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.	Unknown.	T 103.00000000000	CI	1956	1956				
Pu-239	Solid.	Unknown.	T 149.00000000000	CI	1957	1957				
Pu-239	Solid.	Unknown.	T 345.00000000000	CI	1958	1958				
Pu-239	Solid.	Unknown.	T 379.00000000000	CI	1959	1959				
Pu-239	Solid.	Unknown.	T 448.00000000000	CI	1960	1960				
Pu-239	Solid.	Unknown.	T 410.00000000000	CI	1961	1961				
Pu-239	Solid.	Unknown.	T 534.00000000000	CI	1962	1962				
Pu-239	Solid.	Unknown.	T 649.00000000000	CI	1963	1963				
Pu-239	Solid.	Unknown.	T 557.00000000000	CI	1964	1964				

* 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.	Unknown.	T 800.00000000000	CI	1965	1965				
Pu-239	Solid.	Unknown.	T 977.00000000000	CI	1966	1966				
Pu-239	Solid.	Unknown.	T 376.00000000000	CI	1967	1967				
Pu-239	Solid.	Unknown.	T 163.00000000000	CI	1968	1968				
Pu-239	Solid.	Unknown.	T 472.00000000000	CI	1969	1969				
Pu-239	Solid.	Unknown.	T 601.00000000000	CI	1970	1970				
Pu-240	Solid.	Unknown.	T 2.2800000000000	CI	1954	1954				
Pu-240	Solid.	Unknown.	T 11.400000000000	CI	1955	1955				
Pu-240	Solid.	Unknown.	T 23.000000000000	CI	1956	1956				

* 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-240	Solid.	Unknown.	T 33.300000000000	CI	1957	1957				
Pu-240	Solid.	Unknown.	T 77.300000000000	CI	1958	1958				
Pu-240	Solid.	Unknown.	T 84.800000000000	CI	1959	1959				
Pu-240	Solid.	Unknown.	T 100.00000000000	CI	1960	1960				
Pu-240	Solid.	Unknown.	T 91.800000000000	CI	1961	1961				
Pu-240	Solid.	Unknown.	T 120.00000000000	CI	1962	1962				
Pu-240	Solid.	Unknown.	T 145.00000000000	CI	1963	1963				
Pu-240	Solid.	Unknown.	T 125.00000000000	CI	1964	1964				
Pu-240	Solid.	Unknown.	T 179.00000000000	CI	1965	1965				

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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
Pu-240	Solid.	Unknown.	T 219.00000000000	CI	1966	1966				
Pu-240	Solid.	Unknown.	T 84.100000000000	CI	1967	1967				
Pu-240	Solid.	Unknown.	T 36.400000000000	CI	1968	1968				
Pu-240	Solid.	Unknown.	T 106.00000000000	CI	1969	1969				
Pu-240	Solid.	Unknown.	T 134.00000000000	CI	1970	1970				
Pu-241	Solid.	Unknown.	T 61.100000000000	CI	1954	1954				
Pu-241	Solid.	Unknown.	T 306.00000000000	CI	1955	1955				
Pu-241	Solid.	Unknown.	T 615.00000000000	CI	1956	1956				
Pu-241	Solid.	Unknown.	T 890.00000000000	CI	1957	1957				

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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.	Unknown.	T 2060.0000000000	CI	1958	1958				
Pu-241	Solid.	Unknown.	T 2270.0000000000	CI	1959	1959				
Pu-241	Solid.	Unknown.	T 2680.0000000000	CI	1960	1960				
Pu-241	Solid.	Unknown.	T 2460.0000000000	CI	1961	1961				
Pu-241	Solid.	Unknown.	T 3200.0000000000	CI	1962	1962				
Pu-241	Solid.	Unknown.	T 3890.0000000000	CI	1963	1963				
Pu-241	Solid.	Unknown.	T 3330.0000000000	CI	1964	1964				
Pu-241	Solid.	Unknown.	T 4790.0000000000	CI	1965	1965				
Pu-241	Solid.	Unknown.	T 5850.0000000000	CI	1966	1966				

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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.	Unknown.	T 2250.0000000000	CI	1967	1967				
Pu-241	Solid.	Unknown.	T 974.00000000000	CI	1968	1968				
Pu-241	Solid.	Unknown.	T 2820.0000000000	CI	1969	1969				
Pu-241	Solid.	Unknown.	T 3600.0000000000	CI	1970	1970				
Pu-242	Solid.	Unknown.	T .00013700000000	CI	1954	1954				
Pu-242	Solid.	Unknown.	T .00068600000000	CI	1955	1955				
Pu-242	Solid.	Unknown.	T .00138000000000	CI	1956	1956				
Pu-242	Solid.	Unknown.	T .00200000000000	CI	1957	1957				
Pu-242	Solid.	Unknown.	T .00464000000000	CI	1958	1958				

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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-242	Solid.	Unknown.	T .00509000000000	CI	1959	1959				
Pu-242	Solid.	Unknown.	T .00603000000000	CI	1960	1960				
Pu-242	Solid.	Unknown.	T .00551000000000	CI	1961	1961				
Pu-242	Solid.	Unknown.	T .00718000000000	CI	1962	1962				
Pu-242	Solid.	Unknown.	T .00873000000000	CI	1963	1963				
Pu-242	Solid.	Unknown.	T .00748000000000	CI	1964	1964				
Pu-242	Solid.	Unknown.	T .01080000000000	CI	1965	1965				
Pu-242	Solid.	Unknown.	T .01310000000000	CI	1966	1966				
Pu-242	Solid.	Unknown.	T .00505000000000	CI	1967	1967				

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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-242	Solid.	Unknown.	T .00219000000000	CI	1968	1968				
Pu-242	Solid.	Unknown.	T .00634000000000	CI	1969	1969				
Pu-242	Solid.	Unknown.	T .00808000000000	CI	1970	1970				

* 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)

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

2. Details concerning source (names, report no., dates, etc.)
WM-FI-82-021, October 1982, "Content Code Assessment for INEL Contact-Handled Stored Transuranic Waste", Thomas L. Clements Jr.
EDF-RWMC-369.

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
[ ] yes

6. If yes, explain why:
N/A.

7. Major unknowns in inventories of contaminants:

8. Key assumptions used to deal with the unknowns:
The stored waste data was extrapolated to estimate the buried waste amounts.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 225

1. Preparer: Kudera, Don

2. Date prepared: 06/23/93

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

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

5. Number of waste stream from this facility:
13H

6. Waste stream:
Resins.

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

8. Actual years disposed of at SDA:
Starting year 1954 Ending year 1970

9. Waste stream volume:
Amount 28.5000 Units Cubic meters.
Check box: [X] annual or [ ] total over all years
Check box: [X] container volume or [ ] waste volume

10. Comments (specify number of pertinent question):
4. Building 771.
6. This buried waste stream is similar to stored waste content code 430.
9. The average weight per drum is 398 pounds, total weight of the drums is 11,513 pounds. Waste stream contains 29 55-gallon drums.

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

2. Details on physical form(particularly confinement related)
Waste consists of anion and cation exchange resins. Resins are DOWEX series 1-X4 anion and DOWEX 50W-X8 cation resins manufactured by the DOW Chemical Company. Both resins are polystyrene-divinylbenzene copolymers. Resin bead size is 50 to 100 mesh.

3. Chemical form:
Pu bound to ion exchange resin.

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

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

6. Other characteristics of interest:
Content Code 430 was used during 1972 only. The disposal procedure was changed and the content code was changed to 432.

7. Comments (specify number of pertinent question):
4. The resin was packaged in either one gallon polyethylene bottles or in a Fibre-Pak (approximately 18 in. high x 6 in. diameter) lined with two polyethylene bags. One PVC or double plastic (PVC/Polyethylene) bag(s) was placed over the Fibre-Pak before being placed in a 55-gallon drum. Ten Fibre-Paks per drum or 15 to 20 bottles per drum.

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.									0.00000000	

* 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-238	Solid.	Nitrate.	T .03220000000000	CI	1954	1954				
Pu-238	Solid.	Nitrate.	T .16100000000000	CI	1955	1955				
Pu-238	Solid.	Nitrate.	T .32400000000000	CI	1956	1956				
Pu-238	Solid.	Nitrate.	T .46900000000000	CI	1957	1957				
Pu-238	Solid.	Nitrate.	T 1.0900000000000	CI	1958	1958				
Pu-238	Solid.	Nitrate.	T 1.2000000000000	CI	1959	1959				
Pu-238	Solid.	Nitrate.	T 1.4100000000000	CI	1960	1960				
Pu-238	Solid.	Nitrate.	T 1.2900000000000	CI	1961	1961				
Pu-238	Solid.	Nitrate.	T 1.6800000000000	CI	1962	1962				

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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
Pu-238	Solid.	Nitrate.	T 2.0500000000000	CI	1963	1963				
Pu-238	Solid.	Nitrate.	T 1.7600000000000	CI	1964	1964				
Pu-238	Solid.	Nitrate.	T 2.5200000000000	CI	1965	1965				
Pu-238	Solid.	Nitrate.	T 3.0800000000000	CI	1966	1966				
Pu-238	Solid.	Nitrate.	T 1.1800000000000	CI	1967	1967				
Pu-238	Solid.	Nitrate.	T .51300000000000	CI	1968	1968				
Pu-238	Solid.	Nitrate.	T 1.4900000000000	CI	1969	1969				
Pu-238	Solid.	Nitrate.	T 1.9000000000000	CI	1970	1970				
Pu-239	Solid.	Nitrate.	T 1.1000000000000	CI	1954	1954				

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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.	Nitrate.	T 5.4900000000000	CI	1955	1955				
Pu-239	Solid.	Nitrate.	T 11.000000000000	CI	1956	1956				
Pu-239	Solid.	Nitrate.	T 16.000000000000	CI	1957	1957				
Pu-239	Solid.	Nitrate.	T 37.200000000000	CI	1958	1958				
Pu-239	Solid.	Nitrate.	T 40.800000000000	CI	1959	1959				
Pu-239	Solid.	Nitrate.	T 48.300000000000	CI	1960	1960				
Pu-239	Solid.	Nitrate.	T 44.200000000000	CI	1961	1961				
Pu-239	Solid.	Nitrate.	T 57.500000000000	CI	1962	1962				
Pu-239	Solid.	Nitrate.	T 69.900000000000	CI	1963	1963				

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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.	Nitrate.	T 60.000000000000	CI	1964	1964				
Pu-239	Solid.	Nitrate.	T 86.200000000000	CI	1965	1965				
Pu-239	Solid.	Nitrate.	T 105.00000000000	CI	1966	1966				
Pu-239	Solid.	Nitrate.	T 40.400000000000	CI	1967	1967				
Pu-239	Solid.	Nitrate.	T 17.500000000000	CI	1968	1968				
Pu-239	Solid.	Nitrate.	T 50.800000000000	CI	1969	1969				
Pu-239	Solid.	Nitrate.	T 64.700000000000	CI	1970	1970				
Pu-240	Solid.	Nitrate.	T .24600000000000	CI	1954	1954				
Pu-240	Solid.	Nitrate.	T 1.2300000000000	CI	1955	1955				

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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-240	Solid.	Nitrate.	T 2.4800000000000	CI	1956	1956				
Pu-240	Solid.	Nitrate.	T 3.5800000000000	CI	1957	1957				
Pu-240	Solid.	Nitrate.	T 8.3200000000000	CI	1958	1958				
Pu-240	Solid.	Nitrate.	T 9.1400000000000	CI	1959	1959				
Pu-240	Solid.	Nitrate.	T 10.800000000000	CI	1960	1960				
Pu-240	Solid.	Nitrate.	T 9.8900000000000	CI	1961	1961				
Pu-240	Solid.	Nitrate.	T 12.900000000000	CI	1962	1962				
Pu-240	Solid.	Nitrate.	T 15.600000000000	CI	1963	1963				
Pu-240	Solid.	Nitrate.	T 13.400000000000	CI	1964	1964				

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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.	Nitrate.	T 19.300000000000	CI	1965	1965				
Pu-240	Solid.	Nitrate.	T 23.600000000000	CI	1966	1966				
Pu-240	Solid.	Nitrate.	T 9.0600000000000	CI	1967	1967				
Pu-240	Solid.	Nitrate.	T 3.9200000000000	CI	1968	1968				
Pu-240	Solid.	Nitrate.	T 11.400000000000	CI	1969	1969				
Pu-240	Solid.	Nitrate.	T 14.500000000000	CI	1970	1970				
Pu-241	Solid.	Nitrate.	T 6.5800000000000	CI	1954	1954				
Pu-241	Solid.	Nitrate.	T 32.900000000000	CI	1955	1955				
Pu-241	Solid.	Nitrate.	T 66.200000000000	CI	1956	1956				

* 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	Solid.	Nitrate.	T 95.80000000000	CI	1957	1957				
Pu-241	Solid.	Nitrate.	T 222.00000000000	CI	1958	1958				
Pu-241	Solid.	Nitrate.	T 244.00000000000	CI	1959	1959				
Pu-241	Solid.	Nitrate.	T 289.00000000000	CI	1960	1960				
Pu-241	Solid.	Nitrate.	T 264.00000000000	CI	1961	1961				
Pu-241	Solid.	Nitrate.	T 344.00000000000	CI	1962	1962				
Pu-241	Solid.	Nitrate.	T 419.00000000000	CI	1963	1963				
Pu-241	Solid.	Nitrate.	T 359.00000000000	CI	1964	1964				
Pu-241	Solid.	Nitrate.	T 516.00000000000	CI	1965	1965				

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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.	Nitrate.	T 630.00000000000	CI	1966	1966				
Pu-241	Solid.	Nitrate.	T 242.00000000000	CI	1967	1967				
Pu-241	Solid.	Nitrate.	T 105.00000000000	CI	1968	1968				
Pu-241	Solid.	Nitrate.	T 304.00000000000	CI	1969	1969				
Pu-241	Solid.	Nitrate.	T 387.00000000000	CI	1970	1970				
Pu-242	Solid.	Nitrate.	T .00001480000000	CI	1954	1954				
Pu-242	Solid.	Nitrate.	T .00007390000000	CI	1955	1955				
Pu-242	Solid.	Nitrate.	T .00014900000000	CI	1956	1956				
Pu-242	Solid.	Nitrate.	T .00021500000000	CI	1957	1957				

* 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-242	Solid.	Nitrate.	T .00050000000000	CI	1958	1958				
Pu-242	Solid.	Nitrate.	T .00054800000000	CI	1959	1959				
Pu-242	Solid.	Nitrate.	T .00064900000000	CI	1960	1960				
Pu-242	Solid.	Nitrate.	T .00059400000000	CI	1961	1961				
Pu-242	Solid.	Nitrate.	T .00077300000000	CI	1962	1962				
Pu-242	Solid.	Nitrate.	T .00094000000000	CI	1963	1963				
Pu-242	Solid.	Nitrate.	T .00080600000000	CI	1964	1964				
Pu-242	Solid.	Nitrate.	T .00116000000000	CI	1965	1965				
Pu-242	Solid.	Nitrate.	T .00141000000000	CI	1966	1966				

* 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-242	Solid.	Nitrate.	T .00054400000000	CI	1967	1967				
Pu-242	Solid.	Nitrate.	T .00023500000000	CI	1968	1968				
Pu-242	Solid.	Nitrate.	T .00068300000000	CI	1969	1969				
Pu-242	Solid.	Nitrate.	T .00087000000000	CI	1970	1970				

* 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)

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

2. Details concerning source (names, report no., dates, etc.)
WM-F1-82-021, October 1982, "Content Code Assessment for INEL Contact-Handled Stored Transuranic Waste", Thomas L. Clements Jr.
EDF-RWMC-369.

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
[ ] yes

6. If yes, explain why:
N/A.

7. Major unknowns in inventories of contaminants:

8. Key assumptions used to deal with the unknowns:
The stored waste data was extrapolated to estimate the buried waste amounts.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 226

1. Preparer: Kudera, Don

2. Date prepared: 06/24/93

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

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

5. Number of waste stream from this facility:
14H

6. Waste stream:
Salts.

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

8. Actual years disposed of at SDA:
Starting year 1954 Ending year 1970

9. Waste stream volume:
Amount 23.6000 Units Cubic meters.
Check box: [X] annual or [ ] total over all years
Check box: [X] container volume or [ ] waste volume

10. Comments (specify number of pertinent question):
4. Building 776 (Pyrochemical Operations).
6. This buried waste stream is similar to stored waste content codes 005, 410, and 411.
9. Average weight per drum is 302 pounds, total weight of all drums is 6,644 pounds.

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

2. Details on physical form(particularly confinement related)
Waste consists of chloride and nitrate salts.

3. Chemical form:
Pu and Am metal and oxides with trace amounts of Pu and Am chloride or nitrates.

4. Inner packaging: [ ] plastic bag [X] plastic liner
[ ] metal liner [ ] none [X] other (specify)
See 7 below.

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

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
4. Waste salt is packaged in #303 produce cans. Each can is contained in double plastic bags and placed in a 8802 Vollrath stainless steel can. Up to 50 cans fit into a drum which has a 90 mil polyethylene rigid drum liner with one or two drum bags.

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.									0.00000000	

* 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)
See part B., number 3. No hazardous materials are identified in this waste stream.

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.	Metal with some oxides.	T .40100000000000	CI	1954	1954				
Am-241	Solid.	Metal with some oxides.	T 1.2000000000000	CI	1955	1955				
Am-241	Solid.	Metal with some oxides.	T 2.4100000000000	CI	1956	1956				
Am-241	Solid.	Metal with some oxides.	T 3.6100000000000	CI	1957	1957				
Am-241	Solid.	Metal with some oxides.	T 8.8300000000000	CI	1958	1958				
Am-241	Solid.	Metal with some oxides.	T 9.6300000000000	CI	1959	1959				
Am-241	Solid.	Metal with some oxides.	T 11.200000000000	CI	1960	1960				
Am-241	Solid.	Metal with some oxides.	T 10.400000000000	CI	1961	1961				
Am-241	Solid.	Metal with some oxides.	T 13.200000000000	CI	1962	1962				

* 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
Am-241	Solid.	Metal with some oxides.	T 16.400000000000	CI	1963	1963				
Am-241	Solid.	Metal with some oxides.	T 14.000000000000	CI	1964	1964				
Am-241	Solid.	Metal with some oxides.	T 20.100000000000	CI	1965	1965				
Am-241	Solid.	Metal with some oxides.	T 24.500000000000	CI	1966	1966				
Am-241	Solid.	Metal with some oxides.	T 9.6300000000000	CI	1967	1967				
Am-241	Solid.	Metal with some oxides.	T 4.0100000000000	CI	1968	1968				
Am-241	Solid.	Metal with some oxides.	T 12.000000000000	CI	1969	1969				
Am-241	Solid.	Metal with some oxides.	T 15.200000000000	CI	1970	1970				
Pu-238	Solid.	Metal with some oxides.	T .00302000000000	CI	1954	1954				

* 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-238	Solid.	Metal with some oxides.	T .01510000000000	CI	1955	1955				
Pu-238	Solid.	Metal with some oxides.	T .03040000000000	CI	1956	1956				
Pu-238	Solid.	Metal with some oxides.	T .04400000000000	CI	1957	1957				
Pu-238	Solid.	Metal with some oxides.	T .10200000000000	CI	1958	1958				
Pu-238	Solid.	Metal with some oxides.	T .11200000000000	CI	1959	1959				
Pu-238	Solid.	Metal with some oxides.	T .13300000000000	CI	1960	1960				
Pu-238	Solid.	Metal with some oxides.	T .12200000000000	CI	1961	1961				
Pu-238	Solid.	Metal with some oxides.	T .15800000000000	CI	1962	1962				
Pu-238	Solid.	Metal with some oxides.	T .19200000000000	CI	1963	1963				

* 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-238	Solid.	Metal with some oxides.	T .16500000000000	CI	1964	1964				
Pu-238	Solid.	Metal with some oxides.	T .23700000000000	CI	1965	1965				
Pu-238	Solid.	Metal with some oxides.	T .29000000000000	CI	1966	1966				
Pu-238	Solid.	Metal with some oxides.	T .11100000000000	CI	1967	1967				
Pu-238	Solid.	Metal with some oxides.	T .04820000000000	CI	1968	1968				
Pu-238	Solid.	Metal with some oxides.	T .14000000000000	CI	1969	1969				
Pu-238	Solid.	Metal with some oxides.	T .17800000000000	CI	1970	1970				
Pu-239	Solid.	Metal with some oxides.	T .10300000000000	CI	1954	1954				
Pu-239	Solid.	Metal with some oxides.	T .51600000000000	CI	1955	1955				

* 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 with some oxides.	T 1.0400000000000	CI	1956	1956				
Pu-239	Solid.	Metal with some oxides.	T 1.5000000000000	CI	1957	1957				
Pu-239	Solid.	Metal with some oxides.	T 3.4900000000000	CI	1958	1958				
Pu-239	Solid.	Metal with some oxides.	T 3.8300000000000	CI	1959	1959				
Pu-239	Solid.	Metal with some oxides.	T 4.5400000000000	CI	1960	1960				
Pu-239	Solid.	Metal with some oxides.	T 4.1500000000000	CI	1961	1961				
Pu-239	Solid.	Metal with some oxides.	T 5.4000000000000	CI	1962	1962				
Pu-239	Solid.	Metal with some oxides.	T 6.5700000000000	CI	1963	1963				
Pu-239	Solid.	Metal with some oxides.	T 5.6300000000000	CI	1964	1964				

* 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 with some oxides.	T 8.1000000000000	CI	1965	1965				
Pu-239	Solid.	Metal with some oxides.	T 9.8800000000000	CI	1966	1966				
Pu-239	Solid.	Metal with some oxides.	T 3.8000000000000	CI	1967	1967				
Pu-239	Solid.	Metal with some oxides.	T 1.6400000000000	CI	1968	1968				
Pu-239	Solid.	Metal with some oxides.	T 4.7700000000000	CI	1969	1969				
Pu-239	Solid.	Metal with some oxides.	T 6.0800000000000	CI	1970	1970				
Pu-240	Solid.	Metal with some oxides.	T .02310000000000	CI	1954	1954				
Pu-240	Solid.	Metal with some oxides.	T .11600000000000	CI	1955	1955				
Pu-240	Solid.	Metal with some oxides.	T .23300000000000	CI	1956	1956				

* 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-240	Solid.	Metal with some oxides.	T .33700000000000	CI	1957	1957				
Pu-240	Solid.	Metal with some oxides.	T .78200000000000	CI	1958	1958				
Pu-240	Solid.	Metal with some oxides.	T .85800000000000	CI	1959	1959				
Pu-240	Solid.	Metal with some oxides.	T 1.0200000000000	CI	1960	1960				
Pu-240	Solid.	Metal with some oxides.	T .92900000000000	CI	1961	1961				
Pu-240	Solid.	Metal with some oxides.	T 1.2100000000000	CI	1962	1962				
Pu-240	Solid.	Metal with some oxides.	T 1.4700000000000	CI	1963	1963				
Pu-240	Solid.	Metal with some oxides.	T 1.2600000000000	CI	1964	1964				
Pu-240	Solid.	Metal with some oxides.	T 1.8100000000000	CI	1965	1965				

* 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-240	Solid.	Metal with some oxides.	T 2.2100000000000	CI	1966	1966				
Pu-240	Solid.	Metal with some oxides.	T .85100000000000	CI	1967	1967				
Pu-240	Solid.	Metal with some oxides.	T .36800000000000	CI	1968	1968				
Pu-240	Solid.	Metal with some oxides.	T 1.0700000000000	CI	1969	1969				
Pu-240	Solid.	Metal with some oxides.	T 1.3600000000000	CI	1970	1970				
Pu-241	Solid.	Metal with some oxides.	T .61800000000000	CI	1954	1954				
Pu-241	Solid.	Metal with some oxides.	T 3.0900000000000	CI	1955	1955				
Pu-241	Solid.	Metal with some oxides.	T 6.2200000000000	CI	1956	1956				
Pu-241	Solid.	Metal with some oxides.	T 9.0000000000000	CI	1957	1957				

* 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.	Metal with some oxides.	T 20.900000000000	CI	1958	1958				
Pu-241	Solid.	Metal with some oxides.	T 22.900000000000	CI	1959	1959				
Pu-241	Solid.	Metal with some oxides.	T 27.200000000000	CI	1960	1960				
Pu-241	Solid.	Metal with some oxides.	T 24.800000000000	CI	1961	1961				
Pu-241	Solid.	Metal with some oxides.	T 32.300000000000	CI	1962	1962				
Pu-241	Solid.	Metal with some oxides.	T 39.300000000000	CI	1963	1963				
Pu-241	Solid.	Metal with some oxides.	T 33.700000000000	CI	1964	1964				
Pu-241	Solid.	Metal with some oxides.	T 48.500000000000	CI	1965	1965				
Pu-241	Solid.	Metal with some oxides.	T 59.200000000000	CI	1966	1966				

* 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.	Metal with some oxides.	T 22.800000000000	CI	1967	1967				
Pu-241	Solid.	Metal with some oxides.	T 9.8500000000000	CI	1968	1968				
Pu-241	Solid.	Metal with some oxides.	T 28.600000000000	CI	1969	1969				
Pu-241	Solid.	Metal with some oxides.	T 36.400000000000	CI	1970	1970				
Pu-242	Solid.	Metal with some oxides.	T .00000139000000	CI	1954	1954				
Pu-242	Solid.	Metal with some oxides.	T .00000694000000	CI	1955	1955				
Pu-242	Solid.	Metal with some oxides.	T .00001400000000	CI	1956	1956				
Pu-242	Solid.	Metal with some oxides.	T .00002020000000	CI	1957	1957				
Pu-242	Solid.	Metal with some oxides.	T .00004690000000	CI	1958	1958				

* 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-242	Solid.	Metal with some oxides.	T .00005150000000	CI	1959	1959				
Pu-242	Solid.	Metal with some oxides.	T .00006100000000	CI	1960	1960				
Pu-242	Solid.	Metal with some oxides.	T .00005580000000	CI	1961	1961				
Pu-242	Solid.	Metal with some oxides.	T .00007260000000	CI	1962	1962				
Pu-242	Solid.	Metal with some oxides.	T .00008830000000	CI	1963	1963				
Pu-242	Solid.	Metal with some oxides.	T .00007570000000	CI	1964	1964				
Pu-242	Solid.	Metal with some oxides.	T .00010900000000	CI	1965	1965				
Pu-242	Solid.	Metal with some oxides.	T .00013300000000	CI	1966	1966				
Pu-242	Solid.	Metal with some oxides.	T .00005110000000	CI	1967	1967				

* 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-242	Solid.	Metal with some oxides.	T .00002210000000	CI	1968	1968				
Pu-242	Solid.	Metal with some oxides.	T .00006420000000	CI	1969	1969				
Pu-242	Solid.	Metal with some oxides.	T .00008170000000	CI	1970	1970				

* 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)

PART E - SOURCES OF INFORMATION AND UNCERTAINTIES - RFO-DOW-14H

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

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

2. Details concerning source (names, report no., dates, etc.)
WM-F1-82-021, October 1982, "Content Code Assessment for INEL Contact-Handled Stored Transuranic Waste", Thomas L. Clements Jr.

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
[ ] yes

6. If yes, explain why:
N/A.

7. Major unknowns in inventories of contaminants:

8. Key assumptions used to deal with the unknowns:
The stored waste data was extrapolated to estimate the buried waste amounts.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 227

1. Preparer: Kudera, Don

2. Date prepared: 01/10/94

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

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

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

6. Waste stream:
Organic sludge.

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

8. Actual years disposed of at SDA:
Starting year 1966 Ending year 1970

9. Waste stream volume:
Amount 71156.0000 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. Building 774.
9. 9,687 55-gallon drums from 1966 through October 1970. 1966 - 1,963 cu ft., 1967 - 40,570 cu ft., 1968 - 17,580 cu ft., 1969 - 3,919 cu ft., and 1970 - 7,124 cu ft.

1. General physical form (see attached list)
Other liquid setups.
[ ] other (specify)

2. Details on physical form(particularly confinement related)
Absorbents mixed with organic liquid to form grease/paste-like material.

3. Chemical form:
Pu and Am oxide and very small pieces of Pu and Am metal from machining operations organic sludge.

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

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

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
56-23-5 Carbon Tetrachloride	Absorbed liquid.	See chemical name.	T 160000000.00000	GM	1966	1970	N		160000000.	
71-55-6 1,1,1-Trichloroethane	Absorbed liquid.	See chemical name.	T 130000000.00000	GM	1966	1970	N		130000000.	
79-01-6 Trichloroethylene	Absorbed liquid.	See chemical name.	T 140000000.00000	GM	1966	1970	N		140000000.	
127-18-4 Tetrachloroethylene	Absorbed liquid.	See chemical name.	T 36000000.000000	GM	1966	1970	N		36000000.0	
None-XOP. Organophosphates	Absorbed liquid.	See chemical name.	Unknown.	GM	1966	1970	N		0.00000000	
4165-60-0 Nitrobenzene	Absorbed liquid.	See chemical name.	Unknown.	GM	1966	1970	N		0.00000000	
1336363 PCB	Absorbed liquid.	See chemical name.	Unknown.	GM	1966	1970	N		0.00000000	
7440-41-7 Beryllium	Solid.	Metal.	Unknown.	GM	1966	1970	N		0.00000000	
None-DEC. Dibutylethylcarbutol	Absorbed liquid.	See chemical name.	Unknown.	GM	1966	1970	N		0.00000000	

* 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)

This data assumes that TRU waste was buried through October of 1970 (Clements letter - Aug. 1980). It also assumes that the carbon tetrachloride numbers are correct since they were obtained from a revision of RFP logbooks. The TCA, TCE, and PCE quantities were calculated as described in the text of the report. These are all volatile organic compounds and therefore the quantities should be assumed to be an upper bound.

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-238	Solid.	Mostly Pu oxide with traces of Pu metal.	T .29008000000000	GM	1966	1970	N			
Pu-239	Solid.	Mostly Pu oxide with traces of Pu metal.	T 2722.8100000000	GM	1966	1970	N			
Pu-240	Solid.	Mostly Pu oxide with traces of Pu metal.	T 166.75000000000	GM	1966	1970	N			
Pu-241	Solid.	Mostly Pu oxide with traces of Pu metal.	T 9.8600000000000	GM	1966	1970	N			
Pu-242	Solid.	Mostly Pu oxide with traces of Pu metal.	T .58000000000000	GM	1966	1970	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)

The Clements 1982 report was used to estimate the total quantity of Pu-52. It was estimated at 0.3 grams per drum.

PART E - SOURCES OF INFORMATION AND UNCERTAINTIES - RFO-DOW-15H

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

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

2. Details concerning source (names, report no., dates, etc.)
WM-F1-82-021, Clements 1982 Chem Risk 1992 tasks 3+4, Arendholz and Knight 1991b; T.L. Clements letter 1980 to J.D. McKinney "Buried Waste Characterization". TCL-47-80, Aug. 25, 1980.

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
[ ] yes

6. If yes, explain why:
N/A.

7. Major unknowns in inventories of contaminants:
Amounts of 1,1,1 trichloroethane (TCA), trichloroethylene (TCE) and tetrachloroethylene (PCE) in this waste stream.

8. Key assumptions used to deal with the unknowns:
Calculated the average amount of "other organics" per drum for this waste. Then assumed that 45% was TCA, 45% TCE, and 10% PCE. These ratios came from the amounts of these organics listed in the 1974 RFP inventory in the Chem Risk 1992 report.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 228

1. Preparer: Kudera, Don

2. Date prepared: 01/21/94

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

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

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

6. Waste stream:
Depleted uranium.

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

8. Actual years disposed of at SDA:
Starting year 1954 Ending year 1972

9. Waste stream volume:
Amount _____ Units Unknown.
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. Buildings 881 and 883.

1. General physical form (see attached list)

[X] other (specify)
Miscellaneous scrap.

2. Details on physical form(particularly confinement related)
Dry solid, however details on the waste form are unknown. It is expected that they would be mostly combustibles, metals, glass, sludges, etc.

3. Chemical form:
Mostly U oxides. Maybe some metals, but small pieces of metal should have oxidized.

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

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

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.					1954	1972	N		0.00000000	

* 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-234	Unknown.	Oxide and metal.	T 2430.0000000000	GM	1954	1972	N			
U-235	Unknown.	Oxide and metal.	T 522000.00000000	GM	1954	1972	N			
U-236	Unknown.	Oxide and metal.	T 14600.000000000	GM	1954	1972	N			
U-238	Unknown.	Oxide and metal.	T 242000000.00000	GM	1954	1972	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)

The isotopic composition of the depleted uranium is assumed to be described by material type U-12.

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.)
RWMIS used for 1971 and 1972. Lee to Soule letter used for 1954 to 1970.

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

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:
Hazardous materials are unknown. No details available on the various depleted uranium waste streams.

8. Key assumptions used to deal with the unknowns:
Assume that data on depleted uranium (U-238) in the Lee to Soule letter for 1970 are correct, and that the U-238 data in RWMIS for 1971 and 1972 are correct.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 231

1. Preparer: Kudera, Don

2. Date prepared: 01/11/94

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

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

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

6. Waste stream:
Evaporator salts.

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

8. Actual years disposed of at SDA:
Starting year 1967 Ending year 1972

9. Waste stream volume:
Amount 81077.0000 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. Solar ponds.
7. Drums were marked LLW with "or suspect TRU" handwritten besides LLW.
9. 11,028 drums from 1967 through 1972. Drums disposed in 1971 and 1972 were retrieved from pits 11 and 12 and put on Pad A. This data does not include the waste on Pad A.

1. General physical form (see attached list)
Evaporated salts.
[X] other (specify)
Salts.

2. Details on physical form(particularly confinement related)

3. Chemical form:
Pu and Am nitrates and oxides.

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

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

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
7631-99-4 Sodium Nitrate	Solid.	Salt.	T 900000000.00000	GM	1967	1972	N		1800000000	See comment (a) below.
7757-79-1 Potassium Nitrate	Solid.	Salt.	T 450000000.00000	GM	1967	1972	N		900000000.	See comment (a) below.
10101-89-0 Sodium Phosphate	Solid.	Salt.	T 20000000.000000	GM	1967	1972	N		40000000.0	See comment (a) below.
7647-14-5 Sodium Chloride	Solid.	Salt.	T 40000000.000000	GM	1967	1972	N		80000000.0	See comment (a) below.
7757-82-6 Sodium Sulfate	Solid.	Salt.	T 40000000.000000	GM	1967	1972	N		80000000.0	See comment (a) below.
7447-40-7 Potassium Chloride	Solid.	Salt.	T 20000000.000000	GM	1967	1972	N		40000000.0	See comment (a) below.
7778-77-0 Potassium Phosphate	Solid.	Salt.	T 10000000.000000	GM	1967	1972	N		20000000.0	See comment (a) below.
7778-80-5 Potassium Sulfate	Solid.	Salt.	T 20000000.000000	GM	1967	1972	N		40000000.0	See comment (a) below.
10588-01-9 Sodium Dichromate	Solid.	$Na_2Cr_2O_7$.	T 1000000.0000000	GM	1967	1972	N		2000000.00	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. This data assumes that the drums contained 300 pounds of salt that contains 30% potassium nitrate, 60% sodium nitrate and 10% miscellaneous compounds. An analysis of one drum of salts on Pad A, that is detailed in the Pad A RI/FS report showed small amounts of chloride sulfate, phosphate, and chromium. Since this data was only three samples from one drum, it was not considered representative of all the drums. Therefore, it is considered that there is no sample analysis. The 10% miscellaneous was assumed to consist of 4% chlorides, 4% sulfates and 2% phosphates.

b. It was assumed that the evaporator salts contain 400 mg of chromium per kilogram of salt as determined in the analysis of one drum from Pad A. Because of a slightly alkaline pH (9-10) and a high nitrate content, it is assumed that the chromium is present as sodium and potassium dichromates ($Na_2Cr_2O_7$ and $K_2Cr_2O_7$).

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
7778-50-9 Potassium Dichromate	Solid.	K2Cr2O7.	T 570000.00000000	GM	1967	1972	N		1140000.00	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. This data assumes that the drums contained 300 pounds of salt that contains 30% potassium nitrate, 60% sodium nitrate and 10% miscellaneous compounds. An analysis of one drum of salts on Pad A, that is detailed in the Pad A RI/FS report showed small amounts of chloride sulfate, phosphate, and chromium. Since this data was only three samples from one drum, it was not considered representative of all the drums. Therefore, it is considered that there is no sample analysis. The 10% miscellaneous was assumed to consist of 4% chlorides, 4% sulfates and 2% phosphates.

b. It was assumed that the evaporator salts contain 400 mg of chromium per kilogram of salt as determined in the analysis of one drum from Pad A. Because of a slightly alkaline pH (9-10) and a high nitrate content, it is assumed that the chromium is present as sodium and potassium dichromates (Na2Cr2O7 and K2Cr2O7).

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-238	Solid.	Nitrates.	T .00080000000000	CI	1967	1972	N			
Pu-239	Solid.	Nitrates.	T 7.0418000000000	CI	1967	1972	N			
Pu-240	Solid.	Nitrates.	T .43130000000000	CI	1967	1972	N			
Pu-241	Solid.	Nitrates.	T .02550000000000	CI	1967	1972	N			
Pu-242	Solid.	Nitrates.	T .00150000000000	CI	1967	1972	N			
Am-241	Solid.	Nitrates.	T 7.5000000000000	CI	1967	1972	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)
Assumed that the salt contains 5 uCi/g of Pu-52 and 5 uCi/g of Am-241 and that there is 300 lbs. of salt per drum, the Clements 1982 Report estimates - 0.1 g of Pu and 0.1 g of Am per drum. This amount would make the salts be TRU waste, not LLW. Samples from the Pad A RI/FS report calculates 0.3 pCi/g and 0.6 pCi/g for Am-241. The preparer used a total of 10 uCi/g because that was the limit for LLW in 1970.

PART E - SOURCES OF INFORMATION AND UNCERTAINTIES - RFO-DOW-17H

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

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

2. Details concerning source (names, report no., dates, etc.)
EG&G-WM-8727, M.J. Vigil, Jan. 1990. TREE-1286, McKinley and McKinney, Aug. 1978. EGG-WM-9967 "RI/FS for Pad A, Operable Unit 7-12, WAG-7"; Vol. 1, V.E. Halford, et al., July 1993.

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
[ ] yes

6. If yes, explain why:
N/A.

7. Major unknowns in inventories of contaminants:

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 - 234

1. Preparer: Kudera, Don

2. Date prepared: 01/21/94

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

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

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

6. Waste stream:
Enriched uranium.

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

8. Actual years disposed of at SDA:
Starting year 1954 Ending year 1972

9. Waste stream volume:
Amount _____ Units Unknown.
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. Buildings 881 and 883.

1. General physical form (see attached list)

[X] other (specify)
Miscellaneous scrap.

2. Details on physical form(particularly confinement related)
Dry solid. However, details on the waste form are unknown. It is expected that it would be mostly combustibles, metals, glass, sludges, etc.

3. Chemical form:
Mostly oxides. Probably some metals, but small pieces of metal should have oxidized.

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

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

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-DEC. Dibutylethylcarbutol	Liquid.	See chemical name.	Unknown.	GM	1954	1972	N		0.00000000	

* 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 ChemRisk 1992 report volumes 3+4 mention that this organic chemical was used for the solvent extraction of enriched uranium. This organic could be a carbitol instead of carbuterol as given in the ChemRisk report.

PART D - RADIOLOGICAL CONTAMINANTS - RFO-DOW-18H HDT - 234

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	Unknown.	Oxide and metal.	T 3600.0000000000	GM	1954	1972	N			
U-235	Unknown.	Oxide and metal.	T 359600.00000000	GM	1954	1972	N			
U-236	Unknown.	Oxide and metal.	T 1300.0000000000	GM	1954	1972	N			
U-238	Unknown.	Oxide and metal.	T 21800.000000000	GM	1954	1972	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)
Since the enriched uranium was 93% enriched, it is assumed that material type U-38 describes the isotopic composition.

PART E - SOURCES OF INFORMATION AND UNCERTAINTIES - RFO-DOW-18H

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

[ ] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [ ] interview
[ ] expert judgment [X] reports
[X] other
Information received from RFO.

2. Details concerning source (names, report no., dates, etc.)
Appendix C of this report furnishes the information received from RFO. ChemRisk 92 report, Volumes 3 and 4 mentioned the dibutylethylcarbutol.

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:
Data obtained from RFO as their latest best estimate of the amount of enriched uranium shipped to the INEL.

7. Major unknowns in inventories of contaminants:
Quantities of dibutylethylcarbutol are unknown. Other hazardous materials in this waste stream are unknown.

8. Key assumptions used to deal with the unknowns:
It is assumed that the latest best estimate from RFO as given in Appendix C is correct.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 233

1. Preparer: Kudera, Don

2. Date prepared: 01/21/94

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

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

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

6. Waste stream:
U-233.

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

8. Actual years disposed of at SDA:
Starting year 1967 Ending year 1967

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

10. Comments (specify number of pertinent question):

1. General physical form (see attached list)
Unknown.
[X] other (specify)
Miscellaneous scrap.

2. Details on physical form(particularly confinement related)
Unknown - only small quantities.

3. Chemical form:
Probably oxides and metal.

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):

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.									0.00000000	

* 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-233	Unknown.	Oxide metal.	T 56.000000000000	GM	1967	1967	N			
U-232	Unknown.	Oxide metal.	T .00056000000000	GM	1967	1967	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)
It is assumed that the U-233 is material type U-72 and therefore contains 10 ppm U-232.

PART E - SOURCES OF INFORMATION AND UNCERTAINTIES - RFO-DOW-19H

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

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

2. Details concerning source (names, report no., dates, etc.)
Lee to Soule letter of 1971.

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:
No details are available on this waste stream.

8. Key assumptions used to deal with the unknowns:
It is assumed that the data on U-233 in the Lee to Soule letter is correct.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 346

1. Preparer: Kudera, Don

2. Date prepared: 12/02/94

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

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

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

6. Waste stream:
Radiation sources from various buildings.

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

8. Actual years disposed of at SDA:
Starting year 1965 Ending year 1970

9. Waste stream volume:
Amount _____ 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):
9. These radiation sources were placed in other drums of RFP waste that were buried in the SDA. Therefore, there is no added volume from this waste.

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

2. Details on physical form(particularly confinement related)
The sources are solids. The Ra/Be neutron sources are present as finely divided powders.

3. Chemical form:
Metal or oxides.

4. Inner packaging: [ ] plastic bag [ ] plastic liner
[ ] metal liner [ ] none [X] other (specify)
Wrapped in lead or in lead container.

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

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
4. The sources were packaged with other waste streams. The lead was used for shielding. Neutron sources also usually have a paraffin wrapping for absorption of neutrons. Because these waste streams are always packaged with other waste steams, the type of inner packaging of the metal barrel is not always available.

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	Solid.	Metal or oxide.	T .00000290000000	GM	1965	1970	N		0.00000580	Professional judgment.
7440-41-7 Beryllium	Fine powder.	Metal or oxide.	T .12000000000000	GM	1965	1968	N		0.12000000	Professional judgment.

* 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)

All radiation sources were wrapped in lead, or in lead containers. The amount of lead for each radiation source is unknown but was estimated (see continuation page). The amount of Be in a Ra/Be source is unknown. If it is assumed that there is four times as much Be as Ra in the source, then there would be (4 x 0.031g) 0.122g of Be total in the Ra/Be sources.

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.	T 174.00000000000	CI	1968	1970	N			Professional judgment.
Cs-137	Solid.	Metal.	T 214.00000000000	CI	1970	1970	N			Professional judgment.
H-3	Solid.	ScH-3.	T .36000000000000	CI	1970	1970	N			Professional judgment.
Ra-226	Fine powder.	Metal.	T .03000000000000	CI	1965	1968	N			Professional judgment.
Ra-226	Solid.	Oxide.	T .16000000000000	CI	1968	1970	N			Professional judgment.

* 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)

This Ra-226 is from Ra/Be neutron sources. Ra-226 in Ra/Be sources equal 0.030 Ci Be x 1.02 g Ra-226/Ci Be equal 0.031 g Ra-226 in Ra/Be sources. The Ra-226 sources listed are present as paint coatings on instruments. It is estimated that 31 sources were buried at the SDA; 9 Co-60 sources, 6 Cs-137 sources, 2 H-3 sources, 12 Ra/Be neutron sources, and 2 Ra-226 sources.

PART E - SOURCES OF INFORMATION AND UNCERTAINTIES - RFO-DOW-20H

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

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

2. Details concerning source (names, report no., dates, etc.)
EDF-RWMC-761, "Rocky Flats Plant Characterization (1954-1980)", T. L. Clements, Jr., G. Roes Darnel, July 11, 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
[ ] yes

6. If yes, explain why:

7. Major unknowns in inventories of contaminants:
The amount of lead used for shielding on each of these sources is unknown.

8. Key assumptions used to deal with the unknowns:
The Ra/Be sources were assumed to contain 1.7E+7 n/sec/Ci according to H. Cember, "Introduction to Health Physics, Table 5.4, page 139, Pergamon Press, Inc. 1976.

Continuation of Part C Column or Question Number or Title Footnote.

The 2.9E+06 grams of lead was determined by assuming that 8" and 4" of lead were needed to shield the Co-60 and Cs-137 sources, respectively. The lead thickness for shielding was derived based on the source term and potential external radiation readings for the source containers. The amount of lead shielding needed for the H-3 and Ra-226 is negligible in comparison, so no value was calculated. This estimate is +/-50% and small when compared to the total lead amount in the SDA.