

ASSESSMENT REPORT

**Generic Design Assessment:
Disposability Assessment for Wastes
and Spent Fuel arising from Operation
of the Westinghouse Advanced Passive
Pressurised Water Reactor (AP1000)
Part 2: Data Sheets and Inventory Tables**

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Nuclear
Decommissioning
Authority

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1 INTRODUCTION

The 2008 White Paper on Nuclear Power [1], together with the preceding consultation [2], established the process of Generic Design Assessment (GDA), whereby industry-preferred designs of new nuclear power stations would be assessed by regulators in a pre-licensing process. Amongst the parties requesting assessment under the GDA process is Westinghouse Electric Company LLC, which is seeking an initial endorsement of the Westinghouse Advanced Passive Pressurised Water Reactor (AP1000) design.

An important aspect of the GDA process is the consideration of the disposability of the higher-activity solid radioactive wastes and spent fuel that would be generated through reactor operation. Consequently, regulators have indicated that requesting parties should obtain and provide a view from the Nuclear Decommissioning Authority (NDA) (as the authoritative source in the UK in providing such advice) on the disposability in a Geological Disposal Facility of any proposed arisings of higher-activity wastes or spent fuel [3].

In accordance with regulatory guidance, Westinghouse has requested that the Radioactive Waste Management Directorate (RWMD) of NDA provide advice on the disposability of the higher-activity wastes and spent fuel expected to arise from the operation of an AP1000. The reported assessment of the disposability of the higher-activity wastes and spent fuel from the AP1000 is based on information on wastes and proposals for waste packaging supplied by Westinghouse, supplemented as necessary by relevant information available to RWMD.

Comprehensive details of the information supplied to RWMD by Westinghouse, measures taken by RWMD to supplement this information, assessment methods and the detailed conclusions of this GDA Disposability Assessment are presented in the Assessment Report for wastes and spent fuel arising from operation of the Westinghouse AP1000. The report is presented in two parts. Part 1 is the Main Report. This document is Part 2, and provides summary data sheets and inventory data for the waste packages.

Section 2 of this document provides data sheets and inventory tables for ILW packages.

Section 3 of this document provides data sheets and inventory tables for spent fuel packages.

2 DATASHEETS FOR ILW PACKAGES

Data summary sheets and package inventory data for the ILW packages proposed by Westinghouse are presented in this section. For each waste package, we present a summary data sheet that provides information on waste package characteristics, and a table providing average and maximum waste package inventory data.

The tables presented are:

- Table 1 and Table 2 present the data sheet and inventory for AP01 (Primary Circuit Filters);
- Table 3 and Table 4 present the data sheet and inventory for AP02 (Primary Resins);
- Table 5 and Table 6 present the data sheet and inventory for AP03 (Secondary Resins);
- Table 7 and Table 8 present the data sheet and inventory for AP04 (ILW Steel);
- Table 9 and Table 10 present the data sheet and inventory for AP05 (Pressure Vessel).

Table 1 AP01 (Primary Circuit Filters) Radionuclide Inventory Data – Summary

		Per Package Values	
		Average	Maximum
Total Activity (TBq)	alpha	3.95E-06	3.95E-05
	beta/gamma	2.02E+00	2.02E+01
Classification (GBq/te)	alpha	1.35E-02	1.35E-01
	beta/gamma	6.87E+03	6.87E+04
A₂ content	A ₂	5.62E+00	5.62E+01
	A ₂ per gram (raw)	1.92E-05	1.92E-04
	A ₂ per gram (conditioned)	1.14E-06	1.14E-05
	LSA criteria	N/A	N/A
Heat output (W)		Average 4.21E-01	Maximum 4.21E+00
Soluble radionuclides (TBq)	Sr90	Average 3.67E-02	Maximum 3.67E-01
	Cs134	5.77E-01	5.77E+00
	Cs137	5.51E-01	5.51E+00
Radiotoxicity (Sv/yr)		1.23E+03	1.23E+04
Lifetime requirement (years)		245	345
Fissile content (g)	U233	Average 4.25E-11	Maximum 4.25E-10
	U235	1.05E-04	1.05E-03
	U238	1.67E-02	1.67E-01
	Pu239	1.29E-04	1.29E-03
	Pu240	3.53E-05	3.53E-04
	Pu241	1.94E-05	1.94E-04
	Pu242	5.06E-06	5.06E-05
	Total Fissile	U233+U235+Pu239+Pu241 2.54E-04	2.54E-03
	Total U	U233+U235+U238 1.68E-02	1.68E-01
	Pu239 eq	U233+0.65U235+(Pu239+Pu241) 2.17E-04	2.17E-03
	U235 enrichment	U235/U-tot 0.63%	0.63%
	Pu239 separation	Pu239/(Pu239+U-tot) 0.76%	0.76%
	Safeguards content (g)		Average
Total Th		Th227+Th228+Th229+Th230+Th232+Th234 0.00E+00	0.00E+00
Total U		U232+U233+U234+U235+U236+U238 1.69E-02	1.69E-01
Total Pu	Pu236+Pu238+Pu239+Pu240+Pu241+Pu242 1.90E-04	1.90E-03	
Dose rates (mSv/hr)		Average	Maximum
	3m from 3 m ³ box	5.77E+00	5.77E+01
	1m from SWTC-070	1.11E+00	1.11E+01
	0m from SWTC-070	1.55E+00	1.55E+01
	1m from SWTC-285	8.52E-05	8.52E-04
	0m from SWTC-285	9.72E-05	9.72E-04

Table 2 AP01 (Primary Circuit Filters) Average and Maximum Package Inventory Data

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package
H3	7.40E-06	6.73E-09	1.85E-07	7.40E-05	6.73E-08	1.85E-06
Be10	2.96E-09	1.20E-10	4.93E-09	2.96E-08	1.20E-09	4.93E-08
C14	4.68E-04	3.71E-06	1.56E-04	4.68E-03	3.71E-05	1.56E-03
Cl36	5.18E-08	2.27E-09	8.63E-08	5.18E-07	2.27E-08	8.63E-07
Ar39	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ar42	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
K40	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ca41	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mn53	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mn54	1.48E-02	1.98E-03	1.48E-02	1.48E-01	1.98E-02	1.48E-01
Fe55	3.63E-02	3.42E-05	9.06E-04	3.63E-01	3.42E-04	9.06E-03
Co60	1.48E-02	6.16E-03	3.70E-02	1.48E-01	6.16E-02	3.70E-01
Ni59	1.32E-05	1.47E-08	0.00E+00	1.32E-04	1.47E-07	0.00E+00
Ni63	4.68E-03	1.28E-05	1.56E-04	4.68E-02	1.28E-04	1.56E-03
Zn65	7.40E-04	7.01E-05	3.70E-04	7.40E-03	7.01E-04	3.70E-03
Se79	9.18E-07	1.50E-08	4.59E-07	9.18E-06	1.50E-07	4.59E-06
Kr81	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr85	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb87	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr90	3.67E-02	6.65E-03	1.22E-01	3.67E-01	6.65E-02	1.22E+00
Zr93	3.67E-06	1.15E-08	0.00E+00	3.67E-05	1.15E-07	0.00E+00
Nb91	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb92	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb93m	2.65E-06	1.29E-08	8.83E-08	2.65E-05	1.29E-07	8.83E-07
Nb94	3.67E-05	1.02E-05	5.25E-05	3.67E-04	1.02E-04	5.25E-04
Mo93	5.51E-05	1.45E-07	2.75E-06	5.51E-04	1.45E-06	2.75E-05
Tc97	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tc99	2.46E-03	3.99E-05	2.74E-03	2.46E-02	3.99E-04	2.74E-02
Ru106	3.67E-01	9.55E-02	1.84E+00	3.67E+00	9.55E-01	1.84E+01

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package
Pd107	3.67E-07	5.47E-10	0.00E+00	3.67E-06	5.47E-09	0.00E+00
Ag108m	4.68E-05	1.27E-05	6.69E-05	4.68E-04	1.27E-04	6.69E-04
Ag110m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd109	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd113m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn119m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn121m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn123	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn126	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb125	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb126	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Te125m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Te127m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
I129	5.51E-05	6.89E-07	0.00E+00	5.51E-04	6.89E-06	0.00E+00
Cs134	5.77E-01	1.58E-01	8.24E-01	5.77E+00	1.58E+00	8.24E+00
Cs135	1.29E-06	1.16E-08	1.29E-06	1.29E-05	1.16E-07	1.29E-05
Cs137	5.51E-01	7.16E-02	9.18E-01	5.51E+00	7.16E-01	9.18E+00
Ba133	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La138	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ce144	3.67E-01	7.97E-02	1.84E+00	3.67E+00	7.97E-01	1.84E+01
Pm145	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm147	3.67E-02	3.65E-04	1.84E-02	3.67E-01	3.65E-03	1.84E-01
Sm147	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sm151	7.35E-05	2.32E-07	7.35E-06	7.35E-04	2.32E-06	7.35E-05
Eu152	1.10E-06	2.25E-07	1.10E-06	1.10E-05	2.25E-06	1.10E-05
Eu154	3.67E-03	8.89E-04	6.12E-03	3.67E-02	8.89E-03	6.12E-02
Eu155	1.84E-03	3.62E-05	6.12E-04	1.84E-02	3.62E-04	6.12E-03
Gd153	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ho163	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ho166m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tm170	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package
Tm171	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lu174	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lu176	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hf178n	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hf182	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pt193	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl204	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pb205	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pb210	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bi208	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bi210m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Po210	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra223	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra225	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra226	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra228	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac227	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Th227	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Th228	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Th229	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Th230	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Th232	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Th234	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pa231	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pa233	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
U232	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
U233	1.52E-14	1.19E-14	2.53E-12	1.52E-13	1.19E-13	2.53E-11
U234	7.65E-10	5.95E-10	1.27E-07	7.65E-09	5.95E-09	1.27E-06
U235	8.40E-12	6.55E-12	0.00E+00	8.40E-11	6.55E-11	0.00E+00
U236	2.40E-10	1.77E-10	4.00E-08	2.40E-09	1.77E-09	4.00E-07
U238	2.07E-10	1.44E-10	0.00E+00	2.07E-09	1.44E-09	0.00E+00
Np237	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package
Pu236	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pu238	7.40E-07	6.63E-07	7.40E-04	7.40E-06	6.63E-06	7.40E-03
Pu239	2.96E-07	2.48E-07	2.96E-04	2.96E-06	2.48E-06	2.96E-03
Pu240	2.96E-07	2.49E-07	2.96E-04	2.96E-06	2.49E-06	2.96E-03
Pu241	7.40E-05	6.36E-08	1.23E-03	7.40E-04	6.36E-07	1.23E-02
Pu242	7.40E-10	5.91E-10	7.40E-07	7.40E-09	5.91E-09	7.40E-06
Am241	1.48E-07	1.34E-07	1.48E-04	1.48E-06	1.34E-06	1.48E-03
Am242m	5.92E-09	2.60E-10	5.92E-06	5.92E-08	2.60E-09	5.92E-05
Am243	2.22E-08	2.09E-08	2.22E-05	2.22E-07	2.09E-07	2.22E-04
Cm242	2.22E-06	2.21E-06	2.22E-04	2.22E-05	2.21E-05	2.22E-03
Cm243	1.48E-09	1.46E-09	1.48E-06	1.48E-08	1.46E-08	1.48E-05
Cm244	2.22E-07	2.10E-07	1.11E-04	2.22E-06	2.10E-06	1.11E-03
Cm245	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cm246	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cm248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cf249	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cf250	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cf251	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cf252	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total	2.02E+00	4.21E-01	5.62E+00	2.02E+01	4.21E+00	5.62E+01

Table 3 AP02 (Primary Resins) Radionuclide Inventory Data – Summary

		Per-package values		
		Average	Maximum	
Total Activity (TBq)	alpha	1.75E-05	4.48E-05	
	beta/gamma	7.30E-01	1.30E+01	
Classification (GBq/te)	alpha	2.77E-02	7.09E-02	
	beta/gamma	1.16E+03	2.06E+04	
A₂ content	A ₂	1.07E+00	2.01E+01	
	A ₂ per gram (raw)	1.70E-06	3.19E-05	
	A ₂ per gram (conditioned)	3.22E-07	6.06E-06	
	LSA criteria	N/A	N/A	
Heat output (W)		Average	Maximum	
		1.16E-01	2.30E+00	
Soluble radionuclides (TBq)		Average	Maximum	
	Sr90	1.04E-02	2.04E-01	
	Cs134	1.49E-01	4.65E+00	
	Cs137	2.25E-01	4.44E+00	
Radiotoxicity (Sv/yr)		3.53E+02	7.53E+03	
Lifetime requirement (years)		215	345	
Fissile content (g)		Average	Maximum	
	U233	1.12E-06	2.86E-06	
	U235	1.18E-02	3.03E-02	
	U238	2.03E+00	5.20E+00	
	Pu239	9.37E-04	2.40E-03	
	Pu240	2.56E-04	6.55E-04	
	Pu241	1.25E-04	3.21E-04	
	Pu242	4.63E-05	1.18E-04	
	Total Fissile	U233+U235+Pu239+Pu241	1.29E-02	3.30E-02
	Total U	U233+U235+U238	2.05E+00	5.23E+00
	Pu239 eq	U233+0.65U235+(Pu239+Pu241)	8.76E-03	2.24E-02
	U235 enrichment	U235/U-tot	0.58%	0.58%
	Pu239 separation	Pu239/(Pu239+U-tot)	0.05%	0.05%
	Safeguards content (g)		Average	Maximum
Total Th		Th227+Th228+Th229+Th230+Th232+Th234	2.13E-05	5.44E-05
Total U		U232+U233+U234+U235+U236+U238	2.06E+00	5.27E+00
Total Pu		Pu236+Pu238+Pu239+Pu240+Pu241+Pu242	1.37E-03	3.51E-03
Dose rates (mSv/hr)		Average	Maximum	
	3m from 3 m ³ drum	2.06E+00	4.06E+01	
	1m from SWTC-070	5.97E-01	9.59E+00	
	0m from SWTC-070	9.82E-01	1.52E+01	

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1m from SWTC-285
0m from SWTC-285

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6.55E-05 5.58E-04
7.78E-05 6.62E-04

Table 4 AP02 (Primary Resins) Average and Maximum Package Inventory Data

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package
H3	1.35E-03	1.23E-06	3.38E-05	3.46E-03	3.15E-06	8.66E-05
Be10	1.04E-05	4.20E-07	1.73E-05	2.66E-05	1.07E-06	4.43E-05
C14	4.65E-04	3.68E-06	1.55E-04	1.19E-03	9.42E-06	3.96E-04
Cl36	1.47E-06	6.45E-08	2.45E-06	3.76E-06	1.65E-07	6.26E-06
Ar39	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ar42	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
K40	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ca41	2.96E-09	1.52E-12	0.00E+00	7.58E-09	3.89E-12	0.00E+00
Mn53	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mn54	5.05E-02	6.77E-03	5.05E-02	5.73E-02	7.68E-03	5.73E-02
Fe55	5.05E-02	4.77E-05	1.26E-03	6.54E-02	6.17E-05	1.63E-03
Co60	4.65E-02	1.93E-02	1.16E-01	1.19E-01	4.94E-02	2.97E-01
Ni59	9.29E-05	1.03E-07	0.00E+00	2.38E-04	2.64E-07	0.00E+00
Ni63	2.08E-02	5.69E-05	6.92E-04	5.31E-02	1.46E-04	1.77E-03
Zn65	2.32E-04	2.20E-05	1.16E-04	5.93E-04	5.61E-05	2.96E-04
Se79	8.77E-08	1.43E-09	4.39E-08	1.73E-06	2.82E-08	8.64E-07
Kr81	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr85	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb87	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr90	1.04E-02	1.88E-03	3.45E-02	2.04E-01	3.69E-02	6.80E-01
Zr93	4.21E-06	1.32E-08	0.00E+00	8.28E-05	2.60E-07	0.00E+00
Nb91	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb92	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb93m	2.63E-04	1.28E-06	8.77E-06	5.18E-03	2.52E-05	1.73E-04
Nb94	1.04E-05	2.90E-06	1.48E-05	6.46E-05	1.80E-05	9.23E-05
Mo93	1.19E-07	3.15E-10	5.97E-09	2.35E-06	6.21E-09	1.18E-07
Tc97	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tc99	3.10E-05	5.02E-07	3.45E-05	6.10E-04	9.89E-06	6.78E-04
Ru106	1.54E-02	4.01E-03	7.71E-02	3.04E-01	7.90E-02	1.52E+00

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A2 per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package
Pd107	3.31E-07	4.94E-10	0.00E+00	6.52E-06	9.72E-09	0.00E+00
Ag108m	1.47E-05	3.98E-06	2.10E-05	3.76E-05	1.02E-05	5.37E-05
Ag110m	1.88E-03	8.50E-04	4.69E-03	3.69E-02	1.67E-02	9.23E-02
Cd109	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd113m	2.08E-05	6.15E-07	4.15E-05	5.31E-05	1.57E-06	1.06E-04
Sn119m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn121m	6.37E-05	1.31E-06	7.08E-05	1.25E-03	2.58E-05	1.39E-03
Sn123	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn126	1.13E-06	5.06E-07	2.82E-06	2.22E-05	9.96E-06	5.55E-05
Sb125	6.14E-02	5.21E-03	6.14E-02	1.21E+00	1.03E-01	1.21E+00
Sb126	1.57E-07	7.85E-08	3.93E-07	3.10E-06	1.55E-06	7.74E-06
Te125m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Te127m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
I129	2.25E-05	2.82E-07	0.00E+00	4.44E-04	5.55E-06	0.00E+00
Cs134	1.49E-01	4.08E-02	2.13E-01	4.65E+00	1.27E+00	6.64E+00
Cs135	1.25E-06	1.13E-08	1.25E-06	2.46E-05	2.22E-07	2.46E-05
Cs137	2.25E-01	2.93E-02	3.76E-01	4.44E+00	5.77E-01	7.39E+00
Ba133	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La138	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ce144	8.62E-03	1.87E-03	4.31E-02	1.70E-01	3.68E-02	8.49E-01
Pm145	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm147	5.88E-02	5.84E-04	2.94E-02	1.16E+00	1.15E-02	5.79E-01
Sm147	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sm151	7.35E-04	2.32E-06	7.35E-05	1.45E-02	4.57E-05	1.45E-03
Eu152	1.08E-06	2.21E-07	1.08E-06	2.13E-05	4.34E-06	2.13E-05
Eu154	2.16E-02	5.23E-03	3.61E-02	4.26E-01	1.03E-01	7.10E-01
Eu155	6.05E-03	1.19E-04	2.02E-03	1.19E-01	2.35E-03	3.97E-02
Gd153	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ho163	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ho166m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tm170	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A2 per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package
Tm171	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lu174	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lu176	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hf178n	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hf182	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pt193	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl204	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pb205	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pb210	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bi208	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bi210m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Po210	5.62E-10	4.86E-10	2.81E-08	1.44E-09	1.24E-09	7.18E-08
Ra223	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra225	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra226	2.21E-14	9.58E-14	7.37E-12	5.66E-14	2.45E-13	1.89E-11
Ra228	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac227	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Th227	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Th228	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Th229	4.87E-13	4.02E-13	9.73E-10	1.24E-12	1.03E-12	2.49E-09
Th230	8.14E-12	6.21E-12	8.14E-09	2.08E-11	1.59E-11	2.08E-08
Th232	8.63E-14	5.65E-14	0.00E+00	2.21E-13	1.45E-13	0.00E+00
Th234	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pa231	9.91E-12	8.18E-12	2.48E-08	2.53E-11	2.09E-11	6.34E-08
Pa233	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
U232	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
U233	3.98E-10	3.13E-10	6.64E-08	1.02E-09	7.99E-10	1.70E-07
U234	8.14E-08	6.33E-08	1.36E-05	2.08E-07	1.62E-07	3.47E-05
U235	9.47E-10	7.37E-10	0.00E+00	2.42E-09	1.89E-09	0.00E+00
U236	3.08E-08	2.27E-08	5.13E-06	7.87E-08	5.80E-08	1.31E-05
U238	2.53E-08	1.76E-08	0.00E+00	6.47E-08	4.50E-08	0.00E+00
Np237	4.65E-08	4.01E-08	2.32E-05	1.19E-07	1.03E-07	5.94E-05

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A2 per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package
Pu236	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pu238	5.44E-06	4.88E-06	5.44E-03	1.39E-05	1.25E-05	1.39E-02
Pu239	2.15E-06	1.80E-06	2.15E-03	5.50E-06	4.61E-06	5.50E-03
Pu240	2.15E-06	1.81E-06	2.15E-03	5.50E-06	4.63E-06	5.50E-03
Pu241	4.78E-04	4.10E-07	7.96E-03	1.22E-03	1.05E-06	2.04E-02
Pu242	6.77E-09	5.40E-09	6.77E-06	1.73E-08	1.38E-08	1.73E-05
Am241	5.62E-06	5.08E-06	5.62E-03	1.44E-05	1.30E-05	1.44E-02
Am242m	3.69E-08	1.62E-09	3.69E-05	9.44E-08	4.15E-09	9.44E-05
Am243	1.34E-07	1.26E-07	1.34E-04	3.42E-07	3.21E-07	3.42E-04
Cm242	3.88E-07	3.86E-07	3.88E-05	9.91E-07	9.86E-07	9.91E-05
Cm243	7.83E-09	7.71E-09	7.83E-06	2.00E-08	1.97E-08	2.00E-05
Cm244	1.15E-06	1.09E-06	5.75E-04	2.94E-06	2.78E-06	1.47E-03
Cm245	2.16E-07	1.94E-07	2.40E-04	5.52E-07	4.96E-07	6.13E-04
Cm246	6.10E-08	5.36E-08	6.78E-05	1.56E-07	1.37E-07	1.73E-04
Cm248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cf249	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cf250	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cf251	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cf252	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total	7.30E-01	1.16E-01	1.07E+00	1.30E+01	2.30E+00	2.01E+01

Table 5 AP03 (Secondary Resins) Radionuclide Inventory Data – Summary

		Per Package Values	
		Average	Maximum
Total Activity (TBq)	alpha	1.01E-05	2.57E-05
	beta/gamma	5.16E-01	9.73E+00
Classification (GBq/te)	alpha	1.59E-02	4.07E-02
	beta/gamma	8.17E+02	1.54E+04
A₂ content	A ₂	7.64E-01	1.50E+01
	A ₂ per gram (raw)	1.21E-06	2.38E-05
	A ₂ per gram (conditioned)	2.30E-07	4.52E-06
	LSA criteria	N/A	N/A
Heat output (W)		Average 8.29E-02	Maximum 1.74E+00
Soluble radionuclides (TBq)	Sr90	Average 7.59E-03	Maximum 1.49E-01
	Cs134	1.16E-01	3.64E+00
	Cs137	1.65E-01	3.25E+00
Radiotoxicity (Sv/yr)		2.57E+02	5.68E+03
Lifetime requirement (years)		201	331
Fissile content (g)	U233	Average 6.41E-07	Maximum 1.64E-06
	U235	6.80E-03	1.74E-02
	U238	1.17E+00	2.99E+00
	Pu239	5.38E-04	1.38E-03
	Pu240	1.47E-04	3.76E-04
	Pu241	7.20E-05	1.84E-04
	Pu242	2.66E-05	6.79E-05
	Total Fissile	U233+U235+Pu239+Pu241 7.41E-03	1.89E-02
	Total U	U233+U235+U238 1.17E+00	3.00E+00
	Pu239 eq	U233+0.65U235+(Pu239+Pu241) 5.03E-03	1.29E-02
	U235 enrichment	U235/U-tot 0.58%	0.58%
	Pu239 separation	Pu239/(Pu239+U-tot) 0.05%	0.05%
	Safeguards content (g)		Average
Total Th		Th227+Th228+Th229+Th230+Th232+Th234 1.22E-05	3.12E-05
Total U		U232+U233+U234+U235+U236+U238 1.18E+00	3.02E+00
Total Pu	Pu236+Pu238+Pu239+Pu240+Pu241+Pu242 7.88E-04	2.02E-03	
Dose rates (mSv/hr)		Average	Maximum
	3m from 3 m ³ drum	1.46E+00	3.08E+01
	1m from SWTC-070	4.08E-01	7.23E+00
	0m from SWTC-070	6.66E-01	1.15E+01
	1m from SWTC-285	4.09E-05	4.01E-04
	0m from SWTC-285	4.85E-05	4.75E-04

Table 6 AP03 (Secondary Resins) Average and Maximum Package Inventory Data

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package
H3	7.77E-04	7.07E-07	1.94E-05	1.99E-03	1.81E-06	4.97E-05
Be10	5.96E-06	2.41E-07	9.94E-06	1.52E-05	6.16E-07	2.54E-05
C14	2.67E-04	2.11E-06	8.89E-05	6.82E-04	5.41E-06	2.27E-04
Cl36	8.43E-07	3.70E-08	1.41E-06	2.16E-06	9.47E-08	3.59E-06
Ar39	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ar42	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
K40	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ca41	1.70E-09	8.73E-13	0.00E+00	4.35E-09	2.23E-12	0.00E+00
Mn53	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mn54	2.93E-02	3.93E-03	2.93E-02	3.33E-02	4.46E-03	3.33E-02
Fe55	2.92E-02	2.76E-05	7.31E-04	3.75E-02	3.54E-05	9.39E-04
Co60	2.67E-02	1.11E-02	6.67E-02	6.82E-02	2.84E-02	1.71E-01
Ni59	5.33E-05	5.92E-08	0.00E+00	1.36E-04	1.51E-07	0.00E+00
Ni63	1.19E-02	3.27E-05	3.98E-04	3.05E-02	8.36E-05	1.02E-03
Zn65	1.33E-04	1.26E-05	6.65E-05	3.40E-04	3.22E-05	1.70E-04
Se79	6.42E-08	1.05E-09	3.21E-08	1.26E-06	2.06E-08	6.32E-07
Kr81	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr85	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb87	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr90	7.59E-03	1.37E-03	2.53E-02	1.49E-01	2.70E-02	4.98E-01
Zr93	3.08E-06	9.67E-09	0.00E+00	6.06E-05	1.90E-07	0.00E+00
Nb91	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb92	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb93m	1.93E-04	9.37E-07	6.42E-06	3.79E-03	1.84E-05	1.26E-04
Nb94	5.96E-06	1.66E-06	8.52E-06	4.73E-05	1.32E-05	6.76E-05
Mo93	8.75E-08	2.31E-10	4.38E-09	1.72E-06	4.55E-09	8.61E-08
Tc97	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tc99	2.27E-05	3.68E-07	2.52E-05	4.47E-04	7.24E-06	4.97E-04
Ru106	1.13E-02	2.94E-03	5.65E-02	2.22E-01	5.78E-02	1.11E+00

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package
Pd107	2.43E-07	3.61E-10	0.00E+00	4.77E-06	7.11E-09	0.00E+00
Ag108m	8.43E-06	2.29E-06	1.20E-05	2.16E-05	5.84E-06	3.08E-05
Ag110m	1.37E-03	6.22E-04	3.43E-03	2.70E-02	1.22E-02	6.76E-02
Cd109	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd113m	1.19E-05	3.53E-07	2.39E-05	3.05E-05	9.03E-07	6.10E-05
Sn119m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn121m	4.66E-05	9.61E-07	5.18E-05	9.18E-04	1.89E-05	1.02E-03
Sn123	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn126	8.25E-07	3.70E-07	2.06E-06	1.62E-05	7.29E-06	4.06E-05
Sb125	4.50E-02	3.81E-03	4.50E-02	8.85E-01	7.51E-02	8.85E-01
Sb126	1.15E-07	5.75E-08	2.88E-07	2.27E-06	1.13E-06	5.67E-06
Te125m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Te127m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
I129	1.65E-05	2.06E-07	0.00E+00	3.25E-04	4.06E-06	0.00E+00
Cs134	1.16E-01	3.19E-02	1.66E-01	3.64E+00	9.97E-01	5.20E+00
Cs135	9.14E-07	8.24E-09	9.14E-07	1.80E-05	1.62E-07	1.80E-05
Cs137	1.65E-01	2.15E-02	2.75E-01	3.25E+00	4.22E-01	5.41E+00
Ba133	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La138	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ce144	6.31E-03	1.37E-03	3.16E-02	1.24E-01	2.70E-02	6.21E-01
Pm145	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm147	4.31E-02	4.28E-04	2.15E-02	8.48E-01	8.42E-03	4.24E-01
Sm147	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sm151	5.38E-04	1.70E-06	5.38E-05	1.06E-02	3.35E-05	1.06E-03
Eu152	7.92E-07	1.62E-07	7.92E-07	1.56E-05	3.18E-06	1.56E-05
Eu154	1.58E-02	3.83E-03	2.64E-02	3.12E-01	7.55E-02	5.20E-01
Eu155	4.43E-03	8.73E-05	1.48E-03	8.72E-02	1.72E-03	2.91E-02
Gd153	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ho163	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ho166m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tm170	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package
Tm171	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lu174	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lu176	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hf178n	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hf182	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pt193	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl204	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pb205	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pb210	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bi208	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bi210m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Po210	3.23E-10	2.79E-10	1.61E-08	8.25E-10	7.14E-10	4.12E-08
Ra223	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra225	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra226	1.27E-14	5.50E-14	4.23E-12	3.25E-14	1.41E-13	1.08E-11
Ra228	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac227	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Th227	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Th228	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Th229	2.79E-13	2.31E-13	5.59E-10	7.14E-13	5.90E-13	1.43E-09
Th230	4.67E-12	3.57E-12	4.67E-09	1.20E-11	9.12E-12	1.20E-08
Th232	4.95E-14	3.24E-14	0.00E+00	1.27E-13	8.30E-14	0.00E+00
Th234	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pa231	5.69E-12	4.69E-12	1.42E-08	1.45E-11	1.20E-11	3.64E-08
Pa233	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
U232	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
U233	2.29E-10	1.79E-10	3.81E-08	5.85E-10	4.59E-10	9.74E-08
U234	4.67E-08	3.64E-08	7.79E-06	1.20E-07	9.30E-08	1.99E-05
U235	5.43E-10	4.23E-10	0.00E+00	1.39E-09	1.08E-09	0.00E+00
U236	1.77E-08	1.30E-08	2.95E-06	4.52E-08	3.33E-08	7.53E-06
U238	1.45E-08	1.01E-08	0.00E+00	3.72E-08	2.58E-08	0.00E+00
Np237	2.67E-08	2.30E-08	1.33E-05	6.82E-08	5.89E-08	3.41E-05

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package
Pu236	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pu238	3.12E-06	2.80E-06	3.12E-03	7.99E-06	7.16E-06	7.99E-03
Pu239	1.23E-06	1.04E-06	1.23E-03	3.16E-06	2.65E-06	3.16E-03
Pu240	1.23E-06	1.04E-06	1.23E-03	3.16E-06	2.66E-06	3.16E-03
Pu241	2.74E-04	2.36E-07	4.57E-03	7.01E-04	6.03E-07	1.17E-02
Pu242	3.89E-09	3.10E-09	3.89E-06	9.94E-09	7.93E-09	9.94E-06
Am241	3.23E-06	2.92E-06	3.23E-03	8.25E-06	7.47E-06	8.25E-03
Am242m	2.12E-08	9.32E-10	2.12E-05	5.42E-08	2.38E-09	5.42E-05
Am243	7.67E-08	7.21E-08	7.67E-05	1.96E-07	1.84E-07	1.96E-04
Cm242	2.22E-07	2.21E-07	2.22E-05	5.69E-07	5.66E-07	5.69E-05
Cm243	4.50E-09	4.43E-09	4.50E-06	1.15E-08	1.13E-08	1.15E-05
Cm244	6.60E-07	6.25E-07	3.30E-04	1.69E-06	1.60E-06	8.44E-04
Cm245	1.24E-07	1.11E-07	1.38E-04	3.17E-07	2.85E-07	3.52E-04
Cm246	3.50E-08	3.08E-08	3.89E-05	8.96E-08	7.87E-08	9.96E-05
Cm248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cf249	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cf250	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cf251	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cf252	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total	5.16E-01	8.29E-02	7.64E-01	9.73E+00	1.74E+00	1.50E+01

Table 7 AP04 (ILW Steel) Radionuclide Inventory Data – Summary

		Per Package Values		
		Average	Maximum	
Total Activity (TBq)	alpha	1.47E-02	8.17E-02	
	beta/gamma	1.51E+03	7.20E+03	
Classification (GBq/te)	alpha	2.11E+00	1.16E+01	
	beta/gamma	2.17E+05	1.03E+06	
A₂ content	A ₂	9.14E+01	5.45E+02	
	A ₂ per gram (raw)	1.31E-05	7.77E-05	
	A ₂ per gram (conditioned)	9.55E-06	5.65E-05	
	LSA criteria	N/A	N/A	
Heat output (W)		Average 8.30E+00	Maximum 5.61E+01	
Soluble radionuclides (TBq)	Sr90	1.75E-01	7.20E-01	
	Cs134	3.66E-06	1.01E-05	
	Cs137	2.03E-01	9.54E-01	
Radiotoxicity (Sv/yr)		8.85E+03	7.21E+04	
Lifetime requirement (years)		1028	1441	
Fissile content (g)	U233	1.39E+00	6.52E-01	
	U235	1.11E-01	1.73E-01	
	U238	4.05E-02	3.10E-01	
	Pu239	7.60E-03	5.77E-02	
	Pu240	5.09E-03	3.89E-02	
	Pu241	4.70E-04	3.59E-03	
	Pu242	2.59E-03	1.98E-02	
	Total Fissile	U233+U235+Pu239+Pu241	1.51E+00	8.86E-01
	Total U	U233+U235+U238	1.54E+00	1.13E+00
	Pu239 eq	U233+0.65U235+(Pu239+Pu241)	1.47E+00	8.25E-01
	U235 enrichment	U235/U-tot	7.17%	15.27%
	Pu239 separation	Pu239/(Pu239+U-tot)	0.49%	4.84%
	Safeguards content (g)		Average	Maximum
Total Th		Th227+Th228+Th229+Th230+Th232+Th234	2.17E+01	8.25E+00
Total U		U232+U233+U234+U235+U236+U238	1.87E+00	1.55E+00
Total Pu		Pu236+Pu238+Pu239+Pu240+Pu241+Pu242	2.55E-02	1.92E-01
Dose rates (mSv/hr)		Average	Maximum	
	3m from 3 m ³ box	3.32E+01	2.95E+02	
	1m from SWTC-070	1.53E+01	1.36E+02	
	0m from SWTC-070	2.19E+01	1.96E+02	
	1m from SWTC-285	3.10E-03	2.76E-02	
	0m from SWTC-285	3.57E-03	3.15E-02	

Table 8 AP04 (ILW Steel) Average and Maximum Package Inventory Data

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package
H3	4.80E+01	4.37E-02	1.20E+00	2.76E+02	2.51E-01	6.90E+00
Be10	1.08E-04	4.37E-06	1.80E-04	5.15E-04	2.08E-05	8.58E-04
C14	9.03E+00	7.16E-02	3.01E+00	4.40E+01	3.49E-01	1.47E+01
Cl36	7.95E-04	3.49E-05	1.33E-03	3.66E-03	1.61E-04	6.11E-03
Ar39	7.07E-01	2.48E-02	3.54E-02	2.03E+00	7.11E-02	1.02E-01
Ar42	1.59E-06	4.95E-07	7.94E-05	1.10E-05	3.44E-06	5.51E-04
K40	8.76E-07	9.55E-08	9.73E-07	3.85E-06	4.19E-07	4.27E-06
Ca41	1.36E-03	6.99E-07	0.00E+00	6.40E-03	3.29E-06	0.00E+00
Mn53	3.87E-05	3.23E-08	0.00E+00	1.92E-04	1.60E-07	0.00E+00
Mn54	2.85E-11	3.81E-12	2.85E-11	1.64E-10	2.19E-11	1.64E-10
Fe55	7.53E-01	7.11E-04	1.88E-02	2.41E+00	2.28E-03	6.03E-02
Co60	9.69E+00	4.03E+00	2.42E+01	8.70E+01	3.62E+01	2.18E+02
Ni59	1.09E+01	1.21E-02	0.00E+00	3.12E+01	3.47E-02	0.00E+00
Ni63	1.42E+03	3.88E+00	4.72E+01	6.71E+03	1.84E+01	2.24E+02
Zn65	1.89E-16	1.79E-17	9.45E-17	1.02E-15	9.63E-17	5.08E-16
Se79	5.72E-04	9.33E-06	2.86E-04	3.94E-03	6.42E-05	1.97E-03
Kr81	5.66E-04	1.51E-06	1.42E-05	3.22E-03	8.56E-06	8.05E-05
Kr85	2.95E-02	1.20E-03	2.95E-03	1.67E-01	6.76E-03	1.67E-02
Rb87	3.89E-08	4.91E-10	0.00E+00	6.72E-08	8.47E-10	0.00E+00
Sr90	1.75E-01	3.17E-02	5.83E-01	7.20E-01	1.30E-01	2.40E+00
Zr93	2.41E-05	7.56E-08	0.00E+00	1.15E-04	3.60E-07	0.00E+00
Nb91	2.27E-02	6.27E-05	1.14E+00	1.27E-01	3.52E-04	6.37E+00
Nb92	1.00E-06	2.42E-07	5.01E-05	5.11E-06	1.24E-06	2.56E-04
Nb93m	1.50E+01	7.31E-02	5.01E-01	2.82E+01	1.37E-01	9.40E-01
Nb94	2.08E-01	5.79E-02	2.97E-01	7.78E-01	2.17E-01	1.11E+00
Mo93	2.04E+00	5.38E-03	1.02E-01	1.02E+01	2.69E-02	5.10E-01
Tc97	2.20E-08	7.53E-10	0.00E+00	7.20E-08	2.46E-09	0.00E+00
Tc99	5.18E-02	8.39E-04	5.76E-02	1.60E-01	2.59E-03	1.78E-01
Ru106	8.78E-14	2.28E-14	4.39E-13	5.22E-13	1.36E-13	2.61E-12

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package
Pd107	2.70E-06	4.02E-09	0.00E+00	1.84E-05	2.74E-08	0.00E+00
Ag108m	1.51E-03	4.08E-04	2.15E-03	5.33E-04	1.45E-04	7.62E-04
Ag110m	4.52E-19	2.05E-19	1.13E-18	7.66E-19	3.47E-19	1.92E-18
Cd109	2.62E-10	4.56E-12	1.31E-10	1.39E-09	2.42E-11	6.94E-10
Cd113m	4.77E-04	1.41E-05	9.54E-04	1.35E-03	4.00E-05	2.70E-03
Sn119m	1.91E-15	2.68E-17	6.38E-17	1.12E-14	1.57E-16	3.73E-16
Sn121m	1.44E-02	2.97E-04	1.60E-02	7.00E-02	1.44E-03	7.78E-02
Sn123	1.76E-36	1.49E-37	2.93E-36	9.44E-36	7.98E-37	1.57E-35
Sn126	4.83E-06	2.17E-06	1.21E-05	2.39E-05	1.08E-05	5.99E-05
Sb125	1.39E-04	1.18E-05	1.39E-04	7.17E-04	6.08E-05	7.17E-04
Sb126	6.76E-07	3.38E-07	1.69E-06	3.35E-06	1.67E-06	8.38E-06
Te125m	3.48E-05	7.89E-07	3.86E-05	1.79E-04	4.07E-06	1.99E-04
Te127m	1.29E-42	6.49E-44	2.58E-42	7.99E-42	4.03E-43	1.60E-41
I129	5.42E-07	6.78E-09	0.00E+00	2.79E-06	3.49E-08	0.00E+00
Cs134	3.66E-06	1.00E-06	5.22E-06	1.01E-05	2.76E-06	1.44E-05
Cs135	8.40E-06	7.58E-08	8.40E-06	3.54E-05	3.19E-07	3.54E-05
Cs137	2.03E-01	2.64E-02	3.38E-01	9.54E-01	1.24E-01	1.59E+00
Ba133	8.04E-02	5.87E-03	2.68E-02	2.72E-01	1.98E-02	9.06E-02
La137	1.06E-03	6.02E-06	1.77E-04	2.21E-03	1.25E-05	3.68E-04
La138	1.91E-10	3.90E-11	9.57E-09	8.11E-10	1.66E-10	4.06E-08
Ce144	1.59E-16	3.45E-17	7.96E-16	5.31E-16	1.15E-16	2.66E-15
Pm145	1.82E-04	1.34E-06	1.82E-05	5.49E-04	4.04E-06	5.49E-05
Pm147	4.69E-06	4.66E-08	2.35E-06	1.68E-05	1.67E-07	8.39E-06
Sm147	4.61E-11	1.70E-11	0.00E+00	3.45E-11	1.27E-11	0.00E+00
Sm151	4.07E-03	1.29E-05	4.07E-04	5.54E-03	1.75E-05	5.54E-04
Eu152	4.34E-05	8.85E-06	4.34E-05	1.35E-05	2.74E-06	1.35E-05
Eu154	7.98E-03	1.93E-03	1.33E-02	8.34E-03	2.02E-03	1.39E-02
Eu155	3.81E-04	7.50E-06	1.27E-04	4.56E-04	8.98E-06	1.52E-04
Gd153	9.76E-22	2.27E-23	1.08E-22	9.49E-23	2.21E-24	1.05E-23
Ho163	8.52E-06	2.73E-09	4.26E-04	3.64E-08	1.17E-11	1.82E-06
Ho166m	9.77E-05	2.86E-05	1.95E-04	3.58E-05	1.05E-05	7.16E-05
Tm170	3.43E-34	1.84E-35	5.72E-34	1.54E-33	8.25E-35	2.56E-33

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package
Tm171	1.75E-07	7.30E-10	4.38E-09	9.75E-07	4.06E-09	2.44E-08
Lu174	2.49E-07	6.86E-09	2.76E-08	5.28E-07	1.46E-08	5.86E-08
Lu176	5.84E-11	7.30E-12	2.92E-09	4.97E-11	6.21E-12	2.49E-09
Hf178n	1.68E-05	5.21E-06	8.40E-04	1.55E-05	4.81E-06	7.75E-04
Hf182	4.52E-07	2.06E-08	0.00E+00	3.38E-06	1.54E-07	0.00E+00
Pt193	9.65E-01	5.78E-03	2.41E-02	5.98E+00	3.58E-02	1.49E-01
Tl204	1.21E-02	2.32E-06	1.73E-02	4.69E-02	9.00E-06	6.70E-02
Pb205	1.54E-06	1.57E-08	0.00E+00	9.55E-06	9.74E-08	0.00E+00
Pb210	3.88E-08	2.69E-09	7.75E-07	2.16E-07	1.50E-08	4.32E-06
Bi208	5.49E-08	1.69E-08	2.75E-06	3.19E-07	9.82E-08	1.59E-05
Bi210m	6.38E-09	5.99E-09	3.19E-07	3.41E-08	3.20E-08	1.70E-06
Po210	3.94E-08	3.41E-08	1.97E-06	2.20E-07	1.90E-07	1.10E-05
Ra223	4.64E-06	2.09E-05	6.62E-04	3.17E-06	1.43E-05	4.53E-04
Ra225	2.99E-06	1.39E-05	7.47E-04	1.39E-06	6.45E-06	3.47E-04
Ra226	3.38E-09	1.47E-08	1.13E-06	4.87E-09	2.11E-08	1.62E-06
Ra228	8.80E-08	1.98E-08	4.40E-06	3.36E-08	7.56E-09	1.68E-06
Ac227	4.62E-06	6.70E-08	5.14E-02	3.16E-06	4.58E-08	3.51E-02
Th227	4.57E-06	4.52E-06	9.14E-04	3.12E-06	3.09E-06	6.25E-04
Th228	1.97E-03	1.19E-02	1.97E+00	2.37E-03	1.43E-02	2.37E+00
Th229	2.99E-06	2.47E-06	5.98E-03	1.39E-06	1.15E-06	2.78E-03
Th230	1.27E-07	9.69E-08	1.27E-04	9.15E-08	6.98E-08	9.15E-05
Th232	8.80E-08	5.76E-08	0.00E+00	3.35E-08	2.19E-08	0.00E+00
Th234	5.03E-10	7.35E-11	1.68E-09	3.86E-09	5.63E-10	1.29E-08
Pa231	5.85E-06	4.83E-06	1.46E-02	4.28E-06	3.53E-06	1.07E-02
Pa233	2.71E-07	1.79E-08	3.87E-07	1.73E-06	1.14E-07	2.47E-06
U232	1.92E-03	1.66E-03	1.92E+00	2.31E-03	2.00E-03	2.31E+00
U233	4.97E-04	3.90E-04	8.28E-02	2.32E-04	1.82E-04	3.87E-02
U234	6.58E-05	5.12E-05	1.10E-02	6.02E-05	4.68E-05	1.00E-02
U235	8.85E-09	6.90E-09	0.00E+00	1.39E-08	1.08E-08	0.00E+00
U236	8.01E-08	5.90E-08	1.34E-05	3.55E-07	2.61E-07	5.92E-05
U238	5.03E-10	3.50E-10	0.00E+00	3.86E-09	2.68E-09	0.00E+00
Np237	2.71E-07	2.34E-07	1.35E-04	1.73E-06	1.49E-06	8.64E-04

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package
Pu236	1.09E-10	1.02E-10	3.63E-08	8.09E-10	7.61E-10	2.70E-07
Pu238	6.21E-03	5.57E-03	6.21E+00	4.59E-02	4.11E-02	4.59E+01
Pu239	1.74E-05	1.46E-05	1.74E-02	1.32E-04	1.11E-04	1.32E-01
Pu240	4.27E-05	3.60E-05	4.27E-02	3.27E-04	2.75E-04	3.27E-01
Pu241	1.79E-03	1.54E-06	2.99E-02	1.37E-02	1.18E-05	2.28E-01
Pu242	3.78E-07	3.02E-07	3.78E-04	2.90E-06	2.31E-06	2.90E-03
Am241	3.71E-04	3.36E-04	3.71E-01	2.84E-03	2.57E-03	2.84E+00
Am242m	1.47E-06	6.46E-08	1.47E-03	1.12E-05	4.93E-07	1.12E-02
Am243	1.24E-05	1.16E-05	1.24E-02	9.49E-05	8.92E-05	9.49E-02
Cm242	1.21E-06	1.21E-06	1.21E-04	9.25E-06	9.21E-06	9.25E-04
Cm243	4.09E-06	4.03E-06	4.09E-03	3.14E-05	3.09E-05	3.14E-02
Cm244	3.44E-03	3.25E-03	1.72E+00	2.63E-02	2.49E-02	1.32E+01
Cm245	9.36E-06	8.40E-06	1.04E-02	7.17E-05	6.44E-05	7.96E-02
Cm246	9.97E-05	8.75E-05	1.11E-01	7.63E-04	6.70E-04	8.48E-01
Cm248	3.42E-07	1.15E-06	1.14E-03	2.62E-06	8.81E-06	8.74E-03
Cf249	1.64E-05	1.75E-05	2.05E-02	1.26E-04	1.34E-04	1.57E-01
Cf250	1.85E-05	1.87E-05	9.25E-03	1.42E-04	1.43E-04	7.08E-02
Cf251	1.57E-06	1.55E-06	2.24E-03	1.20E-05	1.19E-05	1.71E-02
Cf252	4.54E-08	1.34E-07	1.51E-05	3.48E-07	1.03E-06	1.16E-04
Total	1.51E+03	8.30E+00	9.14E+01	7.20E+03	5.61E+01	5.45E+02

Table 9 AP05 (Pressure Vessel) Radionuclide Inventory Data – Summary

		Per Package Values		
		Average	Maximum	
Total Activity (TBq)	alpha	5.48E-06	1.12E-05	
	beta/gamma	1.04E+00	2.13E+00	
Classification (GBq/te)	alpha	7.98E-04	1.60E-03	
	beta/gamma	1.52E+02	3.04E+02	
A₂ content	A ₂	7.05E-02	1.44E-01	
	A ₂ per gram (raw)	1.03E-08	2.05E-08	
	A ₂ per gram (conditioned)	7.47E-09	1.49E-08	
	LSA criteria	N/A	N/A	
Heat output (W)		Average	Maximum	
		7.75E-03	1.58E-02	
Soluble radionuclides (TBq)		Average	Maximum	
	Sr90	1.10E-04	2.24E-04	
	Cs134	3.17E-09	6.49E-09	
	Cs137	1.06E-04	2.18E-04	
Radiotoxicity (Sv/yr)		9.62E+00	1.97E+01	
Lifetime requirement (years)		29	86	
Fissile content (g)		Average	Maximum	
	U233	1.77E-03	3.63E-03	
	U235	1.19E-04	2.44E-04	
	U238	4.02E-09	8.22E-09	
	Pu239	7.97E-08	1.63E-07	
	Pu240	9.80E-09	2.00E-08	
	Pu241	1.49E-09	3.05E-09	
	Pu242	2.19E-09	4.49E-09	
	Total Fissile	U233+U235+Pu239+Pu241	1.89E-03	3.87E-03
	Total U	U233+U235+U238	1.89E-03	3.87E-03
	Pu239 eq	U233+0.65U235+(Pu239+Pu241)	1.85E-03	3.78E-03
	U235 enrichment	U235/U-tot	6.31%	6.31%
	Pu239 separation	Pu239/(Pu239+U-tot)	0.00%	0.00%
	Safeguards content (g)		Average	Maximum
Total Th		Th227+Th228+Th229+Th230+Th232+Th234	2.79E-02	5.71E-02
Total U		U232+U233+U234+U235+U236+U238	2.26E-03	4.61E-03
Total Pu		Pu236+Pu238+Pu239+Pu240+Pu241+Pu242	5.79E-07	1.18E-06
Dose rates (mSv/hr)		Average	Maximum	
	3m from 3 m ³ box	3.94E-02	8.06E-02	
	1m from SWTC-070	1.82E-02	3.72E-02	
	0m from SWTC-070	2.61E-02	5.33E-02	

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1m from SWTC-285
0m from SWTC-285

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3.56E-06 7.29E-06
3.85E-06 7.86E-06

Table 10 AP05 (Pressure Vessel) Average and Maximum Package Inventory Data

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package
H3	1.63E-02	1.48E-05	4.06E-04	3.32E-02	3.03E-05	8.31E-04
Be10	5.56E-08	2.24E-09	9.26E-08	1.14E-07	4.59E-09	1.89E-07
C14	4.45E-03	3.53E-05	1.48E-03	9.11E-03	7.22E-05	3.04E-03
Cl36	4.29E-07	1.89E-08	7.16E-07	8.78E-07	3.85E-08	1.46E-06
Ar39	5.99E-04	2.10E-05	3.00E-05	1.23E-03	4.29E-05	6.13E-05
Ar42	2.03E-10	6.35E-11	1.02E-08	4.16E-10	1.30E-10	2.08E-08
K40	5.07E-10	5.52E-11	5.63E-10	1.04E-09	1.13E-10	1.15E-09
Ca41	7.13E-07	3.66E-10	0.00E+00	1.46E-06	7.48E-10	0.00E+00
Mn53	1.85E-08	1.54E-11	0.00E+00	3.78E-08	3.15E-11	0.00E+00
Mn54	9.62E-15	1.29E-15	9.62E-15	1.97E-14	2.64E-15	1.97E-14
Fe55	3.06E-04	2.89E-07	7.65E-06	6.26E-04	5.91E-07	1.56E-05
Co60	1.16E-02	4.82E-03	2.90E-02	2.37E-02	9.86E-03	5.93E-02
Ni59	1.04E-02	1.16E-05	0.00E+00	2.13E-02	2.37E-05	0.00E+00
Ni63	9.96E-01	2.73E-03	3.32E-02	2.04E+00	5.58E-03	6.79E-02
Zn65	7.63E-20	7.23E-21	3.82E-20	1.56E-19	1.48E-20	7.80E-20
Se79	7.92E-08	1.29E-09	3.96E-08	1.62E-07	2.64E-09	8.10E-08
Kr81	1.98E-07	5.27E-10	4.96E-09	4.05E-07	1.08E-09	1.01E-08
Kr85	1.05E-05	4.26E-07	1.05E-06	2.15E-05	8.71E-07	2.15E-06
Rb87	4.09E-11	5.15E-13	0.00E+00	8.36E-11	1.05E-12	0.00E+00
Sr90	1.10E-04	1.98E-05	3.65E-04	2.24E-04	4.06E-05	7.47E-04
Zr93	1.24E-08	3.88E-11	0.00E+00	2.53E-08	7.93E-11	0.00E+00
Nb91	8.26E-06	2.28E-08	4.13E-04	1.69E-05	4.66E-08	8.44E-04
Nb92	4.53E-10	1.10E-10	2.26E-08	9.26E-10	2.24E-10	4.63E-08
Nb93m	2.24E-03	1.09E-05	7.46E-05	4.58E-03	2.22E-05	1.53E-04
Nb94	1.44E-04	4.01E-05	2.06E-04	2.94E-04	8.21E-05	4.20E-04
Mo93	9.58E-04	2.53E-06	4.79E-05	1.96E-03	5.17E-06	9.79E-05
Tc97	1.71E-11	5.85E-13	0.00E+00	3.50E-11	1.20E-12	0.00E+00
Tc99	4.19E-05	6.78E-07	4.65E-05	8.56E-05	1.39E-06	9.51E-05
Ru106	2.65E-17	6.90E-18	1.33E-16	5.43E-17	1.41E-17	2.71E-16

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package
Pd107	4.12E-10	6.14E-13	0.00E+00	8.42E-10	1.25E-12	0.00E+00
Ag108m	1.95E-06	5.27E-07	2.78E-06	3.98E-06	1.08E-06	5.68E-06
Ag110m	4.77E-22	2.16E-22	1.19E-21	9.75E-22	4.41E-22	2.44E-21
Cd109	1.10E-13	1.91E-15	5.48E-14	2.24E-13	3.90E-15	1.12E-13
Cd113m	4.08E-07	1.21E-08	8.15E-07	8.34E-07	2.47E-08	1.67E-06
Sn119m	6.14E-19	8.59E-21	2.05E-20	1.25E-18	1.76E-20	4.18E-20
Sn121m	7.15E-06	1.47E-07	7.94E-06	1.46E-05	3.01E-07	1.62E-05
Sn123	7.13E-40	6.03E-41	1.19E-39	1.46E-39	1.23E-40	2.43E-39
Sn126	2.31E-09	1.04E-09	5.78E-09	4.73E-09	2.12E-09	1.18E-08
Sb125	6.14E-08	5.21E-09	6.14E-08	1.26E-07	1.06E-08	1.26E-07
Sb126	3.24E-10	1.61E-10	8.09E-10	6.62E-10	3.30E-10	1.65E-09
Te125m	1.54E-08	3.49E-10	1.71E-08	3.14E-08	7.14E-10	3.49E-08
Te127m	3.32E-46	1.68E-47	6.65E-46	6.80E-46	3.43E-47	1.36E-45
I129	2.41E-10	3.01E-12	0.00E+00	4.93E-10	6.16E-12	0.00E+00
Cs134	3.17E-09	8.69E-10	4.53E-09	6.49E-09	1.78E-09	9.27E-09
Cs135	5.12E-09	4.62E-11	5.12E-09	1.05E-08	9.44E-11	1.05E-08
Cs137	1.06E-04	1.38E-05	1.77E-04	2.18E-04	2.83E-05	3.63E-04
Ba133	6.09E-05	4.45E-06	2.03E-05	1.25E-04	9.09E-06	4.15E-05
La137	1.05E-06	5.95E-09	1.75E-07	2.15E-06	1.22E-08	3.58E-07
La138	1.16E-13	2.36E-14	5.79E-12	2.37E-13	4.83E-14	1.18E-11
Ce144	1.22E-19	2.64E-20	6.09E-19	2.49E-19	5.41E-20	1.25E-18
Pm145	1.50E-07	1.10E-09	1.50E-08	3.06E-07	2.25E-09	3.06E-08
Pm147	3.39E-09	3.37E-11	1.70E-09	6.94E-09	6.89E-11	3.47E-09
Sm147	5.64E-14	2.07E-14	0.00E+00	1.15E-13	4.24E-14	0.00E+00
Sm151	4.54E-06	1.43E-08	4.54E-07	9.28E-06	2.93E-08	9.28E-07
Eu152	5.64E-08	1.15E-08	5.64E-08	1.15E-07	2.35E-08	1.15E-07
Eu154	9.35E-06	2.26E-06	1.56E-05	1.91E-05	4.62E-06	3.18E-05
Eu155	4.35E-07	8.57E-09	1.45E-07	8.90E-07	1.75E-08	2.97E-07
Gd153	1.31E-24	3.04E-26	1.45E-25	2.67E-24	6.22E-26	2.97E-25
Ho163	1.15E-08	3.69E-12	5.77E-07	2.36E-08	7.55E-12	1.18E-06
Ho166m	1.26E-07	3.69E-08	2.52E-07	2.58E-07	7.55E-08	5.16E-07
Tm170	1.93E-37	1.03E-38	3.21E-37	3.94E-37	2.11E-38	6.57E-37

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package
Tm171	6.49E-11	2.71E-13	1.62E-12	1.33E-10	5.53E-13	3.32E-12
Lu174	2.44E-10	6.73E-12	2.71E-11	4.98E-10	1.38E-11	5.54E-11
Lu176	7.04E-14	8.80E-15	3.52E-12	1.44E-13	1.80E-14	7.20E-12
Hf178n	2.00E-08	6.21E-09	1.00E-06	4.10E-08	1.27E-08	2.05E-06
Hf182	1.47E-11	6.71E-13	0.00E+00	3.02E-11	1.37E-12	0.00E+00
Pt193	2.51E-04	1.50E-06	6.27E-06	5.13E-04	3.07E-06	1.28E-05
Tl204	8.10E-06	1.56E-09	1.16E-05	1.66E-05	3.18E-09	2.37E-05
Pb205	4.03E-10	4.11E-12	0.00E+00	8.24E-10	8.40E-12	0.00E+00
Pb210	1.44E-11	9.98E-13	2.87E-10	2.94E-11	2.04E-12	5.87E-10
Bi208	1.80E-11	5.55E-12	9.01E-10	3.68E-11	1.13E-11	1.84E-09
Bi210m	2.62E-12	2.46E-12	1.31E-10	5.36E-12	5.03E-12	2.68E-10
Po210	1.45E-11	1.26E-11	7.27E-10	2.97E-11	2.57E-11	1.49E-09
Ra223	5.72E-09	2.58E-08	8.17E-07	1.17E-08	5.28E-08	1.67E-06
Ra225	3.80E-09	1.77E-08	9.51E-07	7.78E-09	3.62E-08	1.94E-06
Ra226	3.72E-12	1.61E-11	1.24E-09	7.62E-12	3.30E-11	2.54E-09
Ra228	1.13E-10	2.55E-11	5.67E-09	2.32E-10	5.21E-11	1.16E-08
Ac227	5.71E-09	8.27E-11	6.34E-05	1.17E-08	1.69E-10	1.30E-04
Th227	5.64E-09	5.58E-09	1.13E-06	1.15E-08	1.14E-08	2.31E-06
Th228	2.25E-06	1.36E-05	2.25E-03	4.60E-06	2.78E-05	4.60E-03
Th229	3.81E-09	3.14E-09	7.61E-06	7.79E-09	6.43E-09	1.56E-05
Th230	1.56E-10	1.19E-10	1.56E-07	3.19E-10	2.43E-10	3.19E-07
Th232	1.13E-10	7.42E-11	0.00E+00	2.32E-10	1.52E-10	0.00E+00
Th234	5.00E-17	7.30E-18	1.67E-16	1.02E-16	1.49E-17	3.41E-16
Pa231	7.17E-09	5.92E-09	1.79E-05	1.47E-08	1.21E-08	3.67E-05
Pa233	6.11E-11	4.03E-12	8.73E-11	1.25E-10	8.25E-12	1.78E-10
U232	2.19E-06	1.90E-06	2.19E-03	4.47E-06	3.88E-06	4.47E-03
U233	6.32E-07	4.96E-07	1.05E-04	1.29E-06	1.01E-06	2.15E-04
U234	7.86E-08	6.12E-08	1.31E-05	1.61E-07	1.25E-07	2.68E-05
U235	9.55E-12	7.44E-12	0.00E+00	1.95E-11	1.52E-11	0.00E+00
U236	4.58E-11	3.37E-11	7.63E-09	9.36E-11	6.89E-11	1.56E-08
U238	5.00E-17	3.47E-17	0.00E+00	1.02E-16	7.10E-17	0.00E+00
Np237	6.11E-11	5.27E-11	3.05E-08	1.25E-10	1.08E-10	6.25E-08

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A ₂ per Package
Pu236	4.41E-15	4.14E-15	1.47E-12	9.01E-15	8.47E-15	3.00E-12
Pu238	3.08E-07	2.76E-07	3.08E-04	6.30E-07	5.64E-07	6.30E-04
Pu239	1.83E-10	1.54E-10	1.83E-07	3.74E-10	3.14E-10	3.74E-07
Pu240	8.23E-11	6.93E-11	8.23E-08	1.68E-10	1.42E-10	1.68E-07
Pu241	5.68E-09	4.88E-12	9.46E-08	1.16E-08	9.97E-12	1.93E-07
Pu242	3.21E-13	2.56E-13	3.21E-10	6.57E-13	5.24E-13	6.57E-10
Am241	1.35E-09	1.22E-09	1.35E-06	2.76E-09	2.50E-09	2.76E-06
Am242m	8.28E-12	3.64E-13	8.28E-09	1.69E-11	7.45E-13	1.69E-08
Am243	3.03E-12	2.84E-12	3.03E-09	6.19E-12	5.82E-12	6.19E-09
Cm242	6.84E-12	6.81E-12	6.84E-10	1.40E-11	1.39E-11	1.40E-09
Cm243	1.55E-12	1.53E-12	1.55E-09	3.17E-12	3.12E-12	3.17E-09
Cm244	7.76E-11	7.34E-11	3.88E-08	1.59E-10	1.50E-10	7.93E-08
Cm245	5.75E-14	5.17E-14	6.39E-11	1.18E-13	1.06E-13	1.31E-10
Cm246	8.43E-15	7.40E-15	9.37E-12	1.72E-14	1.51E-14	1.92E-11
Cm248	1.72E-19	5.79E-19	5.75E-16	3.53E-19	1.18E-18	1.18E-15
Cf249	3.11E-18	3.33E-18	3.89E-15	6.36E-18	6.81E-18	7.95E-15
Cf250	1.80E-18	1.82E-18	8.99E-16	3.68E-18	3.72E-18	1.84E-15
Cf251	8.91E-20	8.82E-20	1.27E-16	1.82E-19	1.80E-19	2.60E-16
Cf252	2.93E-22	8.64E-22	9.76E-20	5.99E-22	1.77E-21	2.00E-19
Total	1.04E+00	7.75E-03	7.05E-02	2.13E+00	1.58E-02	1.44E-01

3 DATASHEETS FOR SPENT FUEL PACKAGES

Data summary sheets and package inventory data for the spent fuel packages proposed by Westinghouse are presented in this section. For each waste package, we present a summary data sheet that provides information on waste package characteristics, and a table providing average and maximum waste package inventory data.

The tables presented are:

- Table 11 and Table 12 present the data sheet and inventory for AP1000 spent fuel.

Table 11 AP1000 Spent Fuel Radionuclide Inventory Data – Summary

		Per Package Values		
		Average	Maximum	
Total Activity (TBq)	alpha	1.06E+03	1.06E+03	
	beta/gamma	3.39E+03	3.39E+03	
Classification (GBq/te)	alpha	3.46E+05	3.46E+05	
	beta/gamma	1.10E+06	1.10E+06	
A₂ content	A ₂	1.05E+06	1.05E+06	
	A ₂ per gram (raw)	3.41E-01	3.41E-01	
	A ₂ per gram (conditioned)	9.87E-02	9.87E-02	
	LSA criteria	N/A	N/A	
Heat output (W)		Average 1.43E+03	Maximum 1.43E+03	
Soluble radionuclides (TBq)	Sr90	1.16E+03	1.16E+03	
	Cs134	1.57E-09	1.57E-09	
	Cs137	1.98E+03	1.98E+03	
Radiotoxicity (Sv/yr)		2.25E+06	2.25E+06	
Lifetime requirement (years)		924	924	
Fissile content (g)	U233	1.45E-01	1.45E-01	
	U235	9.21E+03	9.21E+03	
	U238	1.96E+06	1.96E+06	
	Pu239	1.32E+04	1.32E+04	
	Pu240	7.61E+03	7.61E+03	
	Pu241	5.32E+01	5.32E+01	
	Pu242	2.96E+03	2.96E+03	
	Total Fissile	U233+U235+Pu239+Pu241	2.24E+04	2.24E+04
	Total U	U233+U235+U238	1.97E+06	1.97E+06
	Pu239 eq	U233+0.65U235+(Pu239+Pu241)	1.92E+04	1.92E+04
	U235 enrichment	U235/U-tot	0.47%	0.47%
	Pu239 separation	Pu239/(Pu239+U-tot)	0.66%	0.66%
	Safeguards content (g)		Average	Maximum
Total Th		Th227+Th228+Th229+Th230+Th232+Th234	1.64E+00	1.64E+00
Total U		U232+U233+U234+U235+U236+U238	1.98E+06	1.98E+06
Total Pu		Pu236+Pu238+Pu239+Pu240+Pu241+Pu242	2.45E+04	2.45E+04
Dose rates (mSv/hr)		Average	Maximum	
	Bare Copper Canister – 3m Gamma	2.37E+00	2.37E+00	
	Bare Copper Canister – 3m Neutron	9.30E-02	9.30E-02	
	Bare Copper Canister – 3m Total	2.46E+00	2.46E+00	
	1m From Transport Container - Gamma	9.67E-02	9.67E-02	
	1m From Transport Container - Neutron	2.13E-02	2.13E-02	
	1m From Transport Container - Total	1.18E-01	1.18E-01	
	0m From Transport Container - Gamma	7.63E-01	7.63E-01	
	0m From Transport Container - Neutron	9.52E-02	9.52E-02	

0m From Transport Container - Total

8.58E-01

8.58E-01

Table 12 AP1000 Spent Fuel - Average and Maximum Package Inventory Data

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A2 per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A2 per Package
H3	8.08E-01	7.36E-04	2.02E-02	8.08E-01	7.36E-04	2.02E-02
Be10	4.88E-05	1.97E-06	8.13E-05	4.88E-05	1.97E-06	8.13E-05
C14	3.30E-01	2.61E-03	1.10E-01	3.30E-01	2.61E-03	1.10E-01
Cl36	3.63E-03	1.59E-04	6.05E-03	3.63E-03	1.59E-04	6.05E-03
Ar39	6.09E-02	2.13E-03	3.04E-03	6.09E-02	2.13E-03	3.04E-03
Ar42	5.47E-07	1.71E-07	2.73E-05	5.47E-07	1.71E-07	2.73E-05
K40	8.90E-08	9.70E-09	9.89E-08	8.90E-08	9.70E-09	9.89E-08
Ca41	1.17E-04	6.02E-08	0.00E+00	1.17E-04	6.02E-08	0.00E+00
Mn53	6.62E-08	5.52E-11	0.00E+00	6.62E-08	5.52E-11	0.00E+00
Mn54	3.69E-31	4.94E-32	3.69E-31	3.69E-31	4.94E-32	3.69E-31
Fe55	1.39E-08	1.31E-11	3.47E-10	1.39E-08	1.31E-11	3.47E-10
Co60	6.95E-03	2.89E-03	1.74E-02	6.95E-03	2.89E-03	1.74E-02
Ni59	1.55E-01	1.72E-04	0.00E+00	1.55E-01	1.72E-04	0.00E+00
Ni63	1.24E+01	3.39E-02	4.13E-01	1.24E+01	3.39E-02	4.13E-01
Zn65	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Se79	1.08E-02	1.77E-04	5.42E-03	1.08E-02	1.77E-04	5.42E-03
Kr81	7.13E-04	1.90E-06	1.78E-05	7.13E-04	1.90E-06	1.78E-05
Kr85	3.52E+00	1.42E-01	3.52E-01	3.52E+00	1.42E-01	3.52E-01
Rb87	3.06E-06	3.85E-08	0.00E+00	3.06E-06	3.85E-08	0.00E+00
Sr90	1.16E+03	2.11E+02	3.88E+03	1.16E+03	2.11E+02	3.88E+03
Zr93	2.86E-01	8.98E-04	0.00E+00	2.86E-01	8.98E-04	0.00E+00
Nb91	2.03E-04	5.61E-07	1.02E-02	2.03E-04	5.61E-07	1.02E-02
Nb92	1.09E-06	2.64E-07	5.45E-05	1.09E-06	2.64E-07	5.45E-05
Nb93m	3.16E+00	1.53E-02	1.05E-01	3.16E+00	1.53E-02	1.05E-01
Nb94	1.26E+00	3.52E-01	1.80E+00	1.26E+00	3.52E-01	1.80E+00
Mo93	5.32E-03	1.41E-05	2.66E-04	5.32E-03	1.41E-05	2.66E-04
Tc97	4.30E-09	1.47E-10	0.00E+00	4.30E-09	1.47E-10	0.00E+00
Tc99	1.92E+00	3.12E-02	2.14E+00	1.92E+00	3.12E-02	2.14E+00
Ru106	4.49E-23	1.17E-23	2.25E-22	4.49E-23	1.17E-23	2.25E-22

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A2 per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A2 per Package
Pd107	2.09E-02	3.11E-05	0.00E+00	2.09E-02	3.11E-05	0.00E+00
Ag108m	1.12E-03	3.04E-04	1.60E-03	1.12E-03	3.04E-04	1.60E-03
Ag110m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd109	4.72E-22	8.22E-24	2.36E-22	4.72E-22	8.22E-24	2.36E-22
Cd113m	7.20E-04	2.13E-05	1.44E-03	7.20E-04	2.13E-05	1.44E-03
Sn119m	2.72E-32	3.81E-34	9.08E-34	2.72E-32	3.81E-34	9.08E-34
Sn121m	7.35E-01	1.51E-02	8.17E-01	7.35E-01	1.51E-02	8.17E-01
Sn123	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn126	8.79E-02	3.95E-02	2.20E-01	8.79E-02	3.95E-02	2.20E-01
Sb125	1.29E-07	1.09E-08	1.29E-07	1.29E-07	1.09E-08	1.29E-07
Sb126	1.23E-02	6.14E-03	3.08E-02	1.23E-02	6.14E-03	3.08E-02
Te125m	3.23E-08	7.32E-10	3.58E-08	3.23E-08	7.32E-10	3.58E-08
Te127m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
I129	4.33E-03	5.41E-05	0.00E+00	4.33E-03	5.41E-05	0.00E+00
Cs134	1.57E-09	4.29E-10	2.24E-09	1.57E-09	4.29E-10	2.24E-09
Cs135	8.08E-02	7.29E-04	8.08E-02	8.08E-02	7.29E-04	8.08E-02
Cs137	1.98E+03	2.57E+02	3.29E+03	1.98E+03	2.57E+02	3.29E+03
Ba133	1.41E-03	1.03E-04	4.68E-04	1.41E-03	1.03E-04	4.68E-04
La137	2.19E-04	1.24E-06	3.65E-05	2.19E-04	1.24E-06	3.65E-05
La138	3.40E-10	6.93E-11	1.70E-08	3.40E-10	6.93E-11	1.70E-08
Ce144	7.35E-31	1.59E-31	3.67E-30	7.35E-31	1.59E-31	3.67E-30
Pm145	2.56E-05	1.88E-07	2.56E-06	2.56E-05	1.88E-07	2.56E-06
Pm147	5.11E-07	5.07E-09	2.55E-07	5.11E-07	5.07E-09	2.55E-07
Sm147	6.31E-07	2.32E-07	0.00E+00	6.31E-07	2.32E-07	0.00E+00
Sm151	2.34E+01	7.40E-02	2.34E+00	2.34E+01	7.40E-02	2.34E+00
Eu152	1.78E-02	3.64E-03	1.78E-02	1.78E-02	3.64E-03	1.78E-02
Eu154	8.38E-01	2.03E-01	1.40E+00	8.38E-01	2.03E-01	1.40E+00
Eu155	1.22E-03	2.41E-05	4.08E-04	1.22E-03	2.41E-05	4.08E-04
Gd153	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ho163	3.55E-07	1.14E-10	1.77E-05	3.55E-07	1.14E-10	1.77E-05
Ho166m	2.99E-03	8.77E-04	5.98E-03	2.99E-03	8.77E-04	5.98E-03
Tm170	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A2 per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A2 per Package
Tm171	2.68E-15	1.12E-17	6.70E-17	2.68E-15	1.12E-17	6.70E-17
Lu174	2.71E-10	7.48E-12	3.01E-11	2.71E-10	7.48E-12	3.01E-11
Lu176	2.61E-10	3.26E-11	1.30E-08	2.61E-10	3.26E-11	1.30E-08
Hf178n	5.01E-03	1.55E-03	2.51E-01	5.01E-03	1.55E-03	2.51E-01
Hf182	3.10E-07	1.41E-08	0.00E+00	3.10E-07	1.41E-08	0.00E+00
Pt193	9.22E-03	5.52E-05	2.30E-04	9.22E-03	5.52E-05	2.30E-04
Tl204	1.14E-06	2.19E-10	1.63E-06	1.14E-06	2.19E-10	1.63E-06
Pb205	3.51E-08	3.58E-10	0.00E+00	3.51E-08	3.58E-10	0.00E+00
Pb210	5.83E-07	4.05E-08	1.17E-05	5.83E-07	4.05E-08	1.17E-05
Bi208	4.27E-07	1.31E-07	2.13E-05	4.27E-07	1.31E-07	2.13E-05
Bi210m	5.82E-08	5.46E-08	2.91E-06	5.82E-08	5.46E-08	2.91E-06
Po210	5.72E-07	4.95E-07	2.86E-05	5.72E-07	4.95E-07	2.86E-05
Ra223	1.89E-06	8.51E-06	2.70E-04	1.89E-06	8.51E-06	2.70E-04
Ra225	4.06E-07	1.89E-06	1.02E-04	4.06E-07	1.89E-06	1.02E-04
Ra226	1.24E-06	5.39E-06	4.15E-04	1.24E-06	5.39E-06	4.15E-04
Ra228	6.20E-09	1.39E-09	3.10E-07	6.20E-09	1.39E-09	3.10E-07
Ac227	1.88E-06	2.73E-08	2.09E-02	1.88E-06	2.73E-08	2.09E-02
Th227	1.86E-06	1.84E-06	3.72E-04	1.86E-06	1.84E-06	3.72E-04
Th228	2.34E-03	1.41E-02	2.34E+00	2.34E-03	1.41E-02	2.34E+00
Th229	4.07E-07	3.36E-07	8.13E-04	4.07E-07	3.36E-07	8.13E-04
Th230	8.48E-05	6.47E-05	8.48E-02	8.48E-05	6.47E-05	8.48E-02
Th232	6.21E-09	4.07E-09	0.00E+00	6.21E-09	4.07E-09	0.00E+00
Th234	2.44E-02	3.56E-03	8.13E-02	2.44E-02	3.56E-03	8.13E-02
Pa231	2.40E-06	1.98E-06	5.99E-03	2.40E-06	1.98E-06	5.99E-03
Pa233	6.49E-02	4.29E-03	9.28E-02	6.49E-02	4.29E-03	9.28E-02
U232	2.28E-03	1.98E-03	2.28E+00	2.28E-03	1.98E-03	2.28E+00
U233	5.16E-05	4.05E-05	8.59E-03	5.16E-05	4.05E-05	8.59E-03
U234	1.70E-01	1.32E-01	2.83E+01	1.70E-01	1.32E-01	2.83E+01
U235	7.36E-04	5.74E-04	0.00E+00	7.36E-04	5.74E-04	0.00E+00
U236	3.25E-02	2.39E-02	5.41E+00	3.25E-02	2.39E-02	5.41E+00
U238	2.44E-02	1.69E-02	0.00E+00	2.44E-02	1.69E-02	0.00E+00
Np237	6.50E-02	5.61E-02	3.25E+01	6.50E-02	5.61E-02	3.25E+01

Isotope	Average			Maximum		
	Activity per package (TBq)	Heat Output per Package (Watts)	A2 per Package	Activity per package (TBq)	Heat Output per Package (Watts)	A2 per Package
Pu236	3.29E-11	3.09E-11	1.10E-08	3.29E-11	3.09E-11	1.10E-08
Pu238	4.16E+02	3.73E+02	4.16E+05	4.16E+02	3.73E+02	4.16E+05
Pu239	3.03E+01	2.54E+01	3.03E+04	3.03E+01	2.54E+01	3.03E+04
Pu240	6.39E+01	5.38E+01	6.39E+04	6.39E+01	5.38E+01	6.39E+04
Pu241	2.03E+02	1.74E-01	3.38E+03	2.03E+02	1.74E-01	3.38E+03
Pu242	4.34E-01	3.46E-01	4.34E+02	4.34E-01	3.46E-01	4.34E+02
Am241	4.92E+02	4.46E+02	4.92E+05	4.92E+02	4.46E+02	4.92E+05
Am242m	1.89E+00	8.32E-02	1.89E+03	1.89E+00	8.32E-02	1.89E+03
Am243	7.25E+00	6.81E+00	7.25E+03	7.25E+00	6.81E+00	7.25E+03
Cm242	1.56E+00	1.55E+00	1.56E+02	1.56E+00	1.55E+00	1.56E+02
Cm243	5.87E-01	5.79E-01	5.87E+02	5.87E-01	5.79E-01	5.87E+02
Cm244	5.22E+01	4.94E+01	2.61E+04	5.22E+01	4.94E+01	2.61E+04
Cm245	2.01E-01	1.81E-01	2.24E+02	2.01E-01	1.81E-01	2.24E+02
Cm246	6.72E-02	5.90E-02	7.46E+01	6.72E-02	5.90E-02	7.46E+01
Cm248	1.90E-06	6.37E-06	6.32E-03	1.90E-06	6.37E-06	6.32E-03
Cf249	1.88E-05	2.01E-05	2.35E-02	1.88E-05	2.01E-05	2.35E-02
Cf250	1.52E-06	1.54E-06	7.61E-04	1.52E-06	1.54E-06	7.61E-04
Cf251	1.60E-06	1.58E-06	2.29E-03	1.60E-06	1.58E-06	2.29E-03
Cf252	2.80E-14	8.27E-14	9.34E-12	2.80E-14	8.27E-14	9.34E-12
Total	4.46E+03	1.43E+03	1.05E+06	4.46E+03	1.43E+03	1.05E+06

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