000374900000	CI	1962	1962	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Insulation.	Unknown.	T .00000374900000	CI	1962	1962	N			See continuation page.
Pu-240	Insulation.	Unknown.	T .00000039570000	CI	1962	1962	N			See continuation page.
Pu-241	Insulation.	Unknown.	T .00040960000000	CI	1962	1962	N			See continuation page.
Am-241	Insulation.	Unknown.	T .00000187500000	CI	1962	1962	N			See continuation page.
Cm-242	Insulation.	Unknown.	T .00000187500000	CI	1962	1962	N			See continuation page.
Cm-244	Insulation.	Unknown.	T .00000173600000	CI	1962	1962	N			See continuation page.
H-3	Insulation.	Unknown.	T .01957000000000	CI	1973	1973	N			See continuation page.
C-14	Insulation.	Unknown.	T .00262600000000	CI	1973	1973	N			See continuation page.
Fe-55	Insulation.	Unknown.	T .45360000000000	CI	1973	1973	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Ni-59	Insulation.	Unknown.	T .00013610000000	CI	1973	1973	N			See continuation page.
Ni-63	Insulation.	Unknown.	T .07639000000000	CI	1973	1973	N			See continuation page.
Co-60	Insulation.	Unknown.	T .15990000000000	CI	1973	1973	N			See continuation page.
Sr-90	Insulation.	Unknown.	T .00021960000000	CI	1973	1973	N			See continuation page.
Tc-99	Insulation.	Unknown.	T .00004297000000	CI	1973	1973	N			See continuation page.
I-129	Insulation.	Unknown.	T .00000001117000	CI	1973	1973	N			See continuation page.
Cs-137	Insulation.	Unknown.	T .04774000000000	CI	1973	1973	N			See continuation page.
Ce-144	Insulation.	Unknown.	T .00112200000000	CI	1973	1973	N			See continuation page.
Eu-154	Insulation.	Unknown.	T .00000069230000	CI	1973	1973	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-155	Insulation.	Unknown.	T .00224400000000	CI	1973	1973	N			See continuation page.
U-234	Insulation.	Unknown.	T .00000050130000	CI	1973	1973	N			See continuation page.
U-235	Insulation.	Unknown.	T .00000001070000	CI	1973	1973	N			See continuation page.
U-236	Insulation.	Unknown.	T .00000019100000	CI	1973	1973	N			See continuation page.
Np-237	Insulation.	Unknown.	T .00000031030000	CI	1973	1973	N			See continuation page.
Pu-238	Insulation.	Unknown.	T .00001289000000	CI	1973	1973	N			See continuation page.
Pu-239	Insulation.	Unknown.	T .00001289000000	CI	1973	1973	N			See continuation page.
Pu-240	Insulation.	Unknown.	T .00000136100000	CI	1973	1973	N			See continuation page.
Pu-241	Insulation.	Unknown.	T .00140800000000	CI	1973	1973	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Am-241	Insulation.	Unknown.	T .00000644500000	CI	1973	1973	N			See continuation page.
Cm-242	Insulation.	Unknown.	T .00000644500000	CI	1973	1973	N			See continuation page.
Cm-244	Insulation.	Unknown.	T .00000596800000	CI	1973	1973	N			See continuation page.
H-3	Insulation.	Unknown.	T .02807000000000	CI	1974	1974	N			See continuation page.
C-14	Insulation.	Unknown.	T .00376500000000	CI	1974	1974	N			See continuation page.
Fe-55	Insulation.	Unknown.	T .65030000000000	CI	1974	1974	N			See continuation page.
Ni-59	Insulation.	Unknown.	T .00019510000000	CI	1974	1974	N			See continuation page.
Ni-63	Insulation.	Unknown.	T .10950000000000	CI	1974	1974	N			See continuation page.
Co-60	Insulation.	Unknown.	T .22930000000000	CI	1974	1974	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Sr-90	Insulation.	Unknown.	T .00031490000000	CI	1974	1974	N			See continuation page.
Tc-99	Insulation.	Unknown.	T .00006161000000	CI	1974	1974	N			See continuation page.
I-129	Insulation.	Unknown.	T .00000001602000	CI	1974	1974	N			See continuation page.
Cs-137	Insulation.	Unknown.	T .06845000000000	CI	1974	1974	N			See continuation page.
Ce-144	Insulation.	Unknown.	T .00160900000000	CI	1974	1974	N			See continuation page.
Eu-154	Insulation.	Unknown.	T .00000099260000	CI	1974	1974	N			See continuation page.
Eu-155	Insulation.	Unknown.	T .00321700000000	CI	1974	1974	N			See continuation page.
U-234	Insulation.	Unknown.	T .00000071870000	CI	1974	1974	N			See continuation page.
U-235	Insulation.	Unknown.	T .00000001540000	CI	1974	1974	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-236	Insulation.	Unknown.	T .00000027380000	CI	1974	1974	N			See continuation page.
Np-237	Insulation.	Unknown.	T .00000044490000	CI	1974	1974	N			See continuation page.
Pu-238	Insulation.	Unknown.	T .00001848000000	CI	1974	1974	N			See continuation page.
Pu-239	Insulation.	Unknown.	T .00001848000000	CI	1974	1974	N			See continuation page.
Pu-240	Insulation.	Unknown.	T .00000195100000	CI	1974	1974	N			See continuation page.
Pu-241	Insulation.	Unknown.	T .00201900000000	CI	1974	1974	N			See continuation page.
Am-241	Insulation.	Unknown.	T .00000924100000	CI	1974	1974	N			See continuation page.
Cm-242	Insulation.	Unknown.	T .00000924100000	CI	1974	1974	N			See continuation page.
Cm-244	Insulation.	Unknown.	T .00000855700000	CI	1974	1974	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Co-60	Insulation.	Unknown.	T .00099999000000	CI	1975	1975	N	-20%	+20%	See comment below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [ ] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
A portion of, or all of the measurements, were assumed to be taken using a G-M detector which only measures gamma emitters; beta emitters have been added to the RWMIS activity based on scaling factors. Therefore, the total activity will be greater than that in RWMIS.

7. Major unknowns in inventories of contaminants:
MAP and MFP were unidentified.

8. Key assumptions used to deal with the unknowns:
MAP radionuclides were chosen based on their cross sections and half lines. MFP radionuclides were chosen based on their fissionable products and half lives. On part D, no G-M counter correction is needed to entries for which upper and lower bounds are given. The presence of such bounds indicates that the estimate was based on weight, laboratory analysis, spectrometry, and/or mathematical calculations. The G-M counter correction is needed for entries for which no bounds are given, because such estimates were originally made using the G-M counter method.

Continuation of Part D Column or Question Number or Title Uncertainty basis.

Because of the material type and the years of the shipments, the prepare does not know whether or how a sample was analyzed. The radionuclide content may have been determined using a Geiger-Mueller counter, a NaI or a Germanium detector. The true uncertainty is not known.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 159

1. Preparer: Amaro, C.

2. Date prepared: 08/27/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 642
(building number - use code from attached list)

5. Number of waste stream from this facility:
3H

6. Waste stream:
Hydrofluoric Acid (HF) solidified and neutralized as NaF.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1962 Ending year 1962

9. Waste stream volume:
Amount 0.2832 Units Cubic feet.
Check box: [ ] annual or [X] total over all years
Check box: [ ] container volume or [X] waste volume

10. Comments (specify number of pertinent question):

1. General physical form (see attached list)

[X] other (specify)
HF solidified.

2. Details on physical form(particularly confinement related)
Material has been rendered non-hazardous by solidification as defined in 40 CFR268.

3. Chemical form:
NaF.

4. Inner packaging: [ ] plastic bag [ ] plastic liner [ ] metal liner [ ] none [ ] other (specify)

5. Waste container type (see attached list)
Other.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
4. Not known.
5. "Other" cannot be defined.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
None.										

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Solid.	HF.	T 1.3780000000000	CI	1962	1962	N			See continuation page.
C-14	Solid.	HF.	T .18480000000000	CI	1962	1962	N			See continuation page.
Fe-55	Solid.	HF.	T 31.920000000000	CI	1962	1962	N			See continuation page.
Ni-59	Solid.	HF.	T .00957500000000	CI	1962	1962	N			See continuation page.
Ni-63	Solid.	HF.	T 5.3760000000000	CI	1962	1962	N			See continuation page.
Co-60	Solid.	HF.	T 11.260000000000	CI	1962	1962	N			See continuation page.
Sr-90	Solid.	HF.	T .01545000000000	CI	1962	1962	N			See continuation page.
Tc-99	Solid.	HF.	T .00302400000000	CI	1962	1962	N			See continuation page.
I-129	Solid.	HF.	T .00000078615000	CI	1962	1962	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Solid.	HF.	T 3.3600000000000	CI	1962	1962	N			See continuation page.
Ce-144	Solid.	HF.	T .07895000000000	CI	1962	1962	N			See continuation page.
Eu-154	Solid.	HF.	T .00004872000000	CI	1962	1962	N			See continuation page.
Eu-155	Solid.	HF.	T .15790000000000	CI	1962	1962	N			See continuation page.
U-234	Solid.	HF.	T .00003528000000	CI	1962	1962	N			See continuation page.
U-235	Solid.	HF.	T .00000075590000	CI	1962	1962	N			See continuation page.
U-236	Solid.	HF.	T .00001344000000	CI	1962	1962	N			See continuation page.
Np-237	Solid.	HF.	T .00002184000000	CI	1962	1962	N			See continuation page.
Pu-238	Solid.	HF.	T .00090710000000	CI	1962	1962	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Solid.	HF.	T .00090710000000	CI	1962	1962	N			See continuation page.
Pu-240	Solid.	HF.	T .00009575000000	CI	1962	1962	N			See continuation page.
Pu-241	Solid.	HF.	T .09911000000000	CI	1962	1962	N			See continuation page.
Am-241	Solid.	HF.	T .00045360000000	CI	1962	1962	N			See continuation page.
Cm-242	Solid.	HF.	T .00045360000000	CI	1962	1962	N			See continuation page.
Cm-244	Solid.	HF.	T .00042000000000	CI	1962	1962	N			See continuation page.
U-235	Solid.	HF.	T .00008131900000	CI	1962	1962	N	-20%	+20%	See comment below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error).

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [ ] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
A portion of, or all of the measurements, were assumed to be taken using a G-M detector which only measures gamma emitters; beta emitters have been added to the RWMIS activity based on scaling factors. Therefore, the total activity will be greater than that in RWMIS.

7. Major unknowns in inventories of contaminants:
None.

8. Key assumptions used to deal with the unknowns:
On part D, no G-M counter correction is needed to entries for which upper and lower bounds are given. The presence of such bounds indicates that the estimate was based on weight, laboratory analysis, spectrometry, and/or mathematical calculations. The G-M counter correction is needed for entries for which no bounds are given, because such estimates were originally made using the G-M counter method.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 209

1. Preparer: Nieschmidt, Ernest

2. Date prepared: 09/01/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 642
(building number - use code from attached list)

5. Number of waste stream from this facility:
4H

6. Waste stream:
Rags, paper and wipes.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1966 Ending year 1982

9. Waste stream volume:
Amount 120.0000 Units Cubic feet.
Check box: [ ] annual or [X] total over all years
Check box: [ ] container volume or [X] waste volume

10. Comments (specify number of pertinent question):
4. Also 603 and 670.

1. General physical form (see attached list)
Combustibles (paper, cloth, wood, etc.).
[ ] other (specify)

2. Details on physical form(particularly confinement related)
Rags, waste paper, and wipes.

3. Chemical form:
Solids.

4. Inner packaging: [X] plastic bag [ ] plastic liner
[ ] metal liner [ ] none [ ] other (specify)

5. Waste container type (see attached list)
Cardboard box.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
None.										

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Solid.	Metal.	A .05772000000000	CI	1966	1966	N			
C-14	Solid.	Metal.	A .00774300000000	CI	1966	1966	N			
Fe-55	Solid.	Metal.	A 1.3370000000000	CI	1966	1966	N			
Ni-59	Solid.	Metal.	A .00040120000000	CI	1966	1966	N			
Ni-63	Solid.	Metal.	A .22520000000000	CI	1966	1966	N			
Co-60	Solid.	Metal.	A .47160000000000	CI	1966	1966	N			
Sr-90	Solid.	Metal.	A .00064760000000	CI	1966	1966	N			
Tc-99	Solid.	Metal.	A .00012670000000	CI	1966	1966	N			
I-129	Solid.	Metal.	A .00000003294000	CI	1966	1966	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Solid.	Metal.	A .14080000000000	CI	1966	1966	N			
Ce-144	Solid.	Metal.	A .00330800000000	CI	1966	1966	N			
Eu-154	Solid.	Metal.	A .00000204100000	CI	1966	1966	N			
Eu-155	Solid.	Metal.	A .00661600000000	CI	1966	1966	N			
U-234	Solid.	Metal.	A .00000147800000	CI	1966	1966	N			
U-235	Solid.	Metal.	A .00000003170000	CI	1966	1966	N			
U-236	Solid.	Metal.	A .00000056310000	CI	1966	1966	N			
Np-237	Solid.	Metal.	A .00000091500000	CI	1966	1966	N			
Pu-238	Solid.	Metal.	A .00003801000000	CI	1966	1966	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Solid.	Metal.	A .00003801000000	CI	1966	1966	N			
Pu-240	Solid.	Metal.	A .00000401200000	CI	1966	1966	N			
Pu-241	Solid.	Metal.	A .00415300000000	CI	1966	1966	N			
Am-241	Solid.	Metal.	A .00001900000000	CI	1966	1966	N			
Cm-242	Solid.	Metal.	A .00001900000000	CI	1966	1966	N			
Cm-244	Solid.	Metal.	A .00001760000000	CI	1966	1966	N			
H-3	Solid.	Metal.	A .00052580000000	CI	1971	1971	N			
C-14	Solid.	Metal.	A .00007053000000	CI	1971	1971	N			
Fe-55	Solid.	Metal.	A .01218000000000	CI	1971	1971	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Ni-59	Solid.	Metal.	A .00000365500000	CI	1971	1971	N			
Ni-63	Solid.	Metal.	A .00205200000000	CI	1971	1971	N			
Co-60	Solid.	Metal.	A .00429600000000	CI	1971	1971	N			
Sr-90	Solid.	Metal.	A .00000589900000	CI	1971	1971	N			
Tc-99	Solid.	Metal.	A .00000115400000	CI	1971	1971	N			
I-129	Solid.	Metal.	A .00000000030000	CI	1971	1971	N			
Cs-137	Solid.	Metal.	A .00128200000000	CI	1971	1971	N			
Ce-144	Solid.	Metal.	A .00003014000000	CI	1971	1971	N			
Eu-154	Solid.	Metal.	A .00000001860000	CI	1971	1971	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

* Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-155	Solid.	Metal.	A .00006027000000	CI	1971	1971	N			
U-234	Solid.	Metal.	A .00000001350000	CI	1971	1971	N			
U-235	Solid.	Metal.	A .00000000030000	CI	1971	1971	N			
U-236	Solid.	Metal.	A .00000000510000	CI	1971	1971	N			
Np-237	Solid.	Metal.	A .00000000830000	CI	1971	1971	N			
Pu-238	Solid.	Metal.	A .00000034620000	CI	1971	1971	N			
Pu-239	Solid.	Metal.	A .00000034620000	CI	1971	1971	N			
Pu-240	Solid.	Metal.	A .00000003650000	CI	1971	1971	N			
Pu-241	Solid.	Metal.	A .00003783000000	CI	1971	1971	N			

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Additional information or explanations (indicate pertinent contaminant)

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Am-241	Solid.	Metal.	A .00000017310000	CI	1971	1971	N			
Cm-242	Solid.	Metal.	A .00000017310000	CI	1971	1971	N			
Cm-244	Solid.	Metal.	A .00000016030000	CI	1971	1971	N			
H-3	Solid.	Metal.	A .00034720000000	CI	1974	1974	N			
C-14	Solid.	Metal.	A .00004657000000	CI	1974	1974	N			
Fe-55	Solid.	Metal.	A .00804400000000	CI	1974	1974	N			
Ni-59	Solid.	Metal.	A .00000241300000	CI	1974	1974	N			
Ni-63	Solid.	Metal.	A .00135500000000	CI	1974	1974	N			
Co-60	Solid.	Metal.	A .00283700000000	CI	1974	1974	N			

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samp les?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Sr-90	Solid.	Metal.	A .00000389500000	CI	1974	1974	N			
Tc-99	Solid.	Metal.	A .00000076210000	CI	1974	1974	N			
I-129	Solid.	Metal.	A .00000000020000	CI	1974	1974	N			
Cs-137	Solid.	Metal.	A .00084680000000	CI	1974	1974	N			
Ce-144	Solid.	Metal.	A .00001990000000	CI	1974	1974	N			
Eu-154	Solid.	Metal.	A .00000001230000	CI	1974	1974	N			
Eu-155	Solid.	Metal.	A .00003980000000	CI	1974	1974	N			
U-234	Solid.	Metal.	A .00000000890000	CI	1974	1974	N			
U-235	Solid.	Metal.	A .00000000020000	CI	1974	1974	N			

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-236	Solid.	Metal.	A .00000000340000	CI	1974	1974	N			
Np-237	Solid.	Metal.	A .00000000550000	CI	1974	1974	N			
Pu-238	Solid.	Metal.	A .00000022860000	CI	1974	1974	N			
Pu-239	Solid.	Metal.	A .00000022860000	CI	1974	1974	N			
Pu-240	Solid.	Metal.	A .00000002410000	CI	1974	1974	N			
Pu-241	Solid.	Metal.	A .00002498000000	CI	1974	1974	N			
Am-241	Solid.	Metal.	A .00000011430000	CI	1974	1974	N			
Cm-242	Solid.	Metal.	A .00000011430000	CI	1974	1974	N			
Cm-244	Solid.	Metal.	A .00000010580000	CI	1974	1974	N			

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Solid.	Metal.	A .00434400000000	CI	1975	1975	N			
C-14	Solid.	Metal.	A .00058270000000	CI	1975	1975	N			
Fe-55	Solid.	Metal.	A .10070000000000	CI	1975	1975	N			
Ni-59	Solid.	Metal.	A .00003020000000	CI	1975	1975	N			
Ni-63	Solid.	Metal.	A .01695000000000	CI	1975	1975	N			
Co-60	Solid.	Metal.	A .03549000000000	CI	1975	1975	N			
Sr-90	Solid.	Metal.	A .00004874000000	CI	1975	1975	N			
Tc-99	Solid.	Metal.	A .00000953500000	CI	1975	1975	N			
I-129	Solid.	Metal.	A .00000000248000	CI	1975	1975	N			

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Solid.	Metal.	A .01059000000000	CI	1975	1975	N			
Ce-144	Solid.	Metal.	A .00024900000000	CI	1975	1975	N			
Eu-154	Solid.	Metal.	A .00000015360000	CI	1975	1975	N			
Eu-155	Solid.	Metal.	A .00049800000000	CI	1975	1975	N			
U-234	Solid.	Metal.	A .00000011120000	CI	1975	1975	N			
U-235	Solid.	Metal.	A .00000000240000	CI	1975	1975	N			
U-236	Solid.	Metal.	A .00000004240000	CI	1975	1975	N			
Np-237	Solid.	Metal.	A .00000006890000	CI	1975	1975	N			
Pu-238	Solid.	Metal.	A .00000286100000	CI	1975	1975	N			

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Solid.	Metal.	A .00000286100000	CI	1975	1975	N			
Pu-240	Solid.	Metal.	A .00000030200000	CI	1975	1975	N			
Pu-241	Solid.	Metal.	A .00031260000000	CI	1975	1975	N			
Am-241	Solid.	Metal.	A .00000143000000	CI	1975	1975	N			
Cm-242	Solid.	Metal.	A .00000143000000	CI	1975	1975	N			
Cm-244	Solid.	Metal.	A .00000132400000	CI	1975	1975	N			
H-3	Solid.	Metal.	A .00503900000000	CI	1976	1976	N			
C-14	Solid.	Metal.	A .00067590000000	CI	1976	1976	N			
Fe-55	Solid.	Metal.	A .11680000000000	CI	1976	1976	N			

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Ni-59	Solid.	Metal.	A .00003503000000	CI	1976	1976	N			
Ni-63	Solid.	Metal.	A .01966000000000	CI	1976	1976	N			
Co-60	Solid.	Metal.	A .04117000000000	CI	1976	1976	N			
Sr-90	Solid.	Metal.	A .00005653000000	CI	1976	1976	N			
Tc-99	Solid.	Metal.	A .00001106000000	CI	1976	1976	N			
I-129	Solid.	Metal.	A .00000000288000	CI	1976	1976	N			
Cs-137	Solid.	Metal.	A .01229000000000	CI	1976	1976	N			
Ce-144	Solid.	Metal.	A .00028880000000	CI	1976	1976	N			
Eu-154	Solid.	Metal.	A .00000017820000	CI	1976	1976	N			

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-155	Solid.	Metal.	A .00057760000000	CI	1976	1976	N			
U-234	Solid.	Metal.	A .00000012900000	CI	1976	1976	N			
U-235	Solid.	Metal.	A .00000000280000	CI	1976	1976	N			
U-236	Solid.	Metal.	A .00000004920000	CI	1976	1976	N			
Np-237	Solid.	Metal.	A .00000007990000	CI	1976	1976	N			
Pu-238	Solid.	Metal.	A .00000331800000	CI	1976	1976	N			
Pu-239	Solid.	Metal.	A .00000331800000	CI	1976	1976	N			
Pu-240	Solid.	Metal.	A .00000035030000	CI	1976	1976	N			
Pu-241	Solid.	Metal.	A .00036250000000	CI	1976	1976	N			

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Am-241	Solid.	Metal.	A .00000165900000	CI	1976	1976	N			
Cm-242	Solid.	Metal.	A .00000165900000	CI	1976	1976	N			
Cm-244	Solid.	Metal.	A .00000153600000	CI	1976	1976	N			
H-3	Solid.	Metal.	A .05009000000000	CI	1977	1977	N			
C-14	Solid.	Metal.	A .00671900000000	CI	1977	1977	N			
Fe-55	Solid.	Metal.	A 1.1610000000000	CI	1977	1977	N			
Ni-59	Solid.	Metal.	A .00034820000000	CI	1977	1977	N			
Ni-63	Solid.	Metal.	A .19550000000000	CI	1977	1977	N			
Co-60	Solid.	Metal.	A .40930000000000	CI	1977	1977	N			

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Sr-90	Solid.	Metal.	A .00056200000000	CI	1977	1977	N			
Tc-99	Solid.	Metal.	A .00010990000000	CI	1977	1977	N			
I-129	Solid.	Metal.	A .00000002858000	CI	1977	1977	N			
Cs-137	Solid.	Metal.	A .12220000000000	CI	1977	1977	N			
Ce-144	Solid.	Metal.	A .00287100000000	CI	1977	1977	N			
Eu-154	Solid.	Metal.	A .00000177100000	CI	1977	1977	N			
Eu-155	Solid.	Metal.	A .00574200000000	CI	1977	1977	N			
U-234	Solid.	Metal.	A .00000128300000	CI	1977	1977	N			
U-235	Solid.	Metal.	A .00000002750000	CI	1977	1977	N			

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-236	Solid.	Metal.	A .00000048870000	CI	1977	1977	N			
Np-237	Solid.	Metal.	A .00000079410000	CI	1977	1977	N			
Pu-238	Solid.	Metal.	A .00003298000000	CI	1977	1977	N			
Pu-239	Solid.	Metal.	A .00003298000000	CI	1977	1977	N			
Pu-240	Solid.	Metal.	A .00000348200000	CI	1977	1977	N			
Pu-241	Solid.	Metal.	A .00360400000000	CI	1977	1977	N			
Am-241	Solid.	Metal.	A .00001649000000	CI	1977	1977	N			
Cm-242	Solid.	Metal.	A .00001649000000	CI	1977	1977	N			
Cm-244	Solid.	Metal.	A .00001527000000	CI	1977	1977	N			

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H-3	Solid.	Metal.	A .01389000000000	CI	1979	1979	N			
C-14	Solid.	Metal.	A .00186400000000	CI	1979	1979	N			
Fe-55	Solid.	Metal.	A .32200000000000	CI	1979	1979	N			
Ni-59	Solid.	Metal.	A .00009659000000	CI	1979	1979	N			
Ni-63	Solid.	Metal.	A .05422000000000	CI	1979	1979	N			
Co-60	Solid.	Metal.	A .11350000000000	CI	1979	1979	N			
Sr-90	Solid.	Metal.	A .00015590000000	CI	1979	1979	N			
Tc-99	Solid.	Metal.	A .00003050000000	CI	1979	1979	N			
I-129	Solid.	Metal.	A .00000000793000	CI	1979	1979	N			

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samp les?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Solid.	Metal.	A .03389000000000	CI	1979	1979	N			
Ce-144	Solid.	Metal.	A .00079640000000	CI	1979	1979	N			
Eu-154	Solid.	Metal.	A .00000049140000	CI	1979	1979	N			
Eu-155	Solid.	Metal.	A .00159300000000	CI	1979	1979	N			
U-234	Solid.	Metal.	A .00000035580000	CI	1979	1979	N			
U-235	Solid.	Metal.	A .00000000760000	CI	1979	1979	N			
U-236	Solid.	Metal.	A .00000013560000	CI	1979	1979	N			
Np-237	Solid.	Metal.	A .00000022030000	CI	1979	1979	N			
Pu-238	Solid.	Metal.	A .00000915000000	CI	1979	1979	N			

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Solid.	Metal.	A .00000915000000	CI	1979	1979	N			
Pu-240	Solid.	Metal.	A .00000096590000	CI	1979	1979	N			
Pu-241	Solid.	Metal.	A .00099980000000	CI	1979	1979	N			
Am-241	Solid.	Metal.	A .00000457500000	CI	1979	1979	N			
Cm-242	Solid.	Metal.	A .00000457500000	CI	1979	1979	N			
Cm-244	Solid.	Metal.	A .00000423600000	CI	1979	1979	N			
H-3	Solid.	Metal.	A .01910000000000	CI	1980	1980	N			
C-14	Solid.	Metal.	A .00256300000000	CI	1980	1980	N			
Fe-55	Solid.	Metal.	A .44260000000000	CI	1980	1980	N			

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Ni-59	Solid.	Metal.	A .00013280000000	CI	1980	1980	N			
Ni-63	Solid.	Metal.	A .07455000000000	CI	1980	1980	N			
Co-60	Solid.	Metal.	A .15610000000000	CI	1980	1980	N			
Sr-90	Solid.	Metal.	A .00021430000000	CI	1980	1980	N			
Tc-99	Solid.	Metal.	A .00004194000000	CI	1980	1980	N			
I-129	Solid.	Metal.	A .00000001090000	CI	1980	1980	N			
Cs-137	Solid.	Metal.	A .04659000000000	CI	1980	1980	N			
Ce-144	Solid.	Metal.	A .00109500000000	CI	1980	1980	N			
Eu-154	Solid.	Metal.	A .00000067560000	CI	1980	1980	N			

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Eu-155	Solid.	Metal.	A .00219000000000	CI	1980	1980	N			
U-234	Solid.	Metal.	A .00000048920000	CI	1980	1980	N			
U-235	Solid.	Metal.	A .00000001050000	CI	1980	1980	N			
U-236	Solid.	Metal.	A .00000018640000	CI	1980	1980	N			
Np-237	Solid.	Metal.	A .00000030290000	CI	1980	1980	N			
Pu-238	Solid.	Metal.	A .00001258000000	CI	1980	1980	N			
Pu-239	Solid.	Metal.	A .00001258000000	CI	1980	1980	N			
Pu-240	Solid.	Metal.	A .00000132800000	CI	1980	1980	N			
Pu-241	Solid.	Metal.	A .00137500000000	CI	1980	1980	N			

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Am-241	Solid.	Metal.	A .00000629000000	CI	1980	1980	N			
Cm-242	Solid.	Metal.	A .00000629000000	CI	1980	1980	N			
Cm-244	Solid.	Metal.	A .00000582400000	CI	1980	1980	N			
H-3	Solid.	Metal.	A .01075000000000	CI	1981	1981	N			
C-14	Solid.	Metal.	A .00144100000000	CI	1981	1981	N			
Fe-55	Solid.	Metal.	A .24900000000000	CI	1981	1981	N			
Ni-59	Solid.	Metal.	A .00007469000000	CI	1981	1981	N			
Ni-63	Solid.	Metal.	A .04193000000000	CI	1981	1981	N			
Co-60	Solid.	Metal.	A .08780000000000	CI	1981	1981	N			

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Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Sr-90	Solid.	Metal.	A .00012060000000	CI	1981	1981	N			
Tc-99	Solid.	Metal.	A .00002359000000	CI	1981	1981	N			
I-129	Solid.	Metal.	A .00000000613000	CI	1981	1981	N			
Cs-137	Solid.	Metal.	A .02621000000000	CI	1981	1981	N			
Ce-144	Solid.	Metal.	A .00061590000000	CI	1981	1981	N			
Eu-154	Solid.	Metal.	A .00000038000000	CI	1981	1981	N			
Eu-155	Solid.	Metal.	A .00123200000000	CI	1981	1981	N			
U-234	Solid.	Metal.	A .00000027520000	CI	1981	1981	N			
U-235	Solid.	Metal.	A .00000000590000	CI	1981	1981	N			

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Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-236	Solid.	Metal.	A .00000010480000	CI	1981	1981	N			
Np-237	Solid.	Metal.	A .00000017040000	CI	1981	1981	N			
Pu-238	Solid.	Metal.	A .00000707600000	CI	1981	1981	N			
Pu-239	Solid.	Metal.	A .00000707600000	CI	1981	1981	N			
Pu-240	Solid.	Metal.	A .00000074690000	CI	1981	1981	N			
Pu-241	Solid.	Metal.	A .00077310000000	CI	1981	1981	N			
Am-241	Solid.	Metal.	A .00000353800000	CI	1981	1981	N			
Cm-242	Solid.	Metal.	A .00000353800000	CI	1981	1981	N			
Cm-244	Solid.	Metal.	A .00000327600000	CI	1981	1981	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Solid.	Metal.	A .00905000000000	CI	1982	1982	N			
C-14	Solid.	Metal.	A .00121400000000	CI	1982	1982	N			
Fe-55	Solid.	Metal.	A .20970000000000	CI	1982	1982	N			
Ni-59	Solid.	Metal.	A .00006291000000	CI	1982	1982	N			
Ni-63	Solid.	Metal.	A .03532000000000	CI	1982	1982	N			
Co-60	Solid.	Metal.	A .07395000000000	CI	1982	1982	N			
Sr-90	Solid.	Metal.	A .00010150000000	CI	1982	1982	N			
Tc-99	Solid.	Metal.	A .00001987000000	CI	1982	1982	N			
I-129	Solid.	Metal.	A .00000000517000	CI	1982	1982	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Solid.	Metal.	A .02207000000000	CI	1982	1982	N			
Ce-144	Solid.	Metal.	A .00051870000000	CI	1982	1982	N			
Eu-154	Solid.	Metal.	A .00000032010000	CI	1982	1982	N			
Eu-155	Solid.	Metal.	A .00103700000000	CI	1982	1982	N			
U-234	Solid.	Metal.	A .00000023180000	CI	1982	1982	N			
U-235	Solid.	Metal.	A .00000000500000	CI	1982	1982	N			
U-236	Solid.	Metal.	A .00000008830000	CI	1982	1982	N			
Np-237	Solid.	Metal.	A .00000014350000	CI	1982	1982	N			
Pu-238	Solid.	Metal.	A .00000596000000	CI	1982	1982	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Solid.	Metal.	A .00000596000000	CI	1982	1982	N			
Pu-240	Solid.	Metal.	A .00000062910000	CI	1982	1982	N			
Pu-241	Solid.	Metal.	A .00065120000000	CI	1982	1982	N			
Am-241	Solid.	Metal.	A .00000298000000	CI	1982	1982	N			
Cm-242	Solid.	Metal.	A .00000298000000	CI	1982	1982	N			
Cm-244	Solid.	Metal.	A .00000275900000	CI	1982	1982	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [ ] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
A portion of, or all of the measurements, were assumed to be taken using a G-M detector which only measures gamma emitters; beta emitters have been added to the RWMIS activity based on scaling factors. Therefore, the total activity will be greater than that in RWMIS.

7. Major unknowns in inventories of contaminants:
Nature of the waste, heterogeneous.

8. Key assumptions used to deal with the unknowns:
Assumption of metals and oxides. On part D, no G-M counter correction is needed to entries for which upper and lower bounds are given. The presence of such bounds indicates that the estimate was based on weight, laboratory analysis, spectrometry, and/or mathematical calculations. The G-M counter correction is needed for entries for which no bounds are given, because such estimates were originally made using the G-M counter method.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 196

1. Preparer: Nieschmidt, Ernest

2. Date prepared: 06/23/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 642
(building number - use code from attached list)

5. Number of waste stream from this facility:
5H

6. Waste stream:
Irradiated fuel rods.

7. Type of radioactive waste (check box):
[X] TRU or suspect TRU
[ ] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1960 Ending year 1960

9. Waste stream volume:
Amount 4.5320 Units Cubic meters.
Check box: [ ] annual or [X] total over all years
Check box: [ ] container volume or [X] waste volume

10. Comments (specify number of pertinent question):

1. General physical form (see attached list)
Irradiated fuel rods from experiments.
[ ] other (specify)

2. Details on physical form(particularly confinement related)
Fuel rods, unknown enrichment, and unknown fuel content.

3. Chemical form:
U2O3.

4. Inner packaging: [ ] plastic bag [ ] plastic liner
[ ] metal liner [ ] none [X] other (specify)
Unknown.

5. Waste container type (see attached list)
Unknown.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
3. Only a guess.
5. Container type unknown.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
None.										

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3			A 7.2800000000000	CI	1960	1960	N			
Sr-90			A 1648.0000000000	CI	1960	1960	N			
Tc-99			A .21100000000000	CI	1960	1960	N			
Sb-125			A 95.800000000000	CI	1960	1960	N			
I-129			A .00038300000000	CI	1960	1960	N			
Cs-137			A 1720.0000000000	CI	1960	1960	N			
Eu-152			A .00613000000000	CI	1960	1960	N			
Eu-154			A 130.00000000000	CI	1960	1960	N			
Eu-155			A 80.500000000000	CI	1960	1960	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
Basis for uncertainty - method of measurement.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-234			A .01760000000000	CI	1960	1960	N			
U-235			A .00038300000000	CI	1960	1960	N			
U-236			A .00690000000000	CI	1960	1960	N			
Np-237			A .01070000000000	CI	1960	1960	N			
Pu-238			A 46.000000000000	CI	1960	1960	N			
Pu-239			A .19200000000000	CI	1960	1960	N			
Pu-240			A .11900000000000	CI	1960	1960	N			
Pu-241			A 76.600000000000	CI	1960	1960	N			
Pu-242			A .00119000000000	CI	1960	1960	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
Basis for uncertainty - method of measurement.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Am-243			A .13000000000000	CI	1960	1960	N			
Am-242			A .01530000000000	CI	1960	1960	N			
Cm-242			A .76600000000000	CI	1960	1960	N			
Cm-244			A 2.1100000000000	CI	1960	1960	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
Basis for uncertainty - method of measurement.

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [ ] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
RWMIS does not list uranium radionuclides, but those radionuclides are expected to be present in irradiated fuel rods.

7. Major unknowns in inventories of contaminants:
Virtually nothing is known about these fuel rods.

8. Key assumptions used to deal with the unknowns:
Experience with what is in a fuel rod. On part D, no G-M counter correction is needed to entries for which upper and lower bounds are given. The presence of such bounds indicates that the estimate was based on weight, laboratory analysis, spectrometry, and/or mathematical calculations. The G-M counter correction is needed for entries for which no bounds are given, because such estimates were originally made using the G-M counter method.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 207

1. Preparer: Nieschmidt, Ernest

2. Date prepared: 09/01/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 642
(building number - use code from attached list)

5. Number of waste stream from this facility:
6H

6. Waste stream:
Scrap metal pieces.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1964 Ending year 1977

9. Waste stream volume:
Amount 40.7400 Units Cubic meters.
Check box: [ ] annual or [X] total over all years
Check box: [ ] container volume or [X] waste volume

10. Comments (specify number of pertinent question):

1. General physical form (see attached list)
Other core,reactor vessel,loop component
[ ] other (specify)

2. Details on physical form(particularly confinement related)
Scrap metal pieces which accumulate from underwater cutting in the canals.

3. Chemical form:
Metal, Fe and Al.

4. Inner packaging: [ ] plastic bag [X] plastic liner
[ ] metal liner [ ] none [ ] other (specify)

5. Waste container type (see attached list)
Wooden box.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
None.										

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Solid.	H.	A 6.6040000000000	CI	1961	1961	N			
C-14	Solid.	H.	A .88600000000000	CI	1961	1961	N			
Fe-55	Solid.	H.	A 153.00000000000	CI	1961	1961	N			
Ni-59	Solid.	H.	A .04591000000000	CI	1961	1961	N			
Ni-63	Solid.	H.	A 25.770000000000	CI	1961	1961	N			
Co-60	Solid.	H.	A 53.960000000000	CI	1961	1961	N			
Sr-90	Solid.	H.	A .07410000000000	CI	1961	1961	N			
Tc-99	Solid.	H.	A .01450000000000	CI	1961	1961	N			
I-129	Solid.	H.	A .00000376920000	CI	1961	1961	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
Entries listed as H are hydrogen entrapped in metal. Basis for default uncertainty - method of measurement.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Solid.	H.	A 16.110000000000	CI	1961	1961	N			
Ce-144	Solid.	H.	A .37850000000000	CI	1961	1961	N			
Eu-154	Solid.	H.	A .00023360000000	CI	1961	1961	N			
Eu-155	Solid.	H.	A .75710000000000	CI	1961	1961	N			
U-234	Solid.	H.	A .00016910000000	CI	1961	1961	N			
U-235	Solid.	H.	A .00000362400000	CI	1961	1961	N			
U-236	Solid.	H.	A .00006443000000	CI	1961	1961	N			
Np-237	Solid.	H.	A .00010470000000	CI	1961	1961	N			
Pu-238	Solid.	H.	A .00434900000000	CI	1961	1961	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
Entries listed as H are hydrogen entrapped in metal. Basis for default uncertainty - method of measurement.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Solid.	H.	A .00434900000000	CI	1961	1961	N			
Pu-240	Solid.	H.	A .00045910000000	CI	1961	1961	N			
Pu-241	Solid.	H.	A .47520000000000	CI	1961	1961	N			
Am-241	Solid.	H.	A .00217500000000	CI	1961	1961	N			
Cm-242	Solid.	H.	A .00217500000000	CI	1961	1961	N			
Cm-244	Solid.	H.	A .00201400000000	CI	1961	1961	N			
H-3	Solid.	H.	A 82.260000000000	CI	1964	1964	N			
C-14	Solid.	H.	A 11.040000000000	CI	1964	1964	N			
Fe-55	Solid.	H.	A 1906.0000000000	CI	1964	1964	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
Entries listed as H are hydrogen entrapped in metal. Basis for default uncertainty - method of measurement.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Ni-59	Solid.	H.	A .57180000000000	CI	1964	1964	N			
Ni-63	Solid.	H.	A 321.00000000000	CI	1964	1964	N			
Co-60	Solid.	H.	A 672.10000000000	CI	1964	1964	N			
Sr-90	Solid.	H.	A .92290000000000	CI	1964	1964	N			
Tc-99	Solid.	H.	A .18060000000000	CI	1964	1964	N			
I-129	Solid.	H.	A .00004695300000	CI	1964	1964	N			
Cs-137	Solid.	H.	A 200.60000000000	CI	1964	1964	N			
Ce-144	Solid.	H.	A 4.7150000000000	CI	1964	1964	N			
Eu-154	Solid.	H.	A .00290900000000	CI	1964	1964	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
Entries listed as H are hydrogen entrapped in metal. Basis for default uncertainty - method of measurement.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Eu-155	Solid.	H.	A 9.4300000000000	CI	1964	1964	N			
U-234	Solid.	H.	A .00210700000000	CI	1964	1964	N			
U-235	Solid.	H.	A .00004514000000	CI	1964	1964	N			
U-236	Solid.	H.	A .00080260000000	CI	1964	1964	N			
Np-237	Solid.	H.	A .00130400000000	CI	1964	1964	N			
Pu-238	Solid.	H.	A .05417000000000	CI	1964	1964	N			
Pu-239	Solid.	H.	A .05417000000000	CI	1964	1964	N			
Pu-240	Solid.	H.	A .00571800000000	CI	1964	1964	N			
Pu-241	Solid.	H.	A 5.9190000000000	CI	1964	1964	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
Entries listed as H are hydrogen entrapped in metal. Basis for default uncertainty - method of measurement.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Am-241	Solid.	H.	A .02709000000000	CI	1964	1964	N			
Cm-242	Solid.	H.	A .02709000000000	CI	1964	1964	N			
Cm-244	Solid.	H.	A .02508000000000	CI	1964	1964	N			
H-3	Solid.	H.	A 15310.000000000	CI	1976	1976	N			
C-14	Solid.	H.	A 2053.0000000000	CI	1976	1976	N			
Fe-55	Solid.	H.	A 354600.00000000	CI	1976	1976	N			
Ni-59	Solid.	H.	A 106.40000000000	CI	1976	1976	N			
Ni-63	Solid.	H.	A 59730.000000000	CI	1976	1976	N			
Co-60	Solid.	H.	A 125100.00000000	CI	1976	1976	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
Entries listed as H are hydrogen entrapped in metal. Basis for default uncertainty - method of measurement.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Sr-90	Solid.	H.	A 171.70000000000	CI	1976	1976	N			
Tc-99	Solid.	H.	A 33.600000000000	CI	1976	1976	N			
I-129	Solid.	H.	A .00873540000000	CI	1976	1976	N			
Cs-137	Solid.	H.	A 37330.000000000	CI	1976	1976	N			
Ce-144	Solid.	H.	A 877.20000000000	CI	1976	1976	N			
Eu-154	Solid.	H.	A .54130000000000	CI	1976	1976	N			
Eu-155	Solid.	H.	A 1754.0000000000	CI	1976	1976	N			
U-234	Solid.	H.	A .39200000000000	CI	1976	1976	N			
U-235	Solid.	H.	A .00839900000000	CI	1976	1976	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
Entries listed as H are hydrogen entrapped in metal. Basis for default uncertainty - method of measurement.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-236	Solid.	H.	A .14930000000000	CI	1976	1976	N			
Np-237	Solid.	H.	A .24260000000000	CI	1976	1976	N			
Pu-238	Solid.	H.	A 10.080000000000	CI	1976	1976	N			
Pu-239	Solid.	H.	A 10.080000000000	CI	1976	1976	N			
Pu-240	Solid.	H.	A 1.0640000000000	CI	1976	1976	N			
Pu-241	Solid.	H.	A 1101.0000000000	CI	1976	1976	N			
Am-241	Solid.	H.	A 5.0390000000000	CI	1976	1976	N			
Cm-242	Solid.	H.	A 5.0390000000000	CI	1976	1976	N			
Cm-244	Solid.	H.	A 4.6660000000000	CI	1976	1976	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
Entries listed as H are hydrogen entrapped in metal. Basis for default uncertainty - method of measurement.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Solid.	H.	A 34570.000000000	CI	1977	1977	N			
C-14	Solid.	H.	A 4638.0000000000	CI	1977	1977	N			
Fe-55	Solid.	H.	A 801000.00000000	CI	1977	1977	N			
Ni-59	Solid.	H.	A 240.30000000000	CI	1977	1977	N			
Ni-63	Solid.	H.	A 134900.00000000	CI	1977	1977	N			
Co-60	Solid.	H.	A 282500.00000000	CI	1977	1977	N			
Sr-90	Solid.	H.	A 387.90000000000	CI	1977	1977	N			
Tc-99	Solid.	H.	A 75.890000000000	CI	1977	1977	N			
I-129	Solid.	H.	A .01972800000000	CI	1977	1977	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
Entries listed as H are hydrogen entrapped in metal. Basis for default uncertainty - method of measurement.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Solid.	H.	A 84320.000000000	CI	1977	1977	N			
Ce-144	Solid.	H.	A 1982.0000000000	CI	1977	1977	N			
Eu-154	Solid.	H.	A 1.2230000000000	CI	1977	1977	N			
Eu-155	Solid.	H.	A 3963.0000000000	CI	1977	1977	N			
U-234	Solid.	H.	A .88540000000000	CI	1977	1977	N			
U-235	Solid.	H.	A .01897000000000	CI	1977	1977	N			
U-236	Solid.	H.	A .33730000000000	CI	1977	1977	N			
Np-237	Solid.	H.	A .54810000000000	CI	1977	1977	N			
Pu-238	Solid.	H.	A 22.770000000000	CI	1977	1977	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
Entries listed as H are hydrogen entrapped in metal. Basis for default uncertainty - method of measurement.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Solid.	H.	A 22.770000000000	CI	1977	1977	N			
Pu-240	Solid.	H.	A 2.4030000000000	CI	1977	1977	N			
Pu-241	Solid.	H.	A 2487.0000000000	CI	1977	1977	N			
Am-241	Solid.	H.	A 11.380000000000	CI	1977	1977	N			
Cm-242	Solid.	H.	A 11.380000000000	CI	1977	1977	N			
Cm-244	Solid.	H.	A 10.540000000000	CI	1977	1977	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
Entries listed as H are hydrogen entrapped in metal. Basis for default uncertainty - method of measurement.

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [ ] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
A portion of, or all of the measurements, were assumed to be taken using a G-M detector which only measures gamma emitters; beta emitters have been added to the RWMIS activity based on scaling factors. Therefore, the total activity will be greater than that in RWMIS.

7. Major unknowns in inventories of contaminants:
Distribution of materials in "canal trash".

8. Key assumptions used to deal with the unknowns:
Assumed that canal trash consists of activated and contaminated metals. On part D, no G-M counter correction is needed to entries for which upper and lower bounds are given. The presence of such bounds indicates that the estimate was based on weight, laboratory analysis, spectrometry, and/or mathematical calculations. The G-M counter correction is needed for entries for which no bounds are given, because such estimates were originally made using the G-M counter method.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 190

1. Preparer: Amaro, C.

2. Date prepared: 09/01/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 642
(building number - use code from attached list)

5. Number of waste stream from this facility:
7H

6. Waste stream:
Various combustible materials.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1965 Ending year 1965

9. Waste stream volume:
Amount 3.7633 Units Cubic feet.
Check box: [ ] annual or [X] total over all years
Check box: [X] container volume or [ ] waste volume

10. Comments (specify number of pertinent question):

1. General physical form (see attached list)
Combustibles (paper, cloth, wood, etc.).
[ ] other (specify)

2. Details on physical form(particularly confinement related)
Various combustible material.

3. Chemical form:
Unknown.

4. Inner packaging: [ ] plastic bag [ ] plastic liner
[ ] metal liner [ ] none [X] other (specify)
Unknown.

5. Waste container type (see attached list)
Other.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
5. "Other" is unknown.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
None.										

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Unknown.	Unknown.	T .00071060000000	CI	1965	1965	N			Unknown.
C-14	Unknown.	Unknown.	T .00009533000000	CI	1965	1965	N			Unknown.
Fe-55	Unknown.	Unknown.	T .01647000000000	CI	1965	1965	N			Unknown.
Ni-59	Unknown.	Unknown.	T .00000494000000	CI	1965	1965	N			Unknown.
Ni-63	Unknown.	Unknown.	T .00277300000000	CI	1965	1965	N			Unknown.
Co-60	Unknown.	Unknown.	T .00580600000000	CI	1965	1965	N			Unknown.
Sr-90	Unknown.	Unknown.	T .00000797300000	CI	1965	1965	N			Unknown.
Tc-99	Unknown.	Unknown.	T .00000156000000	CI	1965	1965	N			Unknown.
I-129	Unknown.	Unknown.	T .00000000041000	CI	1965	1965	N			Unknown.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Unknown.	Unknown.	T .00173300000000	CI	1965	1965	N			Unknown.
Ce-144	Unknown.	Unknown.	T .00004073000000	CI	1965	1965	N			Unknown.
Eu-154	Unknown.	Unknown.	T .00000002510000	CI	1965	1965	N			Unknown.
Eu-155	Unknown.	Unknown.	T .00008146000000	CI	1965	1965	N			Unknown.
U-234	Unknown.	Unknown.	T .00000001820000	CI	1965	1965	N			Unknown.
U-235	Unknown.	Unknown.	T .00000000040000	CI	1965	1965	N			Unknown.
U-236	Unknown.	Unknown.	T .00000000690000	CI	1965	1965	N			Unknown.
Np-237	Unknown.	Unknown.	T .00000001130000	CI	1965	1965	N			Unknown.
Pu-238	Unknown.	Unknown.	T .00000046800000	CI	1965	1965	N			Unknown.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239	Unknown.	Unknown.	T .00000046800000	CI	1965	1965	N			Unknown.
Pu-240	Unknown.	Unknown.	T .00000004940000	CI	1965	1965	N			Unknown.
Pu-241	Unknown.	Unknown.	T .00005113000000	CI	1965	1965	N			Unknown.
Am-241	Unknown.	Unknown.	T .00000023400000	CI	1965	1965	N			Unknown.
Cm-242	Unknown.	Unknown.	T .00000023400000	CI	1965	1965	N			Unknown.
Cm-244	Unknown.	Unknown.	T .00000021670000	CI	1965	1965	N			Unknown.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [ ] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
A portion of, or all of the measurements, were assumed to be taken using a G-M detector which only measures gamma emitters; beta emitters have been added to the RWMIS activity based on scaling factors. Therefore, the total activity will be greater than that in RWMIS.

7. Major unknowns in inventories of contaminants:
MAP and MFP were unknown.

8. Key assumptions used to deal with the unknowns:
MAP radionuclides were chosen based on their cross sections and half lives. MFP radionuclides were chosen based on their fissionable products and half lives. On part D, no G-M counter correction is needed to entries for which upper and lower bounds are given. The presence of such bounds indicates that the estimate was based on weight, laboratory analysis, spectrometry, and/or mathematical calculations. The G-M counter correction is needed for entries for which no bounds are given, because such estimates were originally made using the G-M counter method.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 156

1. Preparer: Amaro, C.

2. Date prepared: 08/27/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 653
(building number - use code from attached list)

5. Number of waste stream from this facility:
1H

6. Waste stream:
Benzine.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1964 Ending year 1964

9. Waste stream volume:
Amount 0.0038 Units Gallons.
Check box: [ ] annual or [X] total over all years
Check box: [ ] container volume or [X] waste volume

10. Comments (specify number of pertinent question):
6. Benzine is not Benzene.

1. General physical form (see attached list)
Other liquid setups.
[ ] other (specify)

2. Details on physical form(particularly confinement related)
Liquid.

3. Chemical form:
Benzine.

4. Inner packaging: [ ] plastic bag [ ] plastic liner
[ ] metal liner [X] none [ ] other (specify)

5. Waste container type (see attached list)
Other.

6. Other characteristics of interest:
Known as ligroin, highly flammable liquid. Toxic if ingested or inhaled.

7. Comments (specify number of pertinent question):
5. "Other" is probably a polystyrene bottle.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
8032-32-4 Benzine			T 4000.0000000000	GM	1964	1964	N	-20%	+20%	See comment below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

Sample was probably measured to obtain volume. Error is 20% because quantity is so small.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3			T .00015420000000	CI	1964	1964	N	-50%	+50%	See comment below.
C-14			T .00002069000000	CI	1964	1964	N	-50%	+50%	See comment below.
Fe-55			T .00357400000000	CI	1964	1964	N	-50%	+50%	See comment below.
Ni-59			T .00000107200000	CI	1964	1964	N	-50%	+50%	See comment below.
Ni-63			T .00060190000000	CI	1964	1964	N	-50%	+50%	See comment below.
Co-60			T .00126000000000	CI	1964	1964	N	-50%	+50%	See comment below.
Sr-90			T .00000173100000	CI	1964	1964	N	-50%	+50%	See comment below.
Tc-99			T .00000033860000	CI	1964	1964	N	-50%	+50%	See comment below.
I-129			T .00000000009000	CI	1964	1964	N	-50%	+50%	See comment below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on previous experience and the type of material, the preparer believes a sample was analyzed. A sodium iodide (NaI) detector was probably used to count the sample. Because it has broad peaks, radionuclides may be masked. The total activity is well known but individual radionuclide activity may be wrong, therefore a 50% error was assigned.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137			T .00037620000000	CI	1964	1964	N	-50%	+50%	See comment below.
Ce-144			T .00000884100000	CI	1964	1964	N	-50%	+50%	See comment below.
Eu-154			T .00000000550000	CI	1964	1964	N	-50%	+50%	See comment below.
Eu-155			T .00001768000000	CI	1964	1964	N	-50%	+50%	See comment below.
U-234			T .00000000400000	CI	1964	1964	N	-50%	+50%	See comment below.
U-235			T .00000000010000	CI	1964	1964	N	-50%	+50%	See comment below.
U-236			T .00000000150000	CI	1964	1964	N	-50%	+50%	See comment below.
Np-237			T .00000000240000	CI	1964	1964	N	-50%	+50%	See comment below.
Pu-238			T .00000010160000	CI	1964	1964	N	-50%	+50%	See comment below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on previous experience and the type of material, the preparer believes a sample was analyzed. A sodium iodide (NaI) detector was probably used to count the sample. Because it has broad peaks, radionuclides may be masked. The total activity is well known but individual radionuclide activity may be wrong, therefore a 50% error was assigned.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-239			T .00000010160000	CI	1964	1964	N	-50%	+50%	See comment below.
Pu-240			T .00000001070000	CI	1964	1964	N	-50%	+50%	See comment below.
Pu-241			T .00001110000000	CI	1964	1964	N	-50%	+50%	See comment below.
Am-241			T .00000005080000	CI	1964	1964	N	-50%	+50%	See comment below.
Cm-242			T .00000005080000	CI	1964	1964	N	-50%	+50%	See comment below.
Cm-244			T .00000004700000	CI	1964	1964	N	-50%	+50%	See comment below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on previous experience and the type of material, the preparer believes a sample was analyzed. A sodium iodide (NaI) detector was probably used to count the sample. Because it has broad peaks, radionuclides may be masked. The total activity is well known but individual radionuclide activity may be wrong, therefore a 50% error was assigned.

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [ ] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[X] no
[ ] yes

6. If yes, explain why:

7. Major unknowns in inventories of contaminants:
MAP and MFP were unidentified.

8. Key assumptions used to deal with the unknowns:
MAP radionuclides were chosen based on the cross sections and half lives. MFP radionuclides were chosen based on their fissionable products and half lives.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 135

1. Preparer: Nieschmidt, Ernest

2. Date prepared: 07/27/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 670
(building number - use code from attached list)

5. Number of waste stream from this facility:
1H

6. Waste stream:
Beryllium reflectors from MTR, ETR and ATR and miscellaneous pieces of Be.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1963 Ending year 1977

9. Waste stream volume:
Amount 41.9300 Units Cubic meters.
Check box: [ ] annual or [X] total over all years
Check box: [ ] container volume or [ ] waste volume

10. Comments (specify number of pertinent question):
4. 670-ATR, also 603-MTR and 642-ETR.
6. Be reflectors shipped 1969-1977, miscellaneous pieces 1963-1977.

1. General physical form (see attached list)
Beryllium.
[ ] other (specify)

2. Details on physical form(particularly confinement related)
Be metal chunks from a few cubic ft. down to gravel size.

3. Chemical form:
Be metal.

4. Inner packaging: [ ] plastic bag [ ] plastic liner
[ ] metal liner [ ] none [X] other (specify)
None.

5. Waste container type (see attached list)
Other.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
5. Container is a topless rectangular basket made of galvanized steel.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
7440-41-7 Beryllium	Solid.	Beryllium.	T 724800.00000000	GM	1963	1963	N	723800	725800	Estimate.
7440-41-7 Beryllium	Solid.	Beryllium.	T 1132900.0000000	GM	1970	1970	N	1131900	1133900	Estimate.
7440-41-7 Beryllium	Solid.	Beryllium.	T 9297800.0000000	GM	1976	1976	N	9296800	9298800	Estimate.
7440-41-7 Beryllium	Solid.	Beryllium.	T 1224900.0000000	GM	1977	1977	N	1223900	1225900	Estimate.
7440-41-7 Beryllium	Solid.	Beryllium.	T 690400.00000000	GM	1969	1969	N	689400	700400	Estimate.
7440-41-7 Beryllium	Solid.	Beryllium.	T 3629.0000000000	GM	1973	1973	N	2629	4629	Estimate.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

Maximum and minimum values estimated. The estimates are based on discussions of former TRA personnel. They estimate that perhaps 1 kg of small pieces may not have been recovered. An error of +/-1 kg has been assigned.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Co-60	Solid.	Metal alloy.	T 3306.0000000000	CI	1963	1977	N			
Cr-51	Solid.	Metal alloy.	T 11639.000000000	CI	1963	1977	N			
Fe-59	Solid.	Metal alloy.	T 1437.0000000000	CI	1963	1977	N			
Be-10	Solid.	Beryllium metal.	T .70000000000000	CI	1963	1977	N			
H-3	Solid.	H.	T 1049500.0000000	CI	1963	1977	N	-50%	+100%	

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [X] interview
[ ] expert judgment [X] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)
Letter T.A. Tomberlin to D.E. Sheldon, TOM-30-86. Interviewee wishes to remain anonymous. Packing information obtained from Dale Wells and Larry Toomer. Letter from P.K. Nagata to T.H. Smith, December 1993, PKN-16-93. J.O. Brower letter to R.N. Bhatt, JOB-23-94, "ATR Tritium Waste Inventory", Oct. 28, 1994.

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
RWMIS has no H-3 entry.

7. Major unknowns in inventories of contaminants:
Accuracy of calculations in TOM-30-86.
Accuracy of calculations in PKN-16-93.
Miniscule amounts of C-14, Ni-59 and Nb-94.

8. Key assumptions used to deal with the unknowns:
That the letters TOM-30-86 and PKN-16-93 are correct. Have reviewed the calculations and references and concur with the results. As indicated in JOB-23-94, the radionuclides C-14, Nb-94 and Ni-59 are present. However, the quantity of these radionuclides in the waste is dependent on whether the shipment is Be blocks or outer shim control cylinders, power levels, and the reactor the shipment is from. Since these are unknown variables, these radionuclides are listed as unknown in the inventory.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 195

1. Preparer: Amaro, C.

2. Date prepared: 09/01/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 670
(building number - use code from attached list)

5. Number of waste stream from this facility:
2H

6. Waste stream:
Stainless steel and aluminum.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1980 Ending year 1980

9. Waste stream volume:
Amount 11.8900 Units Cubic feet.
Check box: [ ] annual or [X] total over all years
Check box: [X] container volume or [ ] waste volume

10. Comments (specify number of pertinent question):

1. General physical form (see attached list)

[X] other (specify)
Canal model.

2. Details on physical form(particularly confinement related)
Stainless steel and aluminum.

3. Chemical form:
Metal.

4. Inner packaging: [ ] plastic bag [ ] plastic liner
[ ] metal liner [ ] none [X] other (specify)
Unknown.

5. Waste container type (see attached list)
Other.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
5. "Other" is not known.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
None.										

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Metal.	Metallic.	T .00000410000000	CI	1980	1980	N			See continuation page.
C-14	Metal.	Metallic.	T .00000055000000	CI	1980	1980	N			See continuation page.
Fe-55	Metal.	Metallic.	T .00009500000000	CI	1980	1980	N			See continuation page.
Ni-59	Metal.	Metallic.	T .00000002850000	CI	1980	1980	N			See continuation page.
Ni-63	Metal.	Metallic.	T .00001600000000	CI	1980	1980	N			See continuation page.
Co-60	Metal.	Metallic.	T .00003350000000	CI	1980	1980	N			See continuation page.
Sr-90	Metal.	Metallic.	T .00000004600000	CI	1980	1980	N			See continuation page.
Tc-99	Metal.	Metallic.	T .00000000900000	CI	1980	1980	N			See continuation page.
I-129	Metal.	Metallic.	Unknown.	CI	1980	1980	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error). Additional radionuclides (e.g. U-235) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Metal.	Metallic.	T .00001000000000	CI	1980	1980	N			See continuation page.
Ce-144	Metal.	Metallic.	T .00000023500000	CI	1980	1980	N			See continuation page.
Eu-154	Metal.	Metallic.	T .00000000010000	CI	1980	1980	N			See continuation page.
Eu-155	Metal.	Metallic.	T .00000047000000	CI	1980	1980	N			See continuation page.
U-234	Metal.	Metallic.	T .00000000010000	CI	1980	1980	N			See continuation page.
U-236	Metal.	Metallic.	T .00000000010000	CI	1980	1980	N			See continuation page.
Np-237	Metal.	Metallic.	T .00000000010000	CI	1980	1980	N			See continuation page.
Pu-238	Metal.	Metallic.	T .00000000270000	CI	1980	1980	N			See continuation page.
Pu-239	Metal.	Metallic.	T .00000000270000	CI	1980	1980	N			See continuation page.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error). Additional radionuclides (e.g. U-235) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-240	Metal.	Metallic.	T .00000000030000	CI	1980	1980	N			See continuation page.
Pu-241	Metal.	Metallic.	T .00000029500000	CI	1980	1980	N			See continuation page.
Am-241	Metal.	Metallic.	T .00000000130000	CI	1980	1980	N			See continuation page.
Cm-242	Metal.	Metallic.	T .00000000130000	CI	1980	1980	N			See continuation page.
Cm-244	Metal.	Metallic.	T .00000000120000	CI	1980	1980	N			See continuation page.
Cr-51	Metal.	Metallic.	T .00494990000000	CI	1980	1980	N	-20%	+20%	See comment below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

The sample column is marked "N" because the preparer cannot prove a sample was counted by the Radiation Measurements Laboratory (RML) at TRA, but based on the RWMIS radionuclide identification, the preparer believes a sample was counted. A 5-10% error is normal for a sample analyzed by the RML, however, being conservative, the preparer assigned a 20% error (doubling the 10% error). Additional radionuclides (e.g. U-235) were identified and calibrated, but are not shown here as their activity was less than 1E-11 curies.

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [ ] interview
[ ] expert judgment [ ] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
A portion of, or all of the measurements, were assumed to be taken using a G-M detector which only measures gamma emitters; beta emitters have been added to the RWMIS activity based on scaling factors. Therefore, the total activity will be greater than that in RWMIS.

7. Major unknowns in inventories of contaminants:
MAP and MFP were unidentified.

8. Key assumptions used to deal with the unknowns:
MAP radionuclides were chosen based on their cross sections and half lives. MFP radionuclides were chosen based on their fissionable cross sections and half lives. On part D, no G-M counter correction is needed to entries for which upper and lower bounds are given. The presence of such bounds indicates that the estimate was based on weight, laboratory analysis, spectrometry, and/or mathematical calculations. The G-M counter correction is needed for entries for which no bounds are given, because such estimates were originally made using the G-M counter method.

Continuation of Part _____ Column or Question Number or Title _____

Because of the configuration of this item, the analysis method is questionable. The radionuclide content may have been determined using smears, a Geiger-Mueller counter, or a sodium iodide detector. The true uncertainty is not known.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 206

1. Preparer: Amaro, C.

2. Date prepared: 09/01/93

3. Generator: TRA
(area or contractor - use code from attached list)

4. Particular facility: 706
(building number - use code from attached list)

5. Number of waste stream from this facility:
1H

6. Waste stream:
Tank.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1975 Ending year 1975

9. Waste stream volume:
Amount 906.1000 Units Cubic feet.
Check box: [ ] annual or [X] total over all years
Check box: [ ] container volume or [X] waste volume

10. Comments (specify number of pertinent question):

1. General physical form (see attached list)

[X] other (specify)
MTR working reservoir.

2. Details on physical form(particularly confinement related)
Tank for effluent.

3. Chemical form:
Metallic.

4. Inner packaging: [ ] plastic bag [ ] plastic liner
[ ] metal liner [X] none [ ] other (specify)

5. Waste container type (see attached list)
Other.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
5. "Other" is the tank itself.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
None.										

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Co-60	Solid.	Metallic.	A 7.0000000000000	CI	1975	1975	N	-50%	+100%	See comment below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

A Geiger-Mueller counter or a portable NaI detector was used to determine this activity. The activity is probably too low by a factor 2. Radioactivity in the tank came from cobalt flux wires. Comment: other radionuclides may be present in small quantities, but there is no reliable evidence.

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [X] interview
[ ] expert judgment [X] reports
[ ] other

2. Details concerning source (names, report no., dates, etc.)
Interviewees wish to remain anonymous.
L.M. DeWitt, Summarization of RWMC Subsurface Disposal Area Source Term Interviews, August 1990, Haz Answer.

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[ ] no
[X] yes

6. If yes, explain why:
A portion of, or all of the measurements, were assumed to be taken using a G-M detector which only measures gamma emitters; beta emitters have been added to the RWMIS activity based on scaling factors. Therefore, the total activity will be greater than that in RWMIS.

7. Major unknowns in inventories of contaminants:
None identified.

8. Key assumptions used to deal with the unknowns:

(Radioactive) Waste Management Complex

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 32

1. Preparer: Jorgensen, Doug

2. Date prepared: 06/24/93

3. Generator: WMC
(area or contractor - use code from attached list)

4. Particular facility: WMC
(building number - use code from attached list)

5. Number of waste stream from this facility:
1H

6. Waste stream:
Soil, pond sediment, scrap metal and equipment.

7. Type of radioactive waste (check box):
[ ] TRU or suspect TRU
[X] LLW
[ ] non-radioactive

8. Actual years disposed of at SDA:
Starting year 1977 Ending year 1983

9. Waste stream volume:
Amount 844.1200 Units Cubic meters.
Check box: [ ] annual or [X] total over all years
Check box: [X] container volume or [ ] waste volume

10. Comments (specify number of pertinent question):
4. RWMC - Waste Management Complex.
6. No consistency in the waste streams generated over the seven year period except for radiologically contaminated materials as a by-product of deconning shipping equipment and non-removable rad. contamination of equipment. All material was low-level waste disposed of in Pit 15.

1. General physical form (see attached list)
Soil.
[X] other (specify)
6, 10.

2. Details on physical form(particularly confinement related)
Soil, sediment and pond waste from Decon. and Decom. Facility South (DSF), contaminated scrap metal and equipment.

3. Chemical form:
Rad-contaminated decon. (solid) waste and rad-contaminated metal.

4. Inner packaging: [ ] plastic bag [ ] plastic liner [ ] metal liner [X] none [ ] other (specify)

5. Waste container type (see attached list)
Metal barrel*.

6. Other characteristics of interest:
O includes materials (bulk) not disposed of in containers.

7. Comments (specify number of pertinent question):
4. No hazardous chemicals are believed to have been disposed, decon waste consisted only of soil and sediment (rad-contaminated) from evaporation pond at the DSF. Two deer were found dead in the pond (drowned because of steep banks to pond not allowing egress) and were also disposed of as rad. contaminated.
5. BXW and "Other" (materials, bulk, not disposed of in containers).

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
None.										

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

RWMIS lists Be contaminated waste as part of WMC waste stream. This material was Rocky Flats waste discovered and retrieved from Pits 1 and 2 during the Early Waste Retrieval Project. This material will not be included as WMC waste in order to not "double-count" the waste received from Rocky Flats. No other hazardous chemical waste was believed to have been disposed based on interviews.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Metal/soil.	Unknown.	T 1.2157000000000	CI	1978	1983	N	-50%	+50%	
Co-60	Metal/soil.	Unknown.	T .00041330000000	CI	1978	1983	N	-50%	+50%	
Fe-59	Metal/soil.	Unknown.	T .00039420000000	CI	1978	1983	N	-50%	+50%	
Sr-90	Metal/soil.	Unknown.	T 4.8000000000000	CI	1978	1983	N	-50%	+50%	
Ra-226	Metal.	Unknown.	T .01720000000000	CI	1978	1983	N	-50%	+50%	
Th-230	Metal.	Unknown.	T .01789000000000	CI	1978	1983	N	-50%	+50%	
Th-232	Metal.	Unknown.	T .00034000000000	CI	1978	1983	N	-50%	+50%	
U-234	Metal.	Unknown.	T .01733000000000	CI	1978	1983	N	-50%	+50%	
U-235	Metal.	Unknown.	T .00091360000000	CI	1978	1983	N	-50%	+50%	

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

Based on process knowledge, MAP split 1/2 into Co-60 and Fe-59, MFP included as Cs-137 and unidentified beta-gamma included under Cs-137. The 1977 record (EWR of Rocky Flats Waste) was not included on this form.

For each contaminant, complete at least one line on the following table. If any entries for that contaminant vary by year, fill out additional lines as needed to cover the varying entries for different years. For example, if the annual quantity disposed was x kg for 1952-56 and y kg for 1956-84, use two lines to handle this situation.

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-238	Metal.	Unknown.	T .01783000000000	CI	1978	1983	N	-50%	+50%	
Cs-137	Metal/soil.	Unknown.	T .00000781500000	CI	1978	1983	N	-50%	+50%	

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column. If not, mark N and give the minimum value and maximum value.

Additional information or explanations (indicate pertinent contaminant)

Based on process knowledge, MAP split 1/2 into Co-60 and Fe-59, MFP included as Cs-137 and unidentified beta-gamma included under Cs-137. The 1977 record (EWR of Rocky Flats Waste) was not included on this form.

1. Type of source of information:
(check box)

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [X] interview
[ ] expert judgment [ ] reports
[X] other
Shipping record.

2. Details concerning source (names, report no., dates, etc.)
Shipping records. Interviews with Jim Bishoff (Operations Manager - RWMC), Larry Miller (Senior HP Workleader, RWMC) and Dale Wells (RWMC Waste Shipment Coordinator).

3. Do the estimates of contaminant quantities in Part C and D represent:
[X] best estimate
[ ] worst case
[ ] other

4. If other than best estimate, explain why:

5. Do the data conflict with RWMIS?
(Historical or Present Data Only)
[X] no
[ ] yes

6. If yes, explain why:

7. Major unknowns in inventories of contaminants:
None.

8. Key assumptions used to deal with the unknowns:
Determination of MAP/MFP. RWMIS determination of rad. content and isotope designation.