DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION RDT - 254

1. Preparer: Rhodes, Donald W.

2. Date prepared: 07/01/94

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

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

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

6. Waste stream:
Includes waste produced by the Decontamination and Decommissioning organization at 11 different locations as shown below in 10.

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

8. Actual years disposed of at SDA:
Starting year 1984 Ending year 1993

9. Waste stream volume:
Amount 952.0000 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. Includes waste produced at MTR-605, ARA, ARV, BRX, CFA, CTF, HTR, IET, MTR, PER, and SPT.

1. General physical form (see attached list)
Other scrap metals.
[ ] other (specify)

2. Details on physical form(particularly confinement related)
The total curie content was low (~4 Ci), so no special effort was made to reduce leachability. The waste was generally piping, valves, evaporators, pumps, concrete, electrical fixtures, rags, paper, HEPA filters, mop heads, soil, anti-c clothing and fence materials.

3. Chemical form:
Metal (stainless and carbon steel), cellulose (paper & wood), cast iron, aluminosilicates (soil), and copper wire.

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

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

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
1. Also 41, 43, 47, 11, and 44.
3. The copper was in the form of electrical cable connected to heaters.
4. Some of the material was placed in plastic bags and sometimes the boxes were lined with plastic.
5. Also O, Pb3, and Rd5.

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
1332-21-4 Asbestos	Insulation.	Magnesium silicate.	T 75000.000000000	GM	1984	1993	N			
7440-38-2 Arsenic	Sludge.	Hydrous oxide.	T .50000000000000	GM	1992	1992	N	-50%	+50%	Professional estimate. See continuation page.
7440-43-9 Cadmium	Sludge.	Hydrous oxide.	T .03000000000000	GM	1992	1992	N	-50%	+50%	Professional estimate. See continuation page.
7440-47-3 Chromium	Sludge.	Hydrous oxide.	T 29.000000000000	GM	1992	1992	N	-50%	+50%	Professional estimate. See continuation page.
7439-97-6 Mercury	Sludge.	Hydrous oxide.	T 2.0000000000000	GM	1992	1992	N	-50%	+50%	Professional estimate. See continuation page.
7440-50-8 Copper	Electrical cable.	Metal.	T 22680.000000000	GM	1992	1992		-50%	+100%	Professional estimate. See comment below.
7439-92-1 Lead	Sludge.	Hydrous oxide.	T 4.0000000000000	GM	1992	1992	N	-50%	+50%	Professional estimate. 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)
Asbestos was disposed of from 3 facilities. One facility reported a total volume of waste of 1024 ft3 of which 35 ft3 (~3%) was reported to be asbestos. The same percentage was assumed to apply to the other two facilities to make a total volume of 64 ft3 asbestos. This volume was converted to grams by, 67 ft3 X 16 lb/ft3 X 0.15 asbestos X 464 g/lb = 7.5E+04 g. The remainder is magnesia and magnesium carbonate. For information on other chemicals, see last page. Copper is assumed to be no more than 100 lbs. (45,360 g).

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	Contained in SS metal.	Metal.	T 1.7000000000000	CI	1984	1993	N			
Cs-137	Sorbed on metal.	Oxide.	T 1.7000000000000	CI	1984	1993	N			
Sr-90	Sorbed on metal.	Oxide.	T .00560000000000	CI	1984	1993	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)

MAP and MFP values were converted to Co-60 and Cs-137 respectively. This radioactivity was associated with D+D of MTR-605. The Sr-90 value was provided by H.K. Peterson, which value he obtained from log books for the IET.

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

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

2. Details concerning source (names, report no., dates, etc.)
RWMIS printout 1984-93. Nineteen published D+D Reports listed in #8 Continuation Part. Input from H.K. Peterson.

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:
(a) The actual amount of asbestos insulation was not known.
(b) The chemical form of the hazardous chemicals in the sludge was not known.

8. Key assumptions used to deal with the unknowns:
(a) One facility reported the amount of asbestos and the amount of total waste. This ratio was assumed to apply to the other two facilities that reported asbestos.
(b) The chemicals were assumed to be hydrous oxide which would have low solubility and thus could be present as solids.

Continuation of Part C Column or Question Number or Title Information in table

The chemicals listed were contained in sludge from the Waste Holdup Tank at SPERT-IV. The chemical form is not known, but it was assumed that the chemicals were present as hydrous oxides, which would have low solubility, thus the chemicals could be present as solids. The sludge was solidified with Portland cement before disposal to meet the "non-leachable" requirement. Therefore, at disposal, the chemicals may have been in the form of silicates. The concentrations of these chemicals were determined by a chemical analysis. However, the homogeneity of the sludge, the number of samples taken, and the uncertainty of the analysis is not known. A variation of +/- 50% was assumed.

E 2. Moser, C.L., 1986; Final Report - Decontamination and Decommissioning of RALA Off-Gas and Storage Tank, WINCO-1036, Feb. 1986; Schoonen, D.H., 1984; Reactor Vessel Decommissioning Project Final Report, EGG-2298, Sept. 1984; Kaiser, L.L., 1984; Decontamination and Decommissioning MTR-657 Plug Storage Facility, EGG-2286, Jan. 1984; Suckel, R.A., Final Report-Decontamination and Decommissioning of the SPERT-I Seepage Pit at the INEL, EGG-2291, Nov. 1984; Smith, D.L., 1984; Decontamination and Decommissioning of the TAN/TSF-3 Concrete Pad, EGG-2292, April 1984; Smith, D.L., 1985; Decontamination and Decommissioning of the BORAX-V Leach Pond, EGG-2300, Jan. 1985; Smith, D.L. and Scott, J.G., 1984; Final Report - Decontamination and Decommissioning of CPP-601 Process Cells "A,B,C,D,and L", EGG-2304, Sept. 1984; Bradford, J.D., 1984; Final Report - Decommissioning of the SPERT-III Large Leach Pond at the INEL, EGG-2306, EGG-2275, April 1984; Smith, D.L., 1985; Final Report-Decontamination and Decommissioning of the MTR-603 HB-2 Cubicle EGG-2431, Dec. 1985; Stoll, F.E., 1987; Final Report-Decontamination and Decommissioning of the Initial Engine Test Facility and the IET Two-Inch Hot Waste Line. EGG-2468, April 1987; Browder, Lofthouse and Willis, E.L., 1985; Decommissioning of the MTR-605 Process Water Building at the INEL, EGG-2361, Jan. 1985; McCusker,T.K., 1989; Final Report-Decontamination and Decommissioning of Heat Transfer Reactor Experiment Test Assemblies HTRE-2 and HTRE-3, EGG-2575, Sept. 1989; Arave, A.E. and Rodman, G.R., 1992; Final Report of the Decontamination and Decommissioning of the BORAX-V Facility Turbine Building, EGG-2683, Dec. 1992; Evans, T.A. and Perry, E.F., 1993; Final Report of the Remedial Action Taken for the TAN Building 616 Liquid Waste Treatment Facility, EGG-2714, Sept. 1993; Moser, C.L., 1984; Final Report- ICPP-BIF Filter Room Decontamination and Decommissioning, WINCO-1028, Dec. 1984; Moser, C.L., Final Report-CPP-603 Chloride Removal System Decontamination and Decommissioning, WINCO-1124, Feb. 1993; Hansen, C.B., 1993; Final Report for the Decontamination and Decommissioning of the SPERT-IV Waste Holdup Tank Ancillaries, EGG-ER-11000, Sept. 1993; Dolenc, M.R., 1986; Final Report-Decontamination and Decommissioning of the APERT-I Reactor Building at the INEL, EGG-2399, Feb. 1986; Rhoades, W.A., Final Report-Decontamination and Decommissioning of the Auxiliary Reactor Area IV Facility, EGG-2518, March 1988.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION PDT - 283

1. Preparer: Rhodes, Donald W.

2. Date prepared: 07/25/94

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

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

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

6. Waste stream:
This waste stream consists of the material that will be produced by the disassembly and disposal of the ARVFS underground bunker and the NaK (after it is treated) that is stored in the bunker.

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

8. Actual years disposed of at SDA:
Starting year 1995 Ending year 1995

9. Waste stream volume:
Amount 1.0000 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):
6. This bunker is an ARMCO multiplate arch building with a concrete floor about 9 ft. below grade. The entrance is sealed by a semicircular steel plate, which is welded shut. NaK from EBR-I is currently stored in four containers inside the bunker. When the NaK, which is contaminated with radionuclides, is treated for disposal, the bunker materials and the treated NaK will be disposed of at the RWMC.

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

2. Details on physical form(particularly confinement related)
Rubble from destruction of the facility.

3. Chemical form:
Calcium silicate (concrete), steel (carbon and stainless), Pb metal, aluminosilicate (soil), sodium hydroxide, and potassium hydroxide.

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

5. Waste container type (see attached list)
Round drum conserve.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
1. Also 7, 10, and 43.
3. The NaK is to be reacted with water, and the water evaporated to produce sodium and potassium hydroxide solids.

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	Fore cast	Samp les?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Sorbed on waste solids.	Probably oxides.	T 8.9000000000000	CI	1995	1995	Y	N			
Ba-137m	Sorbed on waste solids.	Probably oxides.	T 8.5000000000000	CI	1995	1995	Y	N			
Sr-90	Sorbed on waste solids.	Probably oxides.	T 1.2000000000000	CI	1995	1995	Y	N			
Y-90	Sorbed on waste solids.	Probably oxides.	T 1.2000000000000	CI	1995	1995	Y	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 radionuclides are essentially all in the NaK.

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

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

2. Details concerning source (names, report no., dates, etc.)
Solid Radioactive Waste Forecast, A.L. Luptak, 11/15/93. Report, Final RCRA Interim Status Waste Analysis Plan for ARVFS NaK Storage Facility, June 26, 1990. Conversation with A.L. Luptak.

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:
Unclear whether the radionuclide contaminants were associated with the structure or contained in the NaK, and whether or not the NaK would be disposed of at the RWMC.

8. Key assumptions used to deal with the unknowns:
Verified, that most of the radionuclides are contained in the NaK and that both the treated NaK and the construction materials will be disposed of at the RWMC, in a conversation with A.L. Luptak.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION PDT - 293

1. Preparer: Amaro, C.

2. Date prepared: 07/18/94

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

4. Particular facility: TRA603
(building number - use code from attached list)

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

6. Waste stream:
Construction material, such as soil, concrete and rubble.

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

8. Actual years disposed of at SDA:
Starting year 1994 Ending year 2003

9. Waste stream volume:
Amount 7979.0000 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):
4. Also 604, 605, 610, 611, 657, 626, 630, 635, 706, 710, 711, 712, 730, 607, 612, 636, 641, 651, 758, 885, 642, 643, 644, 645, 647, 648, 654, 663, 752, 655, and 753.

1. General physical form (see attached list)

[X] other (specify)
Soil, concrete and rubble.

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)
Bale.

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
5. Also probably 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	Fore cast	Samp les?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Unknown.	Unknown.	T 5.8860000000000	CI	1994	2003	N	N			
C-14	Unknown.	Unknown.	T 1.0320000000000	CI	1994	2003	N	N			
Co-60	Unknown.	Unknown.	T 47.780000000000	CI	1994	2003	N	N			
Ni-63	Unknown.	Unknown.	T 35.550000000000	CI	1994	2003	N	N			
Sr-90	Unknown.	Unknown.	T .28670000000000	CI	1994	2003	N	N			
Tc-99	Unknown.	Unknown.	T .02217000000000	CI	1994	2003	N	N			
I-129	Unknown.	Unknown.	T .00955600000000	CI	1994	2003	N	N			
Cs-137	Unknown.	Unknown.	T 17.200000000000	CI	1994	2003	N	N			
Ce-144	Unknown.	Unknown.	T 5.5420000000000	CI	1994	2003	N	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	Forecast	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-238	Unknown.	Unknown.	T .00668900000000	CI	1994	2003	N	N			
Pu-239	Unknown.	Unknown.	T .00699600000000	CI	1994	2003	N	N			
Pu-241	Unknown.	Unknown.	T 1.0320000000000	CI	1994	2003	N	N			
Am-241	Unknown.	Unknown.	T .00341700000000	CI	1994	2003	N	N			
Cm-242	Unknown.	Unknown.	T .00741500000000	CI	1994	2003	N	N			
Cm-244	Unknown.	Unknown.	T .00332500000000	CI	1994	2003	N	N			
Eu-152	Unknown.	Unknown.	T .00005898000000	CI	1994	2003	N	N			
Eu-154	Unknown.	Unknown.	T .00020590000000	CI	1994	2003	N	N			
Eu-155	Unknown.	Unknown.	T .81490000000000	CI	1994	2003	N	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	Fore cast	Samp les?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Nb-94	Unknown.	Unknown.	T .00014700000000	CI	1994	2003	N	N			
Ni-59	Unknown.	Unknown.	T .04043000000000	CI	1994	2003	N	N			
Np-237	Unknown.	Unknown.	T .00010620000000	CI	1994	2003	N	N			
Pu-240	Unknown.	Unknown.	T .00116300000000	CI	1994	2003	N	N			
Sb-125	Unknown.	Unknown.	T .95340000000000	CI	1994	2003	N	N			
U-234	Unknown.	Unknown.	T .00017300000000	CI	1994	2003	N	N			
U-235	Unknown.	Unknown.	T .00000386700000	CI	1994	2003	N	N			
U-236	Unknown.	Unknown.	T .00006904000000	CI	1994	2003	N	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
[ ] generator forecasts
[ ] other

2. Details concerning source (names, report no., dates, etc.)
"INEL D+D Long-Range Plan", EGG-WM-10924, October 1993 was used.

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:
Unidentified beta gamma (U-B-G) was unknown.

8. Key assumptions used to deal with the unknowns:
U-B-G was determined by EPR1-NP-5077 for PWRs dry waste. The PWR was chosen because it is similar to the reactor at TRA. The radionuclides chosen were based on a combination of the following: cross section, half-lives, and fission product. The Ci content was determined by averaging the present data (1984-1993) to determine Ci/m3, then multiplying it by the m3 reported in EGG-WM-10924.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION PDT - 294

1. Preparer: Amaro, C.

2. Date prepared: 07/11/94

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

4. Particular facility: TRA603
(building number - use code from attached list)

5. Number of waste stream from this facility:
2P

6. Waste stream:
Metal, such as aluminum, stainless steel, etc.

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

8. Actual years disposed of at SDA:
Starting year 1994 Ending year 2003

9. Waste stream volume:
Amount 2427.0000 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):
4. Also 604, 605, 610, 611, 657, 626, 630, 635, 706, 710, 711, 712, 730, 607, 612, 636, 641, 651, 758, 885, 642, 643, 644, 645, 647, 648, 654, 663, 752, 655, and 753.

1. General physical form (see attached list)
Other scrap metals.
[ ] other (specify)

2. Details on physical form(particularly confinement related)
Metal, such as piping, rods, and various other forms, made from aluminum and stainless steel, etc.

3. Chemical form:
Unknown.

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

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

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
5. Probably also PB3, BXM, BXW, RD5, BLX, BLM and O.

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	Fore cast	Samp les?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Metallic.	Unknown.	T 38.150000000000	CI	1994	2003	N	N			
C-14	Metallic.	Unknown.	T 6.6880000000000	CI	1994	2003	N	N			
Co-60	Metallic.	Unknown.	T 309.60000000000	CI	1994	2003	N	N			
Ni-63	Metallic.	Unknown.	T 230.40000000000	CI	1994	2003	N	N			
Sr-90	Metallic.	Unknown.	T 1.8580000000000	CI	1994	2003	N	N			
Tc-99	Metallic.	Unknown.	T .14370000000000	CI	1994	2003	N	N			
I-129	Metallic.	Unknown.	T .06194000000000	CI	1994	2003	N	N			
Cs-137	Metallic.	Unknown.	T 111.40000000000	CI	1994	2003	N	N			
Ce-144	Metallic.	Unknown.	T 35.920000000000	CI	1994	2003	N	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	Forecast	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-238	Metallic.	Unknown.	T .04335000000000	CI	1994	2003	N	N			
Pu-239	Metallic.	Unknown.	T .04534000000000	CI	1994	2003	N	N			
Pu-241	Metallic.	Unknown.	T 6.6880000000000	CI	1994	2003	N	N			
Am-241	Metallic.	Unknown.	T .02215000000000	CI	1994	2003	N	N			
Cm-242	Metallic.	Unknown.	T .04806000000000	CI	1994	2003	N	N			
Cm-244	Metallic.	Unknown.	T .02155000000000	CI	1994	2003	N	N			
Eu-152	Metallic.	Unknown.	T .00038220000000	CI	1994	2003	N	N			
Eu-154	Metallic.	Unknown.	T .00133400000000	CI	1994	2003	N	N			
Eu-155	Metallic.	Unknown.	T 5.2820000000000	CI	1994	2003	N	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	Forecast	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Nb-94	Metallic.	Unknown.	T .00095260000000	CI	1994	2003	N	N			
Ni-59	Metallic.	Unknown.	T .26210000000000	CI	1994	2003	N	N			
Np-237	Metallic.	Unknown.	T .00068830000000	CI	1994	2003	N	N			
Pu-240	Metallic.	Unknown.	T .00753800000000	CI	1994	2003	N	N			
Sb-125	Metallic.	Unknown.	T 6.1790000000000	CI	1994	2003	N	N			
U-234	Metallic.	Unknown.	T .00112100000000	CI	1994	2003	N	N			
U-235	Metallic.	Unknown.	T .00002506000000	CI	1994	2003	N	N			
U-236	Metallic.	Unknown.	T .00044740000000	CI	1994	2003	N	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 [X] reports
[ ] generator forecasts
[ ] other

2. Details concerning source (names, report no., dates, etc.)
"INEL D+D Long-Range Plan" EGG-WM-10924, October 1993, was used.

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:
Unidentified beta gamma (U-B-G) was unknown. The Ci content was unknown.

8. Key assumptions used to deal with the unknowns:
U-B-G was identified from EPRI NP-5077 for dry active waste for PWRs. PWR was chosen because it is similar to ATR, the reactor at TRA. The radionuclides chosen were based on a combination of the following: cross section, half lives and fission product. The average Ci/m3 was determined over 1984-1993 (present date) then the m3 from EGG-W-10924 was multiplied to determine the Ci content.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION PDT - 295

1. Preparer: Amaro, C.

2. Date prepared: 07/18/94

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

4. Particular facility: TRA603
(building number - use code from attached list)

5. Number of waste stream from this facility:
3P

6. Waste stream:
Non-compactible waste, such as glass and metal.

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

8. Actual years disposed of at SDA:
Starting year 1994 Ending year 2003

9. Waste stream volume:
Amount 54.5000 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):
4. Also 604, 605, 610, 611, 657, 626, 630, 635, 706, 710, 711, 712, 730, 607, 612, 636, 641, 651, 758, 885, 642, 643, 644, 645, 647, 648, 654, 663, 752, 655, and 753.

1. General physical form (see attached list)
Glass.
[X] other (specify)
Metal.

2. Details on physical form(particularly confinement related)
This stream is a combination of non-compactible items, such as glass.

3. Chemical form:
Unknown.

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. Probably also BLM and other 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)

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	Fore cast	Samp les?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Unknown.	Unknown.	T .15020000000000	CI	1994	2003	N	N			
C-14	Unknown.	Unknown.	T .02633000000000	CI	1994	2003	N	N			
Co-60	Unknown.	Unknown.	T 1.2190000000000	CI	1994	2003	N	N			
Ni-63	Unknown.	Unknown.	T .90720000000000	CI	1994	2003	N	N			
Sr-90	Unknown.	Unknown.	T .00731700000000	CI	1994	2003	N	N			
Tc-99	Unknown.	Unknown.	T .00056560000000	CI	1994	2003	N	N			
I-129	Unknown.	Unknown.	T .00024380000000	CI	1994	2003	N	N			
Cs-137	Unknown.	Unknown.	T .43880000000000	CI	1994	2003	N	N			
Ce-144	Unknown.	Unknown.	T .14140000000000	CI	1994	2003	N	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	Fore cast	Samp les?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Pu-238	Unknown.	Unknown.	T .00017070000000	CI	1994	2003	N	N			
Pu-239	Unknown.	Unknown.	T .00017850000000	CI	1994	2003	N	N			
Pu-241	Unknown.	Unknown.	T .02633000000000	CI	1994	2003	N	N			
Am-241	Unknown.	Unknown.	T .00008719000000	CI	1994	2003	N	N			
Cm-242	Unknown.	Unknown.	T .00018920000000	CI	1994	2003	N	N			
Cm-244	Unknown.	Unknown.	T .00008485000000	CI	1994	2003	N	N			
Eu-152	Unknown.	Unknown.	T .00000150500000	CI	1994	2003	N	N			
Eu-154	Unknown.	Unknown.	T .00000525300000	CI	1994	2003	N	N			
Eu-155	Unknown.	Unknown.	T .02079000000000	CI	1994	2003	N	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	Fore cast	Samp les?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Nb-94	Unknown.	Unknown.	T .00000375000000	CI	1994	2003	N	N			
Ni-59	Unknown.	Unknown.	T .00103200000000	CI	1994	2003	N	N			
Np-237	Unknown.	Unknown.	T .00000271000000	CI	1994	2003	N	N			
Pu-240	Unknown.	Unknown.	T .00002968000000	CI	1994	2003	N	N			
Sb-125	Unknown.	Unknown.	T .02433000000000	CI	1994	2003	N	N			
U-234	Unknown.	Unknown.	T .00000441400000	CI	1994	2003	N	N			
U-235	Unknown.	Unknown.	T .00000009870000	CI	1994	2003	N	N			
U-236	Unknown.	Unknown.	T .00000176200000	CI	1994	2003	N	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 [X] reports
[ ] generator forecasts
[ ] other

2. Details concerning source (names, report no., dates, etc.)
"INEL D+D Long-Range Plan," EG&G-WM-10924, October 1993 was used.

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:
Unidentified beta gamma (U-B-G) was unknown. The Ci content was unknown.

8. Key assumptions used to deal with the unknowns:
U-B-G was determined from EPR1 NP-5077 for dry active waste from PWRs. PWR was chosen because it is similar to TRA's reactor. The radionuclides chosen were based on a combination of the following: cross section, half lives, and fission product. The future waste was to determine Ci/m3 then this was multiplied by the m3. The m3 was determined from EG&G-WM-10924.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION PDT - 291

1. Preparer: Rhodes, Donald W.

2. Date prepared: 08/02/94

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

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

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

6. Waste stream:
This waste is primarily soil, sludge or debris resulting from the remediation of contaminated sites.

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

8. Actual years disposed of at SDA:
Starting year 1994 Ending year 1999

9. Waste stream volume:
Amount 255.2000 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. This waste represents waste produced by EG&G ER units and also by MK Ferguson Co.

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

2. Details on physical form(particularly confinement related)
Waste will be placed in plastic lined containers for transport to the RWMC.

3. Chemical form:
Aluminosilicates (soil), cellulose (paper, wood), and plastic.

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):
1. Also 11 and 21.
5. Also BLM, RDC, and PB3.

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	Forecast	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Co-60	Sorbed on waste solids.	Probably oxides.	T .60000000000000	CI	1994	1999	Y	N			
Cs-137	Sorbed on waste solids.	Probably oxides.	T .09000000000000	CI	1994	1999	Y	N			
Ag-108	Sorbed on waste solids.	Probably oxides.	T 1.3000000000000	CI	1994	1999	Y	N			
U-238	Sorbed on waste solids.	Probably oxides.	T .05000000000000	CI	1994	1999	Y	N	-50%	+50%	Professional judgment.
U-234	Sorbed on waste solids.	Probably oxides.	T .08000000000000	CI	1994	1999	Y	N	-50%	+50%	Professional judgment.
Pu-239	Sorbed on waste solids.	Probably oxides.	T .00030000000000	CI	1994	1999	Y	N	-50%	+50%	Professional judgment.
Pu-240	Sorbed on waste solids.	Probably oxides.	T .00030000000000	CI	1994	1999	Y	N	-50%	+50%	Professional judgment.
Am-241	Sorbed on waste solids.	Probably oxides.	T .00400000000000	CI	1994	1999	Y	N	-50%	+50%	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)
Additional curies will be present but the amounts are listed as "unknown" in the waste forecast. However, the amounts are expected to be very low, probably in the picocurie range.

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

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

2. Details concerning source (names, report no., dates, etc.)
Solid Radioactive Waste Forecast submitted Nov. 5, 1993 and prepared by J.J. Ellison, C.M. Hiaring of EG&G, and W. Malone of MK-FIC ERP. Also discussions with C.M. Hiaring and T.J. Meyer.

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:
Uncertain whether the forecasts prepared in Nov. 1993 were still valid.

8. Key assumptions used to deal with the unknowns:
Discussions with C.M. Hiaring and T.J. Meyer revealed that several changes had occurred due to findings that have been made since the report was prepared. Appropriate corrections were made.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION RDT - 285

1. Preparer: M.E.HUTCHISON

2. Date prepared: 07/07/94

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

4. Particular facility: 617
(building number - use code from attached list)

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

6. Waste stream:
Low level compactible and non-compactible waste resulting from operation of the prototype reactors and related activities.

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

8. Actual years disposed of at SDA:
Starting year 1984 Ending year 1993

9. Waste stream volume:
Amount 20662.0000 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. Also includes NRF-601, 630, 631, 633, 636, 616, and 619.

1. General physical form (see attached list)
Combustibles (paper, cloth, wood, etc.)
[X] other (specify)
10.

2. Details on physical form(particularly confinement related)
Most of this material would be in particulate form with the majority being mobile. Some larger objects, such as valves, pipes, etc., would have fixed contamination.

3. Chemical form:
Activated corrosion and wear products.

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:
None.

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

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	Particulate.	Oxide.	T 2.8130000000000	CI	1984	1993	N			
Fe-55	Particulate.	Oxide.	T .63300000000000	CI	1984	1993	N			
Ni-63	Particulate.	Oxide.	T .04920000000000	CI	1984	1993	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 [X] other database
[ ] sample analysis data
[X] operating records [ ] interview
[ ] expert judgment [X] reports
[X] other
NRFEM-RR-1122.

2. Details concerning source (names, report no., dates, etc.)
Letter NRFEM-RR-1122, from R.W. Nieslanik (NRF) to T.H. Smith (EG&G), contained information on the radionuclide distributions in various waste streams. The distribution used here was the same distribution used in the historical (1952-1983) phase of this work. Shipping records from 1984 through 1993 were compared to the RWMIS database and no discrepancies were noted. An internal NRF database was also used to verify data. Historically, the quarterly RWMIS report was verified each quarter by comparison to actual shipping records.

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:

8. Key assumptions used to deal with the unknowns:

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION RDT - 286

1. Preparer: M.E.HUTCHISON

2. Date prepared: 07/07/94

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

4. Particular facility: 617
(building number - use code from attached list)

5. Number of waste stream from this facility:
2R

6. Waste stream:
Lead and asbestos.

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

8. Actual years disposed of at SDA:
Starting year 1984 Ending year 1993

9. Waste stream volume:
Amount 532.0000 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 includes NRF-601, 630, 631, 633, 636, 616, 618, and 619.

1. General physical form (see attached list)
Lead.
[X] other (specify)
47.

2. Details on physical form(particularly confinement related)
Asbestos was loose, friable thermal insulation removed from piping. Lead was radioactively contaminated shielding.

3. Chemical form:
Lead - metal; asbestos - fiber.

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

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

6. Other characteristics of interest:
None.

7. Comments (specify number of pertinent question):
5. Also metal 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
7439-92-1 Lead	Solid metal.	Metal.	T 643000.00000000	GM	1984	1987	N	-10%	+10%	Professional judgment.
1332-21-4 Asbestos	Fiber.	Fiber.	T 577000.00000000	GM	1984	1993	N	-50%	+50%	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)

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.	Oxide.	T .27690000000000	CI	1984	1993	N			
Fe-55	Particulate.	Oxide.	T .06230000000000	CI	1984	1993	N			
Ni-63	Particulate.	Oxide.	T .00480000000000	CI	1984	1993	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)

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

2. Details concerning source (names, report no., dates, etc.)
This information was obtained from shipping records. These records indicated that one drum contained lead shielding and some wooden boxes contained asbestos insulation removed from piping.

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:
Quantities of contaminants were not recorded anywhere. Estimates were made of the likely content of the shipments.

8. Key assumptions used to deal with the unknowns:
Lead: One drum was shipped to RWMC for burial with lead shielding in the drum. The drum was listed as 8 ft3 and the lead content was estimated at 25% of that volume, or 2 ft3 +/- 10%. Density of lead was taken from the Radiological Health Handbook at 11.25gm/cm3.
Asbestos: Some 4x4x8 wooden boxes were noted in the records to contain some asbestos. The asbestos content was estimated to be 25% of the volume, or 530 ft3 +/- 50%. Asbestos density was assumed to be 16lb/ft3 (taken from Table D-1, Appendix D, EGG-WM-10903, June 1994.)

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION RDT - 287

1. Preparer: M.E.HUTCHISON

2. Date prepared: 07/07/94

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

4. Particular facility: 618
(building number - use code from attached list)

5. Number of waste stream from this facility:
4R

6. Waste stream:
Structural components removed from Navy nuclear fuel modules (end boxes, etc.) 1984-1988.

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

8. Actual years disposed of at SDA:
Starting year 1984 Ending year 1988

9. Waste stream volume:
Amount 14207.0000 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):

1. General physical form (see attached list)
Other core,reactor vessel,loop component
[X] other (specify)
Irradiated structural components.

2. Details on physical form(particularly confinement related)
Solid metal parts activated by neutrons in the core. The majority of the activity is immobile.

3. Chemical form:
Metal alloys.

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

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

6. Other characteristics of interest:
None.

7. Comments (specify number of pertinent question):
4. This material, scrap metal cut from Navy fuel bundles, was loaded into a shipping cask insert in the ECF water pits. The insert was then loaded into the shipping cask for transport to the RWMC where the insert was removed from the shipping cask and buried.

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
Ni-63	Solid metal.	Metal alloys.	T 283770.00000000	CI	1984	1988	N	-30%	+10%	Physics calculations.
Co-60	Solid metal.	Metal alloys.	T 185319.00000000	CI	1984	1988	N	-30%	+10%	Physics calculations.
Fe-55	Solid metal.	Metal alloys.	T 92660.000000000	CI	1984	1988	N	-30%	+10%	Physics calculations.
Co-58	Solid metal.	Metal alloys.	T 17374.000000000	CI	1984	1988	N	-30%	+10%	Physics calculations.

* 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)
Radionuclide distribution was taken from NRFE-E-1448, dated February 27, 1989.

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

[ ] RWMIS [ ] other database
[ ] sample analysis data
[X] operating records [ ] interview
[ ] expert judgment [ ] reports
[X] other
NRFE-E-1448, February 27, 1989.

2. Details concerning source (names, report no., dates, etc.)
Letter NRFE-E-1448, from J.A. Bartolomucci to J.N. Davis, summarized the estimated curie content of the waste from this waste stream based on operational records and calculations of neutron activation. Additionally, Bartolomucci reported only those radionuclides that were relatively long-lived and that contributed more than 1% of the total activity. This method of calculating activities based on structural materials and core power history has continued to be used, with refinements. The data available since 1988 are more detailed. Data sheet NRF-618-8R contains a longer list of radionuclides because the data were available and a decision was made to include all those radionuclides amounting to more than one curie, regardless of their half-lives.

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:

8. Key assumptions used to deal with the unknowns:

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION RDT - 288

1. Preparer: M.E.HUTCHISON

2. Date prepared: 07/07/94

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

4. Particular facility: 618
(building number - use code from attached list)

5. Number of waste stream from this facility:
6R

6. Waste stream:
Solidified sludge, resin, waste liquids in vermiculite, and RWDS modules.

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

8. Actual years disposed of at SDA:
Starting year 1984 Ending year 1993

9. Waste stream volume:
Amount 8280.0000 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):

1. General physical form (see attached list)
Sludge.
[X] other (specify)
12, 13, 14.

2. Details on physical form(particularly confinement related)
The sludges were contained in metal tanks, drums, and concrete vaults.

3. Chemical form:
Unknown.

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:
None.

7. Comments (specify number of pertinent question):
5. Also tanks and concrete vaults.

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
Fe-55	Sludge matrix.	Oxide.	T 296.97000000000	CI	1984	1993	N			
Co-60	Sludge matrix.	Oxide.	T 123.82000000000	CI	1984	1993	N			
Ni-63	Sludge matrix.	Oxide.	T 21.540000000000	CI	1984	1993	N			
Co-58	Sludge matrix.	Oxide.	T 17.970000000000	CI	1984	1993	N			
Mn-54	Sludge matrix.	Oxide.	T 7.0500000000000	CI	1984	1993	N			
Cs-137	Sludge matrix.	Oxide.	T 1.9800000000000	CI	1984	1993	N			
Ba-137m	Sludge matrix.	Oxide.	T 1.1700000000000	CI	1984	1993	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 [X] other database
[ ] sample analysis data
[X] operating records [ ] interview
[ ] expert judgment [X] reports
[X] other
NRFEM-ER 1223, July 11, 1994.

2. Details concerning source (names, report no., dates, etc.)
The total curie estimate was obtained from shipping records, NRF internal data base, RWMIS, and calculations in Technical Work Records (TWRs). Radionuclide distribution was taken from the same sources. Compiled in NRFEM-ER-1223, 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)
[X] no
[ ] yes

6. If yes, explain why:

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 RDT - 289

1. Preparer: M.E.HUTCHISON

2. Date prepared: 07/07/94

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

4. Particular facility: 618
(building number - use code from attached list)

5. Number of waste stream from this facility:
7R

6. Waste stream:
Low level compactible and non-compactible waste resulting from work at the ECF water pits and hot cells.

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

8. Actual years disposed of at SDA:
Starting year 1984 Ending year 1993

9. Waste stream volume:
Amount 33131.0000 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):

1. General physical form (see attached list)
Combustibles (paper, cloth, wood, etc.)
[X] other (specify)
6, 10, 41, 42, 43.

2. Details on physical form(particularly confinement related)
Most of this material would be in particulate form with the majority being mobile.

3. Chemical form:
Activated corrosion and wear products.

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:
None.

7. Comments (specify number of pertinent question):
5. Also BXC, BXM, and CC.

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	Particulate.	Oxide.	T 19.103300000000	CI	1984	1993	N			
Fe-55	Particulate.	Oxide.	T 9.5516000000000	CI	1984	1993	N			
Ni-63	Particulate.	Oxide.	T 3.1839000000000	CI	1984	1993	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)
Radionuclide distribution was taken from NRFEM-ER-1223, dated July 11, 1994.

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

[X] RWMIS [X] other database
[ ] sample analysis data
[X] operating records [ ] interview
[ ] expert judgment [X] reports
[X] other
NRFEM-ER-1223, July 11, 1994.

2. Details concerning source (names, report no., dates, etc.)
Letter NRFEM-ER-1223, from R.W. Nieslanik (NRF) to T.H. Smith (EG&G), contained information on the radionuclide distributions in various waste streams. Shipping records from 1984 through 1993 were compared to the RWMIS database and no discrepancies were noted. An internal NRF database was also used to verify data. Historically, the quarterly RWMIS report was verified each quarter by comparison to actual shipping records.

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:

8. Key assumptions used to deal with the unknowns:

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION RDT - 290

1. Preparer: M.E.HUTCHISON

2. Date prepared: 07/07/94

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

4. Particular facility: 618
(building number - use code from attached list)

5. Number of waste stream from this facility:
8R

6. Waste stream:
Structural components removed from Navy nuclear fuel modules (end boxes, etc.) 1989-1993.

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

8. Actual years disposed of at SDA:
Starting year 1989 Ending year 1993

9. Waste stream volume:
Amount 9024.0000 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):

1. General physical form (see attached list)
Other core,reactor vessel,loop component
[X] other (specify)
Irradiated structural components.

2. Details on physical form(particularly confinement related)
Solid metal parts activated by neutrons in the core. The majority of the activity is immobile.

3. Chemical form:
Metal alloys.

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

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

6. Other characteristics of interest:
None.

7. Comments (specify number of pertinent question):
4. This material, scrap metal cut from Navy fuel bundles, was loaded into a shipping cask insert in the ECF water pits. The insert was then loaded into the shipping cask for transport to the RWMC where the insert was removed from the shipping cask and buried.

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
Ni-63	Solid metal.	Metal alloys.	T 188543.00000000	CI	1989	1993	N	-30%	+10%	Professional judgment.
Co-60	Solid metal.	Metal alloys.	T 94924.000000000	CI	1989	1993	N	-30%	+10%	Professional judgment.
Fe-55	Solid metal.	Metal alloys.	T 58134.000000000	CI	1989	1993	N	-30%	+10%	Professional judgment.
Ta-182	Solid metal.	Metal alloys.	T 18042.000000000	CI	1989	1993	N	-30%	+10%	Professional judgment.
Sn-119m	Solid metal.	Metal alloys.	T 8769.0000000000	CI	1989	1993	N	-30%	+10%	Professional judgment.
W-185	Solid metal.	Metal alloys.	T 6384.0000000000	CI	1989	1993	N	-30%	+10%	Professional judgment.
Nb-95	Solid metal.	Metal alloys.	T 3614.0000000000	CI	1989	1993	N	-30%	+10%	Professional judgment.
Hf-181	solid metal.	Metal alloys.	T 3436.0000000000	CI	1989	1993	N	-30%	+10%	Professional judgment.
Co-58	Solid metal.	Metal alloys.	T 3250.0000000000	CI	1989	1993	N	-30%	+10%	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)
Radionuclide distribution was taken from NRF curie estimation calculation records.

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
Hf-175	Solid metal.	Metal alloys.	T 2827.0000000000	CI	1989	1993	N	-30%	+10%	Professional judgment.
Sb-125	solid metal.	Metal alloys.	T 2820.0000000000	CI	1989	1993	N	-30%	+10%	Professional judgment.
Zr-95	Solid metal.	Metal alloys.	T 1943.0000000000	CI	1989	1993	N	-30%	+10%	Professional judgment.
Ni-59	Solid metal.	Metal alloys.	T 1356.0000000000	CI	1989	1993	N	-30%	+10%	Professional judgment.
Mn-54	Solid metal.	Metal alloys.	T 296.00000000000	CI	1989	1993	N	-30%	+10%	Professional judgment.
Cr-51	Solid metal.	Metal alloys.	T 267.00000000000	CI	1989	1993	N	-30%	+10%	Professional judgment.
H-3	Solid metal.	Metal alloys.	T 18.000000000000	CI	1989	1993	N	-30%	+10%	Professional judgment.
C-14	Solid metal.	Metal alloys.	T 10.000000000000	CI	1989	1993	N	-30%	+10%	Professional judgment.
Cs-137	Solid metal.	Metal alloys.	T 5.0000000000000	CI	1989	1993	N	-30%	+10%	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)
Radionuclide distribution was taken from NRF curie estimation calculation records.

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
Ba-137m	Solid metal.	Metal alloys.	T 4.0000000000000	CI	1989	1993	N	-30%	+10%	Professional judgment.
Sn-113	Solid metal.	Metal alloys.	T 2.0000000000000	CI	1989	1993	N	-30%	+10%	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)
Radionuclide distribution was taken from NRF curie estimation calculation records.

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

[X] RWMIS [X] other database
[ ] sample analysis data
[X] operating records [X] interview
[ ] expert judgment [ ] reports
[X] other
NRFEM-ER-1223, July 11, 1994.

2. Details concerning source (names, report no., dates, etc.)
Since 1989, NRF has performed quarterly data verification reviews of the RWMIS database. RWMIS printouts are compared to shipping records and curie estimate summary sheets. The RWMIS database was then corrected each quarter to be consistent with shipping records and curie estimates. The Bartolomucci letter (NRFE-E-1448, February 27, 1989) gave a radionuclide breakdown that included only those radionuclides that were relatively long-lived and which contributed more than 1% of the total activity. This data sheet includes all radionuclides which total more than one curie, regardless of their half-lives. This was done because the data were available and might be of use to those using this report.

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:

8. Key assumptions used to deal with the unknowns:
The radionuclide distribution assumed for this stream was taken from NRF curie estimation calculation records.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION PDT - 322

1. Preparer: Leonard, Patrick

2. Date prepared: 08/11/94

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

4. Particular facility: 618
(building number - use code from attached list)

5. Number of waste stream from this facility:
6P

6. Waste stream:
Solidified sludge, resin, waste liquids in vermiculite, and RWDS modules.

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

8. Actual years disposed of at SDA:
Starting year 1994 Ending year 2003

9. Waste stream volume:
Amount 15044.0000 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):

1. General physical form (see attached list)
Resin.
[X] other (specify)
11, 13, 14.

2. Details on physical form(particularly confinement related)
The resins are contained in metal tanks, drums and concrete vaults. Resins are dried before disposal. Sludges are absorbed in vermiculite before disposal.

3. Chemical form:
Resins.

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:
None.

7. Comments (specify number of pertinent question):
5. Also tanks and concrete vaults.

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	Forecast	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Fe-55	Sludge matrix.	Oxide.	T 1.7800000000000	CI	1994	2003	Y	N	-20%	+20%	Professional judgment.
Co-60	Sludge matrix.	Oxide.	T 1.0300000000000	CI	1994	2003	Y	N	-20%	+20%	Professional judgment.
Ni-63	Sludge matrix.	Oxide.	T .36000000000000	CI	1994	2003	Y	N	-20%	+20%	Professional judgment.
Co-58	Sludge matrix.	Oxide.	T .08000000000000	CI	1994	2003	Y	N	-20%	+20%	Professional judgment.
Mn-54	Sludge matrix.	Oxide.	T .05000000000000	CI	1994	2003	Y	N	-20%	+20%	Professional judgment.
C-14	Sludge matrix.	Oxide.	T .01000000000000	CI	1994	2003	Y	N	-20%	+20%	Professional judgment.
Tc-99	Sludge matrix.	Oxide.	T .00100000000000	CI	1994	2003	Y	N	-20%	+20%	Professional judgment.
I-129	Sludge matrix.	Oxide.	T .00000500000000	CI	1994	2003	Y	N	-20%	+20%	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)
Radionuclide distribution and total activity were taken from NRFRC-RCE-2247.

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

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

2. Details concerning source (names, report no., dates, etc.)
Letter NRFRC-RCE-2247 by J.L. Charter, "Radioactive Waste Forecasts-Naval Reactors Facility", November 15, 1993. This letter contains data on the projected waste anticipated from NRF for the period of 1994-2003.

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:

8. Key assumptions used to deal with the unknowns:

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION PDT - 323

1. Preparer: Leonard, Patrick

2. Date prepared: 08/11/94

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

4. Particular facility: 618
(building number - use code from attached list)

5. Number of waste stream from this facility:
7P

6. Waste stream: •
Low level compactible and noncompactible waste resulting from work at the S5G prototype and at the ECF water pits and hot cells.

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

8. Actual years disposed of at SDA:
Starting year 1994 Ending year 2003

9. Waste stream volume:
Amount 22354.0000 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):

1. General physical form (see attached list)
HEPA filters.
[X] other (specify)
6, 10, 41, 42, 43.

2. Details on physical form(particularly confinement related)
Most of this material would be in particulate form with the majority being mobile.

3. Chemical form:
Activated corrosion and wear products.

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:
None.

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

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	Forecast	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Co-60	Particulate.	Oxide.	T 1.2000000000000	CI	1994	2003	Y	N	-20%	+20%	Professional judgment.
Fe-55	Particulate.	Oxide.	T .60000000000000	CI	1994	2003	Y	N	-20%	+20%	Professional judgment.
Ni-63	Particulate.	Oxide.	T .20000000000000	CI	1994	2003	Y	N	-20%	+20%	Professional judgment.
Cs-137	Particulate.	Oxide.	T .20000000000000	CI	1994	2003	Y	N	-20%	+20%	Professional judgment.
Ba-137m	Particulate.	Oxide.	T .20000000000000	CI	1994	2003	Y	N	-20%	+20%	Professional judgment.
Mn-54	Particulate.	Oxide.	T .10000000000000	CI	1994	2003	Y	N	-20%	+20%	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)
Radionuclide distribution and total activity were taken from NRFRC-RCE-2247.

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

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

2. Details concerning source (names, report no., dates, etc.)
Letter NRFRC-RCE-2247 by J.L. Charter, "Radioactive Waste Forecasts-Naval Reactor Facility", November 15, 1993. This letter contains data on the projected waste anticipated from NRF for the period 1994-2003.

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:

8. Key assumptions used to deal with the unknowns:

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION PDT - 324

1. Preparer: Leonard, Patrick

2. Date prepared: 08/10/94

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

4. Particular facility: 618
(building number - use code from attached list)

5. Number of waste stream from this facility:
8P

6. Waste stream:
Structural components removed from Navy nuclear fuel modules (end boxes, etc.) 1994-2003.

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

8. Actual years disposed of at SDA:
Starting year 1994 Ending year 2003

9. Waste stream volume:
Amount 14900.0000 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):

1. General physical form (see attached list)
Irradiated end boxes.
[X] other (specify)
5.

2. Details on physical form(particularly confinement related)
Solid metal parts activated by neutrons in the core. The majority of the activity is immobile.

3. Chemical form:
Metal alloys.

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

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

6. Other characteristics of interest:
None.

7. Comments (specify number of pertinent question):
4. This material, scrap metal cut from Navy fuel bundles, is loaded into a shipping cask insert in the ECF water pits. The insert is then loaded into the shipping cask for transport to the RWMC where the insert is removed from the shipping cask and buried.

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	Fore cast	Samp les?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Ni-63	Solid metal.	Metal alloys.	T 186833.00000000	CI	1994	2003	Y	N	-30%	+10%	Physics calculations.
Co-60	Solid metal.	Metal alloys.	T 169092.00000000	CI	1994	2003	Y	N	-30%	+10%	Physics calculations.
Fe-55	Solid metal.	Metal alloys.	T 99238.000000000	CI	1994	2003	Y	N	-30%	+10%	Physics calculations.
Ta-182	Solid metal.	Metal alloys.	T 30492.000000000	CI	1994	2003	Y	N	-30%	+10%	Physics calculations.
Nb-95	Solid metal.	Metal alloys.	T 27166.000000000	CI	1994	2003	Y	N	-30%	+10%	Physics calculations.
Co-58	Solid metal.	Metal alloys.	T 13860.000000000	CI	1994	2003	Y	N	-30%	+10%	Physics calculations.
Zr-95	Solid metal.	Metal alloys.	T 12751.000000000	CI	1994	2003	Y	N	-30%	+10%	Physics calculations.
Cr-51	Solid metal.	Metal alloys.	T 6653.0000000000	CI	1994	2003	Y	N	-30%	+10%	Physics calculations.
C-14	Solid metal.	Metal alloys.	T 39.000000000000	CI	1994	2003	Y	N	-30%	+10%	Physics calculations.

* 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)
Radionuclide distribution and total activity were taken from NRFRC-RCE-2247.

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	Fore cast	Samp les?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Solid metal.	Metal alloys.	T 11.000000000000	CI	1994	2003	Y	N	-30%	+10%	Physics calculations.
Sr-90	Solid metal.	Metal alloys.	T .60000000000000	CI	1994	2003	Y	N	-30%	+10%	Physics calculations.
Tc-99	Solid metal.	Metal alloys.	T .01000000000000	CI	1994	2003	Y	N	-30%	+10%	Physics calculations.
I-129	Solid metal.	Metal alloys.	T .00000390000000	CI	1994	2003	Y	N	-30%	+10%	Physics calculations.

* 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)
Radionuclide distribution and total activity were taken from NRFRC-RCE-2247.

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

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

2. Details concerning source (names, report no., dates, etc.)
Letter NRFRC-RCE-2247 by J.L. Charter, "Radioactive Waste Forecasts-Naval Reactor Facility", November 15, 1993. This letter contains data on the projected waste anticipated from NRF for the period of 1994-2003.

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:

8. Key assumptions used to deal with the unknowns:

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION RDT - 255

1. Preparer: Rhodes, Donald W.

2. Date prepared: 02/24/95

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

4. Particular facility: 620
(building number - use code from attached list)

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

6. Waste stream:
Primarily waste associated with cleanup of the facility.

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

8. Actual years disposed of at SDA:
Starting year 1984 Ending year 1992

9. Waste stream volume:
Amount 440.0000 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. Also includes waste from 601 and 632.
8. Most of the radionuclides disposed of were in waste produced in 1984 and 1985 from PBF-620.

1. General physical form (see attached list)
Other scrap metals.
[X] other (specify)
7.

2. Details on physical form(particularly confinement related)
Metal tanks, ion exchange resin in metal container, resin tanks in concrete blocks, glass, paper, plastic, wood and cloth.

3. Chemical form:
Metal (ferrous and non-ferrous) and cellulose (paper and wood).

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

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

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
1. Also 12, 13, 21, 41, 42, 43, and 44.
4. Some materials were placed in plastic bags. Large metal tanks and cut up metal were not contained in anything.
5. Also BLX and O.

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	Concrete resin module with lead shielding.	Metal.	T 2500000.0000000	GM	1985	1985	N	-10%	+10%	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)

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	Contained in SS components.	Metal.	T 9.0800000000000	CI	1984	1984	N			
Cs-137	Absorbed on surfaces.	Oxide.	T 85.850000000000	CI	1984	1984	N			
Sr-90	Absorbed on surfaces.	Oxide.	T 85.850000000000	CI	1984	1984	N			
Cs-134	Absorbed on surfaces.	Oxide.	T 49.000000000000	CI	1985	1985	N			
Ba-140	Absorbed on surfaces.	Oxide.	T .50000000000000	CI	1985	1985	N			
La-140	Absorbed on surfaces.	Oxide.	T .50000000000000	CI	1985	1985	N			
Cs-137	Absorbed on surfaces.	Oxide.	T 318.57000000000	CI	1985	1985	N			
Sr-90	Absorbed on surfaces.	Oxide.	T 1.5700000000000	CI	1985	1985	N			
Co-60	Contained in SS components.	Metal.	T .36000000000000	CI	1985	1985	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)
Radioactivity reported as MAP, was listed as Co-60, and MFP was listed as Cs-137 and Sr-90. Since the contamination had probably been in place for several years, it was assumed that only the longer-lived fission products would remain. The total MFP value was thus divided equally between Cs-137 and Sr-90. Ba-La-140 was divided into 50% Ba-140 and 50% La-140.

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	Absorbed on surfaces.	Oxide.	T .00140000000000	CI	1986	1986	N			
Sr-90	Absorbed on surfaces.	Oxide.	T .00140000000000	CI	1986	1986	N			
Co-60	Contained in SS components.	Metal.	T .00025000000000	CI	1986	1986	N			
Cs-137	Absorbed on surfaces.	Oxide.	T 1.2440000000000	CI	1987	1987	N			
Sr-90	Absorbed on surfaces.	Oxide.	T 1.2440000000000	CI	1987	1987	N			
Co-60	Contained in SS components.	Metal.	T 8.0510000000000	CI	1987	1987	N			
Cs-137	Absorbed on surfaces.	Oxide.	T 1.1530000000000	CI	1988	1988	N			
Sr-90	Absorbed on surfaces.	Oxide.	T 1.1530000000000	CI	1988	1988	N			
Co-60	Contained in SS components.	Metal.	T .96650000000000	CI	1988	1988	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)
Radioactivity reported as MAP, was listed as Co-60, and MFP was listed as Cs-137 and Sr-90. Since the contamination had probably been in place for several years, it was assumed that only the longer-lived fission products would remain. The total MFP value was thus divided equally between Cs-137 and Sr-90. Ba-La-140 was divided into 50% Ba-140 and 50% La-140.

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	Absorbed on surfaces.	Oxide.	T 2.3720000000000	CI	1992	1992	N			
Co-60	Contained in SS components.	Metal.	T .00001000000000	CI	1992	1992	N			
Cs-134	Absorbed on surfaces.	Oxide.	T .04690000000000	CI	1992	1992	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)
Radioactivity reported as MAP, was listed as Co-60, and MFP was listed as Cs-137 and Sr-90. Since the contamination had probably been in place for several years, it was assumed that only the longer-lived fission products would remain. The total MFP value was thus divided equally between Cs-137 and Sr-90. Ba-La-140 was divided into 50% Ba-140 and 50% La-140.

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

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

2. Details concerning source (names, report no., dates, etc.)
RWMIS printout 1984-93. Tech Note data compiled from RWMIS by C.J. Barnard and M.J. Schlafman.

J.D. Wells letter to K.L. Falconer, "Hazardous Materials in the SDA," JDW-02-86, January 15, 1986.

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:
Inadequate description of waste in RWMIS.

8. Key assumptions used to deal with the unknowns:
Used content code from RWMIS to determine waste description.