DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 8

1. Preparer: Jorgensen, Doug

2. Date prepared: 06/02/93

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

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

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

6. Waste stream:
Thirty-nine Co-60 wires sealed in concrete.

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

8. Actual years disposed of at SDA:
Starting year 1963 Ending year 1963

9. Waste stream volume:
Amount 0.1416 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. MFS - Memorial Hospital of Sheridan Co., Sheridan, WY.
9. RWMIS shows 0.1136 m3 but EGG-PR-W-80-027 shows 0.14 m3 and shipping records show 0.1416 m3.

1. General physical form (see attached list)

[X] other (specify)
Co-60 wires sealed in concrete.

2. Details on physical form(particularly confinement related)
Co-60 wires sealed in concrete in a metal drum.

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:

7. Comments (specify number of pertinent question):
One 30-gallon drum.

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

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

* 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	Wires.	Unknown.	Unknown.	CI	1963	1963	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)
Match between RWMIS and PR-W-80-027 sect 2.2.12. Part A, 9 explains a small weight mismatch.

PART E - SOURCES OF INFORMATION AND UNCERTAINTIES - OFF-MHS-1H

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

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

2. Details concerning source (names, report no., dates, etc.)
EGG-PR-W-80-027 Buried waste characterization:
Non-Radiological Hazards Study - Offsite Waste Generators,
Oct. 1980.

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

4. If other than best estimate, explain why:

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

6. If yes, explain why:
One hundred percent match in references except for a slight weight difference.

7. Major unknowns in inventories of contaminants:
None.

8. Key assumptions used to deal with the unknowns:
None.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 9

1. Preparer: Jorgensen, Doug

2. Date prepared: 06/07/93

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

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

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

6. Waste stream:
Aluminum heat exchanger, and waste containing U-235 and U-238.

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

8. Actual years disposed of at SDA:
Starting year 1961 Ending year 1962

9. Waste stream volume:
Amount 164.5500 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. NEC - Nuclear Engineering Co., Pleasanton, CA.
6. The 80 curies in the heat exchanger are not shown on RWMIS. RWMIS shows three shipments in 1961 and one in 1962, however, shipping records show one in 1961 and three in 1962.
7. TRU and LLW are marked on data sheet.
9. RWMIS shows 176.7, but shipping records account for 164.55 m3.

1. General physical form (see attached list)
Combustibles (paper, cloth, wood, etc.).
[X] other (specify)
2, 5, 10, 21, 22, 42.

2. Details on physical form(particularly confinement related)
Sixty-eight fiberboard boxes and 99 each 55-gallon drums. Plus one aluminum heat exchanger of 14.87 m3 containing 80 curies of MFP.

3. Chemical form:
Solid waste contained in boxes. One aluminum heat exchanger.

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:
There are 434.4 gms of U-235 and 1.09 kg of U-238, plus a heat exchanger which contains 80 curies of MFP.

7. Comments (specify number of pertinent question):
5. BXC, O. 99 each BLM, 68 each BXC, one "Other" (heat exchanger). RWMIS shows some wooden boxes but shipping records show all boxes to be fiberboard (BXC).
6. The 80 curies of MFP in the heat exchanger are not shown in RWMIS.

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	Samp les?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Sr-90	Solid.	Unknown.	A .83042000000000	CI	1961	1961	N	-50%	+50%	
Sr-90	Solid.	Unknown.	A 81.373220000000	CI	1962	1962	N	-50%	+50%	
U-235	Solid.	Unknown.	T 434.40000000000	GM	1962	1962	N	-50%	+50%	
U-238	Solid.	Unknown.	T 1090.0000000000	GM	1962	1962	N	-50%	+50%	

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

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

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

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

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

4. If other than best estimate, explain why:

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

6. If yes, explain why:
The 80 curies of MFP were not listed in RWMIS.

7. Major unknowns in inventories of contaminants:
No information indicating hazardous chemical substances.

8. Key assumptions used to deal with the unknowns:
Based on shipping records describing MFP as Sr-90, assume all MFP is Sr-90. No G-M correction is needed to the best estimate. The waste stream curie content and specific radionuclides were determined by means of the generator's analytical methods prior to shipping. Upper and lower bounds are estimated based on waste expert's judgment.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 10

1. Preparer: Jorgensen, Doug

2. Date prepared: 06/08/93

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

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

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

6. Waste stream:
Biological waste.

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

8. Actual years disposed of at SDA:
Starting year 1961 Ending year 1961

9. Waste stream volume:
Amount 3.9640 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. NMR - University of California, Lab. of Nuclear Med. and Rad. Biol., Los Angeles, CA.
6. MFP from plant uptake studies. Also, various isotopes used in biological biochemistry, radiation effects and toxicology. All contributed to the stream.
9. Weight of containers/waste (total) is 4.536E+06 grams.

1. General physical form (see attached list)
Biological waste.
[X] other (specify)
41.

2. Details on physical form(particularly confinement related)
Waste was mixed with cement and placed in drums.

3. Chemical form:
Only small or trace amounts contained in ashes.

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:
Waste is contained in cement matrix in metal drums.

7. Comments (specify number of pertinent question):
5. Thirteen BLMs were prepared for sea disposal (voids filled). The remaining six drums were not completely void free but were filled and capped with cement.

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
7439-95-4 Magnesium	Unknown.	Unknown.	Unknown.	GM	1961	1961				See comment below.
7439-96-5 Manganese	Unknown.	Unknown.	Unknown.	GM	1961	1961				See comment below.
7631-99-4 Sodium Nitrate	Unknown.	Unknown.	Unknown.	GM	1961	1961				See comment below.
120-12-7 Anthracene	Unknown.	Unknown.	T 200.00000000000	GM	1961	1961				See comment below.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
Quantity disposed, for all hazardous chemicals listed, except anthracene, is in trace amounts.

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

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samp les?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Surface contamination and biological uptake.	Unknown.	Unknown.	CI	1961	1961	N	-50%	+50%	
Sr-90	Surface contamination and biological uptake.	Unknown.	T .01979000000000	CI	1961	1961	N	-50%	+50%	
H-3	Surface contamination and biological uptake.	Unknown.	T .00020000000000	CI	1961	1961	N	-50%	+50%	
C-14	Surface contamination and biological uptake.	Unknown.	Unknown.	CI	1961	1961	N	-50%	+50%	
P-32	Surface contamination and biological uptake.	Unknown.	Unknown.	CI	1961	1961	N	-50%	+50%	
Fe-59	Surface contamination and biological uptake.	Unknown.	Unknown.	CI	1961	1961	N	-50%	+50%	
Ca-45	Surface contamination and biological uptake.	Unknown.	Unknown.	CI	1961	1961	N	-50%	+50%	
Zn-65	Surface contamination and biological uptake.	Unknown.	Unknown.	CI	1961	1961	N	-50%	+50%	
I-131	Surface contamination and biological uptake.	Unknown.	Unknown.	CI	1961	1961	N	-50%	+50%	

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
All isotopes, except for Sr-90, H-3 and Co-60, listed as trace amounts. Sr-90 determined to be the primary MFP based on process/type of wastes in stream.

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

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Sr-89	Surface contamination and biological uptake.	Unknown.	Unknown.	CI	1961	1961	N	-50%	+50%	
Ce-144	Surface contamination and biological uptake.	Unknown.	Unknown.	CI	1961	1961	N	-50%	+50%	
Y-91	Surface contamination and biological uptake.	Unknown.	Unknown.	CI	1961	1961	N	-50%	+50%	
Co-60	Surface contamination and biological uptake.	Unknown.	T .00001000000000	CI	1961	1961	N	-50%	+50%	

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

Additional information or explanations (indicate pertinent contaminant)

All isotopes, except for Sr-90, H-3 and Co-60, listed as trace amounts. Sr-90 determined to be the primary MFP based on process/type of wastes in stream.

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

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

2. Details concerning source (names, report no., dates, etc.)
Report EGG-PR-W-80-027.

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:
Good correlation between RWMIS and Report EGG-PR-W-80-027.

7. Major unknowns in inventories of contaminants:
Disposal volume of hazardous chemicals.

8. Key assumptions used to deal with the unknowns:
That small or trace amounts are considered to be unmeasurable. No G-M correction is needed to the best estimate. The waste stream curie content and specific radionuclides were determined by means of the generator's analytical methods prior to shipping. Upper and lower bounds are estimated based on waste expert's judgment.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 11

1. Preparer: Jorgensen, Doug

2. Date prepared: 06/08/93

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

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

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

6. Waste stream:
Control rods.

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

8. Actual years disposed of at SDA:
Starting year 1963 Ending year 1963

9. Waste stream volume:
Amount 0.1700 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. NPF - Nuclear Power Field Office, Ft. Belvoir, VA. Five control rods from the SM-1 reactor container in an insert. These rods have Boron-10 dispersed in iron clad with 304 stainless steel.
9. 0.283 m3 per RWMIS, but 0.17 m3 per shipping records.

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

2. Details on physical form(particularly confinement related)
Boron carbide (B4C) dispersed in iron and clad in type 304 stainless steel. Five of these control rods are contained in an insert.

3. Chemical form:
Boron carbide (B4C) dispersed in iron and clad with type 304 stainless steel.

4. Inner packaging: [ ] plastic bag [ ] 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):

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	Steel alloy.	Unknown.	T 1080.0000000000	CI	1963	1963	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
[X] other
Shipping record.

2. Details concerning source (names, report no., dates, etc.)
Shipping record NPFO-64-1.

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

4. If other than best estimate, explain why:

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

6. If yes, explain why:
Volumes are different. Activity levels are identical.

7. Major unknowns in inventories of contaminants:
None.

8. Key assumptions used to deal with the unknowns:
None.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 12

1. Preparer: Jorgensen, Doug

2. Date prepared: 06/08/93

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

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

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

6. Waste stream:
Paper graphite clothing, steel copper crucibles and acid carboy.

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

8. Actual years disposed of at SDA:
Starting year 1961 Ending year 1961

9. Waste stream volume:
Amount 7.3300 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. OMC - Oregon Metallurgical Corp., Albany, OR.
9. Was contained in nineteen each 208 L drums and one wooden crate. Total weight per RWMIS is 2.51E+06 grams. Volume per RWMIS is 7.324. Volume per report is 7.33 m3.

1. General physical form (see attached list)
Other scrap metals.
[X] other (specify)
16, 21.

2. Details on physical form(particularly confinement related)
Wooden crate contained steel copper crucibles and an empty acid carboy. Drums contained paper graphite clothing and metal scrap. Drums contaminated with uranium.

3. Chemical form:
N/A.

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:
Wastes contaminated with uranium.

7. Comments (specify number of pertinent question):
5. Nineteen BLMs and 1 BXW.

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

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

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

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

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Loose contamination.	Unknown.	T .00100000000000	CI	1961	1961	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
Cs-137 used for MFP based on shipping records describing type of contamination. A negligible amount of uranium is probable in shipment based on reports.

PART E - SOURCES OF INFORMATION AND UNCERTAINTIES - OFF-OMC-1H

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

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

2. Details concerning source (names, report no., dates, etc.)
EGG-PR-W-80 027.

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

4. If other than best estimate, explain why:

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

6. If yes, explain why:
RWMIS more complete. Report does not show weight or activities.

7. Major unknowns in inventories of contaminants:
None.

8. Key assumptions used to deal with the unknowns:
Assume MFP is Cs-137.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 66

1. Preparer: Jorgensen, Doug

2. Date prepared: 06/08/93

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

4. Particular facility: PM1
(building number - use code from attached list)

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

6. Waste stream:
Resin storage tank, cement and empty tank.

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

8. Actual years disposed of at SDA:
Starting year 1969 Ending year 1969

9. Waste stream volume:
Amount 49.9000 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. PM1 - PM1 Nuclear Power Plant, Sundance AFS, Sundance, WY.
6. Each 454 liter drum contains a 208 L drum. The annulus between drums is filled with concrete.
9. Calculated value 48.1, but RWMIS shows 49.9.

1. General physical form (see attached list)
Other scrap metals.
[X] other (specify)
12, 41.

2. Details on physical form(particularly confinement related)
Six 208 L drums containing resin. The 208 L drums are packed inside 454 L drums with concrete between the drums.

3. Chemical form:
Magnesia 85 cement, mixed with resin in 208 liter drum.

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

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

6. Other characteristics of interest:
Tank is empty.

7. Comments (specify number of pertinent question):
4. Resin/cement contained in 208 L drum. Two hudred-eight liter drum surrounded by concrete inside 454 liter drum.
5. "Other". Six each BLM and 1 each 45,420 L tank.

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)
No means to determine chemical constituents of resin.

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

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Co-60	Solid.	Unknown.	T 16.600000000000	CI	1969	1969	N			
Sr-90	Solid.	Unknown.	T 16.600000000000	CI	1969	1969	N			
Cs-137	Solid.	Unknown.	T 16.700000000000	CI	1969	1969	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
UN-ID-B&G equals 1/3 Co-60, 1/3 Sr-90, and 1/3 Cs-137; based on best guess estimate.

PART E - SOURCES OF INFORMATION AND UNCERTAINTIES - OFF-PM1-1H

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

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

2. Details concerning source (names, report no., dates, etc.)
EGG-PR-W-80-027 Sect 2.2.17.

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

4. If other than best estimate, explain why:

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

6. If yes, explain why:
RWMIS shows 49.9 m3 volume but report shows 4.81 m3 volume.

7. Major unknowns in inventories of contaminants:
Isotope makeup of UN-ID-B&G.

8. Key assumptions used to deal with the unknowns:
Assumed UN-ID-B&G to be 1/3 Co-60, 1/3 Sr-90, and 1/3 Cs-137. G-M correction is needed to the best estimate. The waste stream inventory was identified by the generator as MFP, G-M method was used by generator to estimate total curie content.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 13

1. Preparer: Jorgensen, Doug

2. Date prepared: 06/09/93

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

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

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

6. Waste stream:
Missile structural components, jet engine parts, fragments of fuel tanks, paper and ash.

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

8. Actual years disposed of at SDA:
Starting year 1961 Ending year 1961

9. Waste stream volume:
Amount 25.1400 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. SAM - SAMMA, Kelly Air Force Base, TX. BOMARC missile cleanup. Missile debris, ash and sand. (10.79 m3) in two jet engine cans and 69 steel drums containing scrap metal, paper, ash and dirt (14.35 m3).
6. Missile debris consists of magnesium-thorium structural components, aluminum electronic guidance components, ram jet engine parts and fragments of stainless steel fuel tanks. Some plutonium.

1. General physical form (see attached list)
Other scrap metals.
[X] other (specify)
17, 43, 46.

2. Details on physical form(particularly confinement related)
Loose debris in two jet engine containers and 69 drums.

3. Chemical form:
Magnesium/thorium structural components.
Some plutonium. All solid.

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:
Maybe some water.

7. Comments (specify number of pertinent question):
5. "Other" (2 each) and BLM (69 each).

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
Th-232	Solid.	Unknown.	T .01960000000000	CI	1961	1961	N			
Pu-239	Solid.	Unknown.	T .17640000000000	CI	1961	1961	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
No curie content but readings with PAC-15 vary from 50K to 550K CPM alpha in drums, according to shipping papers. RWMIS shows combined curie content of 0.196 fpr 25.14 m3 volume. That is the combined volume of 69 drums and two engine cans. Assumed RWMIS activity to be divided: 90% Pu-239 and 10% Th-232.

PART E - SOURCES OF INFORMATION AND UNCERTAINTIES - OFF-SAM-1H

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

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

2. Details concerning source (names, report no., dates, etc.)
EGG-PR-W-80-027.

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:
Radiological levels, if any, in two engine cans.

8. Key assumptions used to deal with the unknowns:
Only low level radioactive waste is present.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 23

1. Preparer: Jorgensen, Doug

2. Date prepared: 06/09/93

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

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

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

6. Waste stream:
Reactor shield, miscellaneous metals (magnesium alloy, copper, tin, aluminum, and stainless steel) insulation, rubber, plastic, paper, glass, wire, dirt, wood, concrete, and ash.

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

8. Actual years disposed of at SDA:
Starting year 1960 Ending year 1961

9. Waste stream volume:
Amount 73.1300 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. SAM - SAMMA, Kelly Air Force Base, TX. One reactor shield, 119 each 208L drums. Drums contained various irradiated materials. One drum contained a magnesium alloy with 3% thorium and 1% zinc. One steel box containing various irradiated materials.
6. Irradiated materials consist of: copper, steel, tin, aluminum, stainless steel, insulation, rubber, plastic, paper, glass, wire, dirt, wood, concrete and ashes.

1. General physical form (see attached list)
Other scrap metals.
[X] other (specify)
17, 21, 43, 44, 45 and fiberglass insulation.

2. Details on physical form(particularly confinement related)
All debris contained in 208L drums plus one steel box. The reactor shield was separate.

3. Chemical form:
Magnesium fines possibly present.

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:
The reactor shield contained several filled water tanks.

7. Comments (specify number of pertinent question):
5. BXM and "Other". One hundred-nineteen each BLM, one BXM, and one "Other", a reactor shield weighing 36,000 lbs. (47.3 m3), consisting of stainless steel and lead.

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
7439-95-4 Magnesium	Fines.	Unknown.	Unknown.	GM	1960	1961				
7439-92-1 Lead	Solid.	Metal.	Unknown.	GM	1960	1961				

* 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)

No means to determine volume/quantity of hazardous chemicals in shipment.

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

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Co-60	Unknown.	Unknown.	T .09700000000000	CI	1960	1960	N			
Cs-137	Unknown.	Unknown.	T .09700000000000	CI	1960	1960	N			
Pu-239	Unknown.	Unknown.	T .10000000000000	CI	1961	1961	N			
Cs-137	Unknown.	Unknown.	T .09600000000000	CI	1961	1961	N			

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
MFP equals Cs-137 based on process information.

PART E - SOURCES OF INFORMATION AND UNCERTAINTIES - OFF-SAM-2H

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

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

2. Details concerning source (names, report no., dates, etc.)
EGG-PR-W-80-027.

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:
Specific volume of hazardous chemicals.

8. Key assumptions used to deal with the unknowns:
One hundred-eighteen drums contained uniform amounts. One drum contained magnesium alloy fines.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 14

1. Preparer: Jorgensen, Doug

2. Date prepared: 06/09/93

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

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

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

6. Waste stream:
Radio transmitting and receiving sets, switchboards, tubes, plastic, electric instruments, and cobalt resinate.

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

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

9. Waste stream volume:
Amount 1.8400 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. SSD - Sacramento Signal Depot, Commanding General, Sacramento, CA.

1. General physical form (see attached list)
Radiation sources.
[X] other (specify)
42.

2. Details on physical form(particularly confinement related)
Vacuum tubes and electrical instruments. Cobalt resinate.

3. Chemical form:
One box of solid resinate.

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

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

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):

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

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

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

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

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Co-60	Resinate.	Unknown.	T .00200000000000	CI	1960	1960	N			

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

PART E - SOURCES OF INFORMATION AND UNCERTAINTIES - OFF-SSD-1H

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

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

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

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

4. If other than best estimate, explain why:

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

6. If yes, explain why:

7. Major unknowns in inventories of contaminants:
Isotope of cobalt.

8. Key assumptions used to deal with the unknowns:

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 15

1. Preparer: Jorgensen, Doug

2. Date prepared: 06/09/93

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

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

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

6. Waste stream:
Rags, wipes, tape, concrete, graphite and solvent.

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

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

9. Waste stream volume:
Amount 2.1200 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. TCC - Thiokol Chemical Corp., Brigham City, UT. Cleanup waste from an incident involving a Co-60 radiographic camera.

1. General physical form (see attached list)
Combustibles (paper, cloth, wood, etc.).
[X] other (specify)
16, 41.

2. Details on physical form(particularly confinement related)
Items contained in wooden box.

3. Chemical form:
Small amount of solvent on paper wipes.

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

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

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):

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

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

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

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

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Co-60	Surface contamination.	Unknown.	T .00100000000000	CI	1960	1960	N			

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

PART E - SOURCES OF INFORMATION AND UNCERTAINTIES - OFF-TCC-1H

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

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

2. Details concerning source (names, report no., dates, etc.)
EGG-PR-W-80-027.

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:
Solvent volume and type unknown. Stated as "small amount" in reports.

8. Key assumptions used to deal with the unknowns:
Minimal to no remaining volume involved.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 16

1. Preparer: Jorgensen, Doug

2. Date prepared: 06/09/93

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

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

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

6. Waste stream:
Radioactive tube waste packed in cement.

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

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

9. Waste stream volume:
Amount 1.8400 Units Cubic meters.
Check box: [ ] annual or [ ] total over all years
Check box: [X] container volume or [ ] waste volume

10. Comments (specify number of pertinent question):
4. UAC - U.S. Army Chemical Center, Maryland.
9. Weight is 6.278E+05 grams. RWMIS shows 1.037, but shipping records show 1.84 m3.

1. General physical form (see attached list)
Radiation sources.
[X] other (specify)
41.

2. Details on physical form(particularly confinement related)
Contained in a BLM.

3. Chemical form:
Solid tubes in cement.

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

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

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):

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

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

* 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
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)

PART E - SOURCES OF INFORMATION AND UNCERTAINTIES - OFF-UAC-1H

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

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

2. Details concerning source (names, report no., dates, etc.)
Shipping records CC-61-1 (dl).

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

4. If other than best estimate, explain why:

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

6. If yes, explain why:
RWMIS shows 1.037 m3, but shipping papers show 1.84 m3.

7. Major unknowns in inventories of contaminants:
What isotopes, if any, are involved.
Shipping papers and RWMIS indicate no radioactivity measured.

8. Key assumptions used to deal with the unknowns:
Very little, if any radioactivity, and is well contained in cement in drums.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 67

1. Preparer: Jorgensen, Doug

2. Date prepared: 06/09/93

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

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

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

6. Waste stream:
Ore processing wastes (includes rare earth elements, U3O8, Fe-2O3, ThO2, uranium chlorides, and iron oxides).

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

8. Actual years disposed of at SDA:
Starting year 1961 Ending year 1963

9. Waste stream volume:
Amount 22.9800 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. UBM - U.S. Bureau of Mines, Albany, OR.
6. Additional wastes include thorium, thorium oxide and chlorinated residuals from another process. Additionally, wastes from radioactive tracer consists of bench top filter paper, metal chlorides (probably FeCl2) and a small jar of waste oxides containing Y-91. Furnace wastes contain fines and turnings, some of which may be oxides or pyrophoric metal in two 208 L drums. Various process hardware (blower, filters, tank and a vacuum cleaner).
9. RWMIS shows 22.98 m3. Shipping records show at least 19.19 m3, but how much more is not known.

1. General physical form (see attached list)
Reactive metals.
[X] other (specify)
6, 10, 11, 16, 21, 23, 41, 42.

2. Details on physical form(particularly confinement related)
Most is solid, although there may be some liquids. All boxes are sealed, taped, and painted. All barrels are sealed.

3. Chemical form:
Thorium and uranium oxides; thorium chloride and thorium oxalate. Depleted uranium oxide and alloy; YO2; thorium and uranium carbide; uranium chloride.

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

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

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
5. BLM. Shipping records show 31 BXW and 8 BLM - RWMIS shows 28 BXW and 6 BLM.

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
Th-232	Solid.	Oxide.	T .31420000000000	CI	1961	1963	N	-50%	+50%	
Y-91	Solid.	Oxide.	T .31420000000000	CI	1961	1962	N	-50%	+50%	
Cl-36	Solid.	Unknown.	T .31420000000000	CI	1961	1962	N	-50%	+50%	
U-238	Solid.	Alloy.	T .21994000000000	CI	1961	1961	N	-50%	+50%	
C-14	Solid.	Unknown.	T .31420000000000	CI	1961	1962	N	-50%	+50%	
Th-232	Solid.	Chloride.	T .31420000000000	CI	1961	1963	N	-50%	+50%	
Th-232	Solid.	Oxalate.	T .31420000000000	CI	1961	1961	N	-50%	+50%	
Th-232	Solid.	Carbide.	T .31420000000000	CI	1962	1962	N	-50%	+50%	
U-238	Solid.	Alloy.	T .08797600000000	CI	1961	1961	N	-50%	+50%	

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

Additional information or explanations (indicate pertinent contaminant)

Per RWMIS. Not all curie contents listed in shipping records. Assumed activity to be equally divided among the constituents.

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

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
U-235	Solid.	Alloy.	T .00628400000000	CI	1961	1961	N	-50%	+50%	
U-235	Solid.	Carbide.	T .00094260000000	CI	1962	1962	N	-50%	+50%	
U-234	Solid.	Carbide.	T .15081600000000	CI	1962	1962	N	-50%	+50%	
U-238	Solid.	Carbide.	T .15385800000000	CI	1962	1962	N	-50%	+50%	

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
Per RWMIS. Not all curie contents listed in shipping records. Assumed activity to be equally divided among the constituents.

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

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

2. Details concerning source (names, report no., dates, etc.)
Report PR-W-80-027, sect 2.2.2
Shipping Records USBM-61-1, 62-1, 62-2, 63-1 & 63-1a.

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

4. If other than best estimate, explain why:

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

6. If yes, explain why:
Volume per RWMIS is 22.98 m3. Volume per shipping records is 19.19 m3. RWMIS shows 6.04E+06 gms, shipping records show 1.65E+06 gms. (Many entries had no weight shown and some with no volume shown.)

7. Major unknowns in inventories of contaminants:
Activity of each isotope.

8. Key assumptions used to deal with the unknowns:
Activity distributed evenly throughout. No G-M correction is needed to the best estimate. The waste stream curie content was determined by the generator's analytical methods prior to shipping. The list of radionuclides that contribute to the total curie content, based on the process, was provided on the shipping records. Upper and lower bounds are estimated based on waste expert's judgment.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 17

1. Preparer: Jorgensen, Doug

2. Date prepared: 06/10/93

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

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

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

6. Waste stream:
Paper, disposable syringes, glass, plastic containers, and animal carcasses.

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

8. Actual years disposed of at SDA:
Starting year 1963 Ending year 1963

9. Waste stream volume:
Amount 0.8300 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. UEA - U.S. Army Edgewood Arsenal, Edgewood Arsenal, Maryland.
9. Six hundred pounds (272.4 kg) total weight per RWMIS. Only four drums were received per shipping records. Volumes agree.

1. General physical form (see attached list)
Combustibles (paper, cloth, wood, etc.).
[X] other (specify)
24, 42, 44.

2. Details on physical form(particularly confinement related)
All waste is solid and contained in plastic bags in 55-gallon steel drums. (Four drums total.)

3. Chemical form:
Solid.

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

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

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):

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

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

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

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

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Solid.	Unknown.	T .02857000000000	CI	1963	1963	N	-50%	+50%	
C-14	Solid.	Unknown.	T .02857000000000	CI	1963	1963	N	-50%	+50%	
P-32	Solid.	Unknown.	T .02857000000000	CI	1963	1963	N	-50%	+50%	
Co-60	Solid.	Unknown.	T .02857000000000	CI	1963	1963	N	-50%	+50%	
Sr-85	Solid.	Unknown.	T .02857000000000	CI	1963	1963	N	-50%	+50%	
Sr-90	Solid.	Unknown.	T .02858000000000	CI	1963	1963	N	-50%	+50%	
I-131	Unknown.	Solid.	T .02857000000000	CI	1963	1963	N	-50%	+50%	

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

Additional information or explanations (indicate pertinent contaminant)

Highest radiation level at outside of drums is 1 mR/hr. Shipping records list a total of 0.20 curies for H-3, C-14, P-32, Co-60, Sr-85, Sr-90, and I-131. Curies averaged over all isotopes listed.

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

[X] RWMIS [ ] other database
[ ] sample analysis data
[ ] operating records [ ] interview
[ ] expert judgment [ ] reports
[X] other
Shipping papers USA-EA-63-1.

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

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

4. If other than best estimate, explain why:

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

6. If yes, explain why:
Shipping records show 20 millicuries. RWMIS shows 20 curies.

7. Major unknowns in inventories of contaminants:
Concentrations of individual isotopes.

8. Key assumptions used to deal with the unknowns:
Uniform activity levels of all drums and contents and averaging of curies reported over several isotopes. No G-M correction is needed to the best estimate. The waste stream curie content was determined by the generator's analytical methods prior to shipping. The list of radionuclides that contribute to the total curie content, based on the process, was provided on the shipping records. Upper and lower bounds are estimated based on waste expert's judgment.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 18

1. Preparer: Jorgensen, Doug

2. Date prepared: 06/10/93

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

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

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

6. Waste stream:
Laboratory waste (paper wood, glassware, empty bottles, etc.), Co-60 sources, Sr-90 sources, and H-3.

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

8. Actual years disposed of at SDA:
Starting year 1963 Ending year 1963

9. Waste stream volume:
Amount 8.0400 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. UNR - U.S. Navel Radiological Defense, San Francisco, CA.
6. Waste is in cardboard boxes in plastic bags inside the concrete block with a concrete cap. May include animal carcasses (rats and mice), blood and feces, scintillation vials, small quantities (1 liter containers) of fuming nitric acid, and titanium H-3 accelerator targets. Nitric acid containers are inside another container with absorbent material (calcium silicate).

1. General physical form (see attached list)
Combustibles (paper, cloth, wood, etc.).
[X] other (specify)
7, 13, 15, 24, 31, 44.

2. Details on physical form(particularly confinement related)
Loose items in BXCs in plastic bags, or in bottles sealed with plaster of paris, inside other container with absorbent.

3. Chemical form:
Liquid fuming nitric acid in bottle in another container with absorbent.

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

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

6. Other characteristics of interest:
Co-60 sources in lead. Sr-90 sources in plaster of paris.

7. Comments (specify number of pertinent question):
5. "Other" equals concrete block.

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
7697-37-2 Nitric Acid	Fuming/liquid in absorbent.	Unknown.	Unknown.	GM	1963	1963	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)
Fuming nitric acid is not confirmed to be in this shipment. No indication of how much lead shielding around sources may be in shipment.

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	Sources.	Unknown.	T 15.300000000000	CI	1963	1963	N	-50%	+50%	
Sr-90	Sources.	Unknown.	T 3.0200000000000	CI	1963	1963	N	-50%	+50%	
H-3	Accelerator targets.	Unknown.	T 10.000000000000	CI	1963	1963	N	-50%	+50%	

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

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

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

2. Details concerning source (names, report no., dates, etc.)
EGG-PR-W-80-027.

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:
Volumes or concentrations of chemical hazards, and whether biological waste was included in waste stream.

8. Key assumptions used to deal with the unknowns:
No G-M correction is needed to the best estimate. The waste stream curie content and specific radionuclides were determined by means of the generator's analytical methods prior to shipping. Upper and lower bounds are estimated based on waste expert's judgment.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 53

1. Preparer: Jorgensen, Doug

2. Date prepared: 06/03/93

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

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

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

6. Waste stream:
Biological waste.

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

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

9. Waste stream volume:
Amount 710.0000 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. UOU - University of Utah.
9. Two shipments received, the first in 12/60 of 338 cu ft. and the second in 9/62 of 372 cu ft.

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

2. Details on physical form(particularly confinement related)
Biological waste. Radioactive excreta and animal carcasses mixed in concrete. Waste in drums, paint cans, and card board boxes.

3. Chemical form:
Biological waste.

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. BXC. Total of 85 55-gallon drums, 10 5-gallon paint cans and 3 cardboard boxes (cardboard boxes contain dry paper waste).

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
50-00-0 Formaldehyde	Animal carcasses and feces.	Unknown.	T 83.200000000000	LB	1960	1962	N	45.4	121	See comment below.

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

Additional information or explanations (indicate pertinent contaminant)

Best estimate of formaldehyde mass contained in embalmed animals for 55-gallon containers only. Best estimate of 3-8 % of total mass. Toluene and nitric acid represents <1% of mass based on reports and understanding of process. Based on this low mass, estimates of these masses will not be determined.

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

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Sr-90	Animal carcasses and feces.	Unknown.	T .00200000000000	CI	1960	1960	N	-50%	+50%	
Sr-90	Animal carcasses and feces.	Unknown.	T .01000000000000	CI	1962	1962	N	-50%	+50%	

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

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

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

2. Details concerning source (names, report no., dates, etc.)
EGG-PR-W-80-027, "Buried Waste Characterization: Nonradiological Hazards Study - Offsite Waste Generators". Direct 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)
[ ] no
[X] yes

6. If yes, explain why:
RWMIS reports total of 0.022 Ci, shipping records specify total of 0.012 Ci. Volume reported in RWMIS does not match shipping records. Shipping records equal 2.011 m3, RWMIS equals 2.752 m3.

7. Major unknowns in inventories of contaminants:
No information on volumes of hazardous materials.

8. Key assumptions used to deal with the unknowns:
Assume understanding of waste-generating process and actual disposal records are better estimate over RWMIS. No G-M correction is needed to the best estimate. The waste stream curie content and specific radionuclides were determined by means of the generator's analytical methods prior to shipping. Upper and lower bounds are estimated based on waste expert's judgment.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 19

1. Preparer: Jorgensen, Doug

2. Date prepared: 06/14/93

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

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

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

6. Waste stream:
Animals, animal tissue, isotopic solutions, evaporated residues, paper, syringes, clothing, laboratory glassware, planchets, benzene, carbon tetrachloride, methyl alcohol and other biomedical waste.

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

8. Actual years disposed of at SDA:
Starting year 1960 Ending year 1963

9. Waste stream volume:
Amount 12.9700 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. UOW - University of Washington, Radiological Safety Division, Seattle, WA.

1. General physical form (see attached list)
Biological waste.
[X] other (specify)
21.

2. Details on physical form(particularly confinement related)
Animal carcasses were wrapped in plastic or butcher paper and placed in drums. Other items were placed in drums.

3. Chemical form:
Minute amounts of isotopic solutions.

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

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

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
2. Tissue experiments conducted may have involved the use of 14C, Diphtheria, Poliovirus and New Castle virus. Although it is not known if this type of waste was in the waste stream, it is believed the waste would have been deactivated prior to disposal.
4. Carcasses were wrapped in plastic or butcher paper. Other items are unknown.

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

Contaminant & CAS Registry Number	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
56-49-5 3-Methylcholanthrene	Unknown.	Unknown.	Unknown.	GM	1960	1963	N			
55914 Diisopropylfluorophosphate	Unknown.	Unknown.	Unknown.	GM	1960	1963	N			
71-43-2 Benzene	Unknown.	Unknown.	Unknown.	GM	1960	1963	N			
56-23-5 Carbon Tetrachloride	Unknown.	Unknown.	Unknown.	GM	1960	1963	N			
67-56-1 Methyl Alcohol	Unknown.	Unknown.	Unknown.	GM	1960	1963	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)
All quantities are unknown.

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

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Unknown.	Unknown.	T .04800000000000	CI	1960	1963	N	-50%	+50%	
C-14	Unknown.	Unknown.	T .04800000000000	CI	1960	1963	N	-50%	+50%	
Cr-51	Unknown.	Unknown.	T .01200000000000	CI	1963	1963	N	-50%	+50%	
Fe-55	Unknown.	Unknown.	T .01200000000000	CI	1963	1963	N	-50%	+50%	
Fe-59	Unknown.	Unknown.	T .01200000000000	CI	1963	1963	N	-50%	+50%	
Co-60	Unknown.	Unknown.	T .55300000000000	CI	1963	1963	N	-50%	+50%	
Zn-65	Unknown.	Unknown.	T .01200000000000	CI	1963	1963	N	-50%	+50%	
Sr-90	Unknown.	Unknown.	T .04800000000000	CI	1960	1963	N	-50%	+50%	
I-131	Unknown.	Unknown.	T .01200000000000	CI	1963	1963	N	-50%	+50%	

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

Additional information or explanations (indicate pertinent contaminant)

MAP equals Co-60 and MFP equals Cs-137 based on process information.

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

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Unknown.	Unknown.	T .53200000000000	CI	1960	1963	N	-50%	+50%	
Pm-147	Unknown.	Unknown.	T .01200000000000	CI	1963	1963	N	-50%	+50%	
Hg-203	Unknown.	Unknown.	T .01200000000000	CI	1963	1963	N	-50%	+50%	

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
MAP equals Co-60 and MFP equals Cs-137 based on process information.

PART E - SOURCES OF INFORMATION AND UNCERTAINTIES - OFF-UOW-1H

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

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

2. Details concerning source (names, report no., dates, etc.)
EGG-PR-W-80-027.

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:
Amounts of chemical hazards are unknown, but minute.

8. Key assumptions used to deal with the unknowns:
Minute amounts are contained in biological tissue samples. MFP/MAP determination. No G-M correction is needed to the best estimate. The waste stream curie content was determined by the generator's analytical methods prior to shipping. The list of radionuclides that contribute to the total curie content, based on the process, was provided on the shipping records. Upper and lower bounds are estimated based on waste expert's judgment.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 20

1. Preparer: Jorgensen, Doug

2. Date prepared: 06/14/93

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

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

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

6. Waste stream:
Resin filled demineralizers.

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

8. Actual years disposed of at SDA:
Starting year 1963 Ending year 1963

9. Waste stream volume:
Amount 0.1400 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. USC - USARAL Support Command and Fort Richardson, Seattle, WA.
9. According to the shipping records, the volume of both buried demineralizers was 0.1 m3 (0.05 each). The shipping casks were not buried but were returned. The RWMIS shows 0.7362 m3.

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

2. Details on physical form(particularly confinement related)
Solid resin inside stainless steel demineralizers. Not immobilized but contained.

3. Chemical form:

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

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

6. Other characteristics of interest:
The containers (2 each) are small stainless steel demineralizers.

7. Comments (specify number of pertinent question):

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

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

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
No means to determine type of solidified resin that was disposed.

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

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samp les?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Co-60	Solid.	Unknown.	T .01670000000000	CI	1963	1963	N	-50%	+50%	
Sr-90	Solid.	Unknown.	T .01670000000000	CI	1963	1963	N	-50%	+50%	
Cs-137	Solid.	Unknown.	T .01670000000000	CI	1963	1963	N	-50%	+50%	

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
25 mCi per demineralizer per shipping records. Assumed chemical NOS to include UN-ID-B&G, which was divided 1/3 Co-60, 1/3 Sr-90 and 1/3 Cs-137.

PART E - SOURCES OF INFORMATION AND UNCERTAINTIES - OFF-USC-1H

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

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

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

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

4. If other than best estimate, explain why:

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

6. If yes, explain why:
Volumes conflict (see A.10).

7. Major unknowns in inventories of contaminants:
What specific chemicals are involved.
Shipping records just say "chemical NOS".

8. Key assumptions used to deal with the unknowns:
Determination of isotopes based on assumptions of typical isotopes found with this type of waste stream. No G-M correction is needed to the best estimate. The waste stream curie content was determined by the generator's analytical methods prior to shipping. The list of radionuclides that contribute to the total curie content, based on the process, was provided on the shipping records. Upper and lower bounds are estimated based on waste expert's judgment.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 21

1. Preparer: Jorgensen, Doug

2. Date prepared: 06/14/93

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

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

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

6. Waste stream:
Animal carcasses, waste paper towels, glassware, tools and similar laboratory items.

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

8. Actual years disposed of at SDA:
Starting year 1960 Ending year 1963

9. Waste stream volume:
Amount 227.5000 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):
9. RWMIS shows 227.5, but shipping records show 154.63.

1. General physical form (see attached list)
Combustibles (paper, cloth, wood, etc.).
[X] other (specify)
15.

2. Details on physical form(particularly confinement related)
The animal carcasses are pickled in formaldehyde inside plastic bags in 55-gallon drums. The lab waste is in double plastic bags in boxes or drums.

3. Chemical form:
Animal carcasses in formaldehyde. Other waste is dry solid.

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

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

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
5. BLM (18 each) and BXC (1488 each).

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
50-00-0 Formaldehyde	Liquid.	Unknown.	T 225.00000000000	LB	1963	1963	N	207	243	Three to 8 % of 495.

* If sample data are available, mark Y in the column titled "Samples?" and provide number of samples in the next column and standard deviation in the next column.
If not, mark N and give the minimum value and maximum value.
Additional information or explanations (indicate pertinent contaminant)
Assumed 5.5 % of volume of carcasses in 9 each 55-gallon drums was formaldehyde.

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

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
Cs-137	Unknown.	Unknown.	T 73.240000000000	CI	1961	1963	N	-50%	+50%	See comment below.
Co-60	Unknown.	Unknown.	T 73.240000000000	CI	1961	1963	N	-50%	+50%	See comment below.
Sr-90	Unknown.	Unknown.	T 44.590000000000	CI	1960	1962	N	-50%	+50%	See comment below.
Po-210	Unknown.	Unknown.	T 51.680000000000	CI	1961	1962	N	-50%	+50%	See comment below.
Ra-226	Unknown.	Unknown.	T 43.340000000000	CI	1961	1962	N	-50%	+50%	See comment below.
Ir-192	Unknown.	Unknown.	T 3.3600000000000	CI	1961	1961	N	-50%	+50%	See comment below.
Ba-137m	Unknown.	Unknown.	T 3.3600000000000	CI	1961	1961		-50%	+50%	See comment below.
Sb-124	Unknown.	Unknown.	T 3.3600000000000	CI	1961	1961	N	-50%	+50%	See comment below.
Tm-170	Unknown.	Unknown.	T 3.3600000000000	CI	1961	1961	N	-50%	+50%	See comment below.

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

Additional information or explanations (indicate pertinent contaminant)

Note: Most values were stated as "less than". This summary removes the "less than" and uses the maximum value. The total shipped is assumed to be half of the maximum value. The C-14 is contained in 9 drums of animal carcasses.

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
Y-90	Unknown.	Unknown.	T 1.2500000000000	CI	1960	1960	N	-50%	+50%	See comment below.
C-14	Unknown.	Unknown.	T .00300000000000	CI	1963	1963	N	-50%	+50%	See comment below.

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

Additional information or explanations (indicate pertinent contaminant)

Note: Most values were stated as "less than". This summary removes the "less than" and uses the maximum value. The total shipped is assumed to be half of the maximum value. The C-14 is contained in 9 drums of animal carcasses.

PART E - SOURCES OF INFORMATION AND UNCERTAINTIES - OFF-USN-1H

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

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

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

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

4. If other than best estimate, explain why:
Used worse case curie values off shipping records.

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

6. If yes, explain why:
RWMIS shows 772 curies, 227.5 m3 for volume and 4.832E+07 grams. Shipping records show 601.5 curies, 154.6 m3 and 1.8E+07 grams.

7. Major unknowns in inventories of contaminants:
Curie content of the various isotopes.
Formaldehyde concentration was unknown.

8. Key assumptions used to deal with the unknowns:
Assumed worst case for radionuclide inventory but still don't know curie content for each isotope. Assumed 3-8% of contents of drum was due to formaldehyde. No G-M correction is needed to the best estimate. The waste stream curie content and specific radionuclides were determined by means of the generator's analytical methods prior to shipping. Upper and lower bounds are estimated based on waste expert's judgment.

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 22

1. Preparer: Jorgensen, Doug

2. Date prepared: 06/14/93

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

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

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

6. Waste stream:
Paper rags, furnace coke, carbon baffles, wax brick refractory and small hand tools.

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

8. Actual years disposed of at SDA:
Starting year 1961 Ending year 1961

9. Waste stream volume:
Amount 4.5300 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. WCC - Wan Chang Corp., Albany, OR.

1. General physical form (see attached list)
Concrete, brick, and asphalt.
[X] other (specify)
16, 44, brick, refractory, wax and furnace coke.

2. Details on physical form(particularly confinement related)
Loose items packed in 114L drums.

3. Chemical form:

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:
All materials contaminated with thorium.

7. Comments (specify number of pertinent question):
5. Forty each 114 liter BLMs.

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
Th-232	Solid.	ThO2.	Unknown.	CI	1961	1961	N			

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

Additional information or explanations (indicate pertinent contaminant)

RWMIS lists MFP but the only radionuclide discussed is thorium. (RWMIS is in error.) Zero curies listed in RWMIS.

PART E - SOURCES OF INFORMATION AND UNCERTAINTIES - OFF-WCC-1H

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

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

2. Details concerning source (names, report no., dates, etc.)
EGG-W-80-027.

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

4. If other than best estimate, explain why:

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

6. If yes, explain why:
RWMIS lists MFP, but records show no MFPs.

7. Major unknowns in inventories of contaminants:
If there are truly no curies in this waste stream.

8. Key assumptions used to deal with the unknowns:

DATA INPUT FOR HISTORICAL DATA TASK FOR RWMC SUBSURFACE DISPOSAL AREA

PART A - GENERAL INFORMATION HDT - 68

1. Preparer: Jorgensen, Doug

2. Date prepared: 06/14/93

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

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

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

6. Waste stream:
Bird, animal and crayfish carcasses. Kim wipes, paper towels, gloves, aluminum and stainless steel plackets.

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

8. Actual years disposed of at SDA:
Starting year 1962 Ending year 1962

9. Waste stream volume:
Amount 2.1500 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. WSU - Washington State University, Pullman, WA.
6. Hazardous materials included small amounts of petroleum ether and ethanol/methanol mixtures, ATP (adenosinetriphospate), dimethyl POPOP (1,4, bis 2,5 phenyloxazolyl benzene), ethanol/toluene and magnesium. Uranium compounds (elemental, oxide and chloride forms) and magnesium oxide were also present.
9. 1.67 per RWMIS, 2.15 calculated from shipping records.

1. General physical form (see attached list)
Biological waste.
[X] other (specify)
13, 14, 21, 42, 44.

2. Details on physical form(particularly confinement related)
Bird and animal carcasses, with a variety of tracers (C-14, Na-22, Cl-36, Ca-45, H-3, P-32, and I-131). Lab waste (paper, kim wipes, gloves, beakers, etc.) UCL4Mg from a metallurgical experiment.

3. Chemical form:
Trace amounts of contaminants in the carcasses and lab waste.

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

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

6. Other characteristics of interest:

7. Comments (specify number of pertinent question):
4. Boxes and plastic bags. Boxes inside a 0.004 inch poly wrap.
5. Eight each BLMs.

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
64175 Ethyl Alcohol	Animal/bird/fish carcasses.	Unknown.	Unknown.	GM	1962	1962	N			See comment below.
67-56-1 Methyl Alcohol	Animal/bird/fish carcasses.	Unknown.	Unknown.	GM	1962	1962	N			
1806-34-4 1,4-Bis(5-Phenyloxazol-2-YL)Be	Animal/bird/fish carcasses.	Unknown.	Unknown.	GM	1962	1962	N			
108-88-3 Toluene	Animal/bird/fish carcasses.	Unknown.	Unknown.	GM	1962	1962	N			

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

Additional information or explanations (indicate pertinent contaminant)

CAS #: 1806-34-4: 1,4 bis 2,5 phenyloxazolyl benzene (Dimethyl POPOP). Total quantity disposed is unknown, but small amounts.

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

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
H-3	Animal carcasses and lab waste.	Unknown.	T .00066670000000	CI	1962	1962	N	-50%	+50%	
C-14	Animal carcasses and lab waste.	Unknown.	T .00066670000000	CI	1962	1962	N	-50%	+50%	
P-32	Animal carcasses and lab waste.	Unknown.	T .00066670000000	CI	1962	1962	N	-50%	+50%	
S-35	Animal carcasses and lab waste.	Unknown.	T .00066670000000	CI	1962	1962	N	-50%	+50%	
Ca-45	Animal carcasses and lab waste.	Unknown.	T .00066670000000	CI	1962	1962	N	-50%	+50%	
Co-60	Animal carcasses and lab waste.	Unknown.	T .00066670000000	CI	1962	1962	N	-50%	+50%	
Zn-65	Animal carcasses and lab waste.	Unknown.	T .00066670000000	CI	1962	1962	N	-50%	+50%	
Sr-85	Animal carcasses and lab waste.	Unknown.	T .00066670000000	CI	1962	1962	N	-50%	+50%	
Rb-86	Animal carcasses and lab waste.	Unknown.	T .00066670000000	CI	1962	1962	N	-50%	+50%	

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

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

Radionuclide	Physical Form	Chemical Form	(A)nnual/(T)otal Quantity	Unit	Begin Year	End Year	Samples?	Minimum Value/#Samp	Maximum Value/STD	Basis for Uncertainty
I-131	Animal carcasses and lab waste.	Unknown.	T .00066670000000	CI	1962	1962	N	-50%	+50%	
Cs-137	Animal carcasses and lab waste.	Unknown.	T .00066670000000	CI	1962	1962	N	-50%	+50%	
Ce-144	Animal carcasses and lab waste.	Unknown.	T .00066670000000	CI	1962	1962	N	-50%	+50%	
Pm-147	Animal carcasses and lab waste.	Unknown.	T .00066670000000	CI	1962	1962	N	-50%	+50%	
Tl-204	Animal carcasses and lab waste.	Unknown.	T .00066670000000	CI	1962	1962	N	-50%	+50%	
U-238	Animal carcasses and lab waste.	Unknown.	T .00066670000000	CI	1962	1962	N	-50%	+50%	

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

PART E - SOURCES OF INFORMATION AND UNCERTAINTIES - OFF-WSU-1H

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

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

2. Details concerning source (names, report no., dates, etc.)
EGG-PR-W-80-027.

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:
Curies of individual isotopes. Volume of hazardous chemical constituents.

8. Key assumptions used to deal with the unknowns:
Assumed uniform distribution. No G-M correction is needed to the best estimate. The waste stream curie content was determined by the generator's analytical methods prior to shipping. The list of radionuclides that contribute to the total curie content, based on the process, was provided on the shipping records. Upper and lower bounds are estimated based on waste expert's judgment.