Bradwell SITE SITE OWNER **Nuclear Decommissioning Authority WASTE CUSTODIAN** Magnox Limited LLW **WASTE TYPE** Is the waste subject to No Scottish Policy: **WASTE VOLUMES** Reported At 1.4.2022..... Stocks: $0 \, \text{m}^3$ 1.4.2087 - 31.3.2090...... Future arisings - $0.2 \, \text{m}^3$ Total future arisings: $0.2 \, \text{m}^3$ Total waste volume: $0.2 \, \text{m}^3$ Comment on volumes: Final Dismantling & Site Clearance is assumed to commence in 2083 with reactor dismantling commencing in 2087 and lasting for three years. Volumes and radioactivity have been calculated for 85 years after reactor shutdown, i.e. 2087. Uncertainty factors on Arisings (upper) Stock (upper): x 1.2 volumes: Arisings (lower) Stock (lower): x 0.8 **WASTE SOURCE** Stainless steel items from reactor dismantling. PHYSICAL CHARACTERISTICS General description: A variety of stainless steel items. Waste can be packaged in standard LLW packages. Stainless steel items (100%) from the boron ball shutdown system. Physical components (%wt): Sealed sources: The waste does not contain sealed sources. Bulk density (t/m3): ~1.4 Comment on density: The density is of the waste as cut for packaging. CHEMICAL COMPOSITION General description and Stainless steels (100%). components (%wt): Chemical state: Neutral Chemical form of CI-36: The chlorine 36 will be incorporated in the steel. radionuclides: Metals and alloys (%wt): Items will have been cut for packaging. Thicknesses are likely to vary from a few mm to about 25 mm. % of total C14 (%wt) Type(s) / Grade(s) with proportions activity Stainless steel..... 100.0 Stainless steel type is BS970-EN56. Other ferrous metals..... Iron..... Aluminium...... 0 Beryllium...... 0 Cobalt..... Copper...... 0 Lead...... 0

	Zinc	0		
	Zircaloy/Zirconium	. 0		
	Other metals	. 0		
Organics	(%wt): -			
		(%wt)	Type(s) and comment	% of total C14
	Total cellulosics	0		activity
	Paper, cotton	0		
	Wood	0		
	Halogenated plastics	0		
	Total non-halogenated plastics	0		
	Condensation polymers	0		
	Others	0		
	Organic ion exchange materials	0		
	Total rubber	0		
	Halogenated rubber	0		
	Non-halogenated rubber	0		
	Hydrocarbons			
	Oil or grease			
	Fuel			
	Asphalt/Tarmac (cont.coal tar)			
	Asphalt/Tarmac (no coal tar)			
	Bitumen			
	Others			
	Other organics	0		
Other ma	terials (%wt): There might be trace	ces of grap	hite.	
		(%wt)	Type(s) and comment	% of total C14
		,	71 ()	activity
	Inorganic ion exchange materials	0		
	Inorganic sludges and flocs	0		
	Soil	0		
	Brick/Stone/Rubble	0		
	Cementitious material	0		
	Sand			
	Glass/Ceramics	0 TD		
	Graphite	TR		
	Desiccants/Catalysts	•		
	Asbestos	0		
	Non/low friable			
	Moderately friable			
	Highly friable	0		
	Free aqueous liquids	0		
	Free non-aqueous liquids	0		

Powder/Ash	0	
Inorganic anions (%wt):		
	(%wt)	Type(s) and comment
Fluoride	0	
Chloride	TR	
lodide	0	
Cyanide	0	
Carbonate	0	
Nitrate	0	
Nitrite	0	
Phosphate	0	
Sulphate	0	
Sulphide	0	
Materials of interest for waste acceptance criteria:	to pose a f	ire or other non-radiological hazard have been identified.
	(%wt)	Type(s) and comment
Combustible metals	0	
Low flash point liquids	0	
Explosive materials	0	
Phosphorus	0	
Hydrides	0	
Biological etc. materials	0	
Biodegradable materials		
Putrescible wastes	0	
Non-putrescible wastes		
Corrosive materials	0	
Pyrophoric materials	0	
Generating toxic gases	0	
Reacting with water	0	
Higher activity particles		
Soluble solids as bulk chemical compounds		
Hazardous substances / None expected non hazardous pollutants:		
	(%wt)	Type(s) and comment
Acrylamide		
Benzene		
Chlorinated solvents		
Formaldehyde		
Organometallics		
Phenol		
Sturono		

i ri-butyi phospha	ie		
Other organophos	sphates		
Vinyl chloride			
Arsenic			
Barium			
Boron			
Boron (in Boral)			
Boron (non-Bor	al)		
Cadmium			
Caesium			
Selenium			
Chromium			
Molybdenum			
Thallium			
Tin			
Vanadium			
Mercury compour	ds		
Others			
Electronic Electri	cal Equipment (EEE)	
EEE Type 1			
EEE Type 2			
EEE Type 3			
EEE Type 4			
EEE Type 5			
Complexing agents (%wt):	Yes		
		(%wt)	Type(s) and comment
EDTA			
DPTA			
NTA			
Polycarboxylic ac	ds		
Other organic con	nplexants		
Total complexing	agents	TR	
Potential for the waste to contain discrete items:			s)/"substantial" thickness items considered ainless items assumed DIs. NB if recycled then DI

TREATMENT, PACKAGING AND DISPOSAL

Planned on-site / off-site treatment(s):

Treatment	On-site / Off site	Stream volume %
Low force compaction		
Supercompaction (HFC)		
Incineration		
Solidification		
Decontamination		
Metal treatment		
Size reduction		
Decay storage		
Recyling / reuse		
Other / various		
None		100.0

Comment on planned treatments:

Disposal Routes:

Disposal Route	Stream volume %	Disposal density t/m3
Expected to be consigned to the LLW Repository Expected to be consigned to a Landfill Facility Expected to be consigned to an On-Site Disposal Facility Expected to be consigned to an Incineration Facility Expected to be consigned to a Metal Treatment Facility Expected to be consigned as Out of Scope Expected to be recycled / reused Disposal route not known	100.0	1.4

Classification codes for waste expected to be consigned to a landfill facility:

Upcoming (2022/23-2024/25) Waste Routing (if expected to change from above):

Disposal Route	Stream volume %				
Disposal Noute	2022/23	2023/24	2024/25		
Expected to be consigned to the LLW Repository Expected to be consigned to a Landfill Facility Expected to be consigned to an On-Site Disposal Facility Expected to be consigned to an Incineration Facility Expected to be consigned to a Metal Treatment Facility Expected to be consigned as Out of Scope Expected to be recycled / reused Disposal route not known					

Opportunities for alternative disposal routing:

Baseline Management Route	Opportunity Management Route	Stream volume (%)	Estimated Date that Opportunity will be realised	Opportunity Confidence	Comment
_	_	_	_	_	_

Waste Packaging for Disposal:

Container	Stream volume %	Waste loading m ³	Number of packages
1/3 Height IP-1 ISO 2/3 Height IP-2 ISO 1/2 Height WAMAC IP-2 ISO 1/2 Height IP-2 Disposal/Re-usable ISO 2m box (no shielding) 4m box (no shielding) Other	100.0	10	<1

Other information: The volume of waste in this stream is small and will not fill a box. Data have

been presented as though the waste will be placed in a container with other

LLW.

Waste Planned for Disposal at the LLW Repository:

Container voidage: Inaccessible voidage is not expected.

Waste Characterisation

The waste meets the LLWR's Waste Acceptance Criteria (WAC).

Form (WCH): The waste does not have a current WCH.

Waste consigned for disposal to LLWR in year of generation:

No. It will not arise until the reactor is dismantled and is expected to be packaged

immediately for disposal.

Non-Containerised Waste for In-Vault Grouting: (Not applicable to this waste stream)

Stream volume (%):

Waste stream variation: -

Bounding cuboidal volume:

Inaccessible voidage: -

Other information:

RADIOACTIVITY

Source: Activation of the stainless steel and impurities.

Uncertainty: The values quoted were derived by calculation from available material specification and

are indicative of the activities that are expected. The major source of uncertainty is the

impurity levels.

Definition of total alpha and total beta/gamma:

Where totals are shown on the table of radionuclide activities they are the sums of the listed alpha or beta/gamma emitting radionuclides plus 'other alpha' or 'other beta/gamma'.

Measurement of radioactivities:

The specific activities were estimated from neutron activation calculations of the material

and its impurities.

Other information: The activities quoted are those at 85 years after reactor shutdown, i.e. in 2087. There may

be some contamination by Cs137.

Nuclide		Mean radioactivity, TBq/m³			Mean radioactivity, TBq/m³					
H S S G S S H I S S G I S S S H I S S G I S S S S S S S S S		Waste at	Bands and	Future	Bands and		Waste at	Bands and	Future	Bands and
Be 10 C 14	Nuclide	1.4.2022	Code	arisings	Code	Nuclide	1.4.2022	Code	arisings	Code
C-14	H 3	ĺ			8	Gd 153				8
Na 22	Be 10				8	Ho 163				8
A 28	C 14				8	Ho 166m				8
C136	Na 22				8	Tm 170				8
Ar 39 Ar 442 Ar 40 Ar 40 Ar 40 Ar 40 Ar 41 Br 40 Br 41 Br 41 Br 41 Br 42 Br 42 Br 42 Br 41 Br 41 Br 42 Br 42 Br 43 Br 41 Br 41 Br 41 Br 42 Br 41 Br 41 Br 42 Br 41	AI 26				8	Tm 171				8
Ar 42	CI 36			2.75E-08	CC 2	Lu 174				8
K-40 Ca-41 Mn 53 Mn 54 Fe55 Co 60 S 5.97E-06 CC 2 B 120B N169 2.21E-04 CC 2 B 120B N163 1.24E-02 CC 2 B 120B N163 Ra 223 Sa 79 Kr 81 Kr 85 Kr 85 Rb 87	Ar 39				8	Lu 176				8
Ca 41	Ar 42				8	Hf 178n				8
Mn 53 Mn 54 Fe 55 Co 60 Mn 54 Fe 55 Co 60 So 79 Ni 59 2.21E-04 CC 2 Bi 20B Ni 63 Se 79 Se	K 40				8	Hf 182				8
Mn 54	Ca 41				8	Pt 193				8
Fe 55 Co 60 S 5.97E-06 Co 2 Bi 208 Ni 59 2.21E-04 Co 2 Bi 208 Ni 63 1.24E-02 Co 2 Po 210 Se 79 Kr 81 Ra 225 Kr 81 Ra 225 Kr 81 Ra 226 Kr 85 Rb 87 Rb 97 Rb 97 Rb 98 Rb 92 Rb 106 Rb 10232 Rb 107 Rb 108 Rb 10236 Rb 1038 Rb 1236 Rb 10236	Mn 53				8	TI 204				8
Co 60 5.97E-06 CC 2 Bi 208 Ni 59 2.21E-04 CC 2 Bi 210m Ni 63 1.24E-02 CC 2 Po 210 Zn 65 8 Ra 223 Se 79 8 Ra 223 Kr 81 8 Ra 226 Kr 85 8 Ra 226 Kr 85 8 Ra 227 Sr 90 8 Th 227 Zr 93 8 Th 227 Nb 91 8 Th 230 Nb 92 8 Th 230 Nb 93m 8 Th 232 Nb 94 8 Th 234 Mo 93 8 Pa 233 Tc 97 8 Pa 233 Tc 99 8 U 233 Ru 106 8 U 233 Ag 110m 8 U 233 Ag 110m 8 U 236 Cd 109 8 U 235 Ag 12m 8 Pu 238 Sh 126 8 Pu 240 <td>Mn 54</td> <td></td> <td></td> <td></td> <td>8</td> <td>Pb 205</td> <td></td> <td></td> <td></td> <td>8</td>	Mn 54				8	Pb 205				8
Ni 59 Ni 63 Ni 64	Fe 55				8	Pb 210				8
Ni 59 Ni 63 1.24E-02 CC 2 Po 210 Zn 65 Se 79 Kr 81 Kr 81 Kr 85 Kr 81 Kr 85 Nb 87 Ra 228 Rb 87 Rb	Co 60			5.97E-06	CC 2	Bi 208				8
Ni 63						Bi 210m				8
Zn 66 8 Ra 223 Se 79 8 Ra 225 Kr 81 8 Ra 226 Kr 85 8 Ra 228 Rb 87 8 Ac 227 Sr 90 8 Th 227 Zr 93 8 Th 228 Nb 91 8 Th 229 Nb 92 8 Th 230 Nb 93m 8 Th 234 Mb 93 8 Th 234 Mb 94 8 Th 234 Mb 93 8 Pa 233 Tc 97 8 Pa 233 Tc 99 8 U 232 Ru 106 8 U 233 Pd 107 8 U 234 Ag 108m 8 U 236 Ad 109m 8 U 238 Cd 113m 8 Pu 236 Sh 121m 8 Pu 239 Sh 126 8 Pu 240 Sh 125 8 Pu 241 Sh 126 8 Pu 242 Te 125m 8 Am 241 Te 127m 8										8
Se 79 8 Ra 225 Kr 81 8 Ra 226 Kr 85 8 Ra 228 Rb 87 8 Ac 227 Sr 90 8 Th 227 Zr 93 8 Th 228 Nb 91 8 Th 229 Nb 92 8 Th 230 Nb 93m 8 Th 232 Nb 94 8 Th 234 Mo 93 8 Pa 231 Tc 97 8 Pa 231 Tc 99 8 U 232 Ru 106 8 U 233 Pd 107 8 U 234 Ag 110m 8 U 236 Cd 10g 8 U 236 Cd 10g 8 U 238 Sh 12m 8 Pu 238 Sh 12m 8 Pu 238 Sh 12a 8 Pu 241 Sb 12b 8 Pu 241 Sb 12c 8 Pu 242 Sb 12b 8 Pu 241 Sb 12c 8 Pu 242 Sb 12b 8										8
Kr 81 8 Ra 226 Kr 85 8 Ra 228 Rb 87 8 Ac 227 Sr 90 8 Th 227 2r 93 8 Th 228 Nb 91 8 Th 229 Nb 92 8 Th 330 Nb 93m 8 Th 234 Mo 93 8 Th 234 Mo 93 8 Pa 231 Tc 97 8 Pa 233 Tc 97 8 Pa 233 Pd 107 8 U 234 Ag 108m 8 U 235 Ag 10m 8 U 236 Cd 113m 8 Dy 237 Sh 12n 8 Pu 236 Sh 121m 8 Pu 238 Sh 122 8 Pu 239 Sh 126 8 Pu 240 Sb 125 8 Pu 240 Sb 126 8 Pu 242 Te 127m 8 Am 243 Te 125m 8 Am 243 Cs 134 8 Cm 245 Cs 137 8<										8
Kr 85 8 Ra 228 Rb 87 8 Ac 227 Sr 90 8 Th 227 Zr 93 8 Th 228 Nb 91 8 Th 229 Nb 92 8 Th 230 Nb 93m 8 Th 232 Nb 94 8 Th 232 Mo 93 7c 97 8 Fc 99 8 U 233 Ru 106 8 U 233 Pd 107 8 U 234 Ag 108m 8 U 238 Ag 110m 8 U 236 Cd 10g 8 U 236 Ag 119m 8 Pu 236 Sn 12m 8 Pu 239 Sn 12a 8 Pu 239 Sn 12b 8 Pu 240 Sb 12c 8 Pu 241 Sb 12c 8 Pu 242 Te 127m 8 Am 241 Te 127m 8 Am 242 Cs 134 8 Cm 244 Ba 133 8 Cm 246 La 137 8 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>8</td>										8
Rb 87 Sr 90 Sr 90 8 Th 227 Tr 32 Nb 91 Nb 92 Nb 93 Nb 93 Nb 94 Mo 93 Tc 97 8 Pa 231 Tc 97 Tc 99 8 U 232 Ru 106 8 U 233 Pd 107 Ag 108m Ag 110m Ag 110m Bu 1238 Nb 1241 Nb 1248 Nb 1258 Nb 125 Nb 126 Nb 126 Nb 127 Nb 128										8
Sr 90 Zr 93 8 Th 227 Nb 91 Nb 91 Nb 92 Nb 93m Nb 94 8 Th 232 Nb 93m Nb 94 8 Th 232 Nb 93m Nb 94 Nb 93 Tc 97 8 Pa 231 Tc 97 8 Pa 231 Tc 99 8 U 232 Ru 106 Pd 107 Ag 108m Ag 110m Cd 109 8 U 236 Cd 113m Sn 119m Sn 119m Sn 123 Sn 123 Sn 126 Sb 127 Sb 126 Sb 127 Sb 128 Sb 128 Sb 128 Sb 128 Sb 129 Sb 126 Sb 126 Sb 126 Sb 127 Sb 126 Sb 127 Sb 128 Sb 1										8
Zr 93										8
Nb 91 Nb 92 Nb 92 Nb 93 Nb 93 Nb 94 Nb 93 Nb 93 Nb 93 Nb 94 Nb 93 Nb 97 Nb 96 Nb 97 Nb 98										8
Nb 92 Nb 93m Nb 94 Nb 93 Tb 97 Tc 97 Rb 98 Ru 106 Pd 107 Ru 108 Ru 108 Ru 108 Ru 109 R										8
Nb 93m Nb 94 Mb 93 Nb 94 Mb 93 Rb 94 Mb 93 Rb 94 Rb 7h 232 Rb 106 Rb 107 Rb 103 Rb 107 Rb 108 Rb 107 Rb 108										8
Nb 94										8
Mo 93 8 Pa 231 Tc 97 8 Pa 233 Tc 99 8 U 232 Ru 106 8 U 233 Pd 107 8 U 234 Ag 108m 8 U 236 Ag 101m 8 U 236 Cd 109 8 U 238 Cd 113m 8 Np 237 Sh 119m 8 Pu 236 Sh 121m 8 Pu 238 Sh 123 8 Pu 239 Sh 124 8 Pu 241 Sh 125 8 Pu 241 Sh 126 8 Pu 241 Te 125m 8 Am 241 Te 125m 8 Am 242 I 129 8 Am 243 Cs 134 8 Cm 242 Cs 135 8 Cm 242 Cs 137 8 Cm 243 Cs 137 6 Cm 243 Cs 138 Cm 246 La 138 Cm 246 La 138 Cm 248 Ce 144 8 Cf 250										8
Tc 97 Tc 99 Ru 106 Ru 106 Ru 107 Ru 108m Rg 108m Rg 109 Rg										8
Tc 99 Ru 106 Pd 107 Ru 107 Ru 108m Ru 108m Ru 108m Ru 108m Ru 108m Ru 109m Ru										8
Ru 106 Pd 107 Ag 108m Ag 108m Ag 108m Ag 110m Cd 109 Cd 113m B										8
Pd 107 Ag 108m Ag 110m Cd 109 Cd 113m Sn 119m Sn 121m Sn 121m Sn 126 Sn 126 Sb 125 Sb 126 Te 125m Te 127m I 129 Cs 134 Cs 135 Cs 137 Ba 133 La 137 La 138 Ce 144 Pm 145 Pm 145 Pm 147 Sm 151 Pm 147 Sm 151 Pm 147 Sm 152 Bu 1036 Bu 1236 Bu 1238 Bu 1241 Bu 1238 Bu 1241 Bu 12										8
Ag 108m Ag 110m Ag 110m Cd 109 B B U 236 U 236 Cd 113m B Np 237 Sn 119m B Np 236 Sn 121m B Np 238 Sn 123 Sn 126 Sb 125 Sb 126 B Pu 241 Sb 126 Te 125m B Am 241 Te 127m B N Am 242 Cs 134 Cs 135 Cs 137 Ba 133 B Cm 246 Cs 137 Ba 133 B Cm 246 Ca 144 Ba 133 B Cm 246 Ce 144 Pm 145 Pm 145 Pm 145 Pm 147 Sm 151 Bu 152 Eu 154 Bu 1036 Bu 1236 B										8
Ag 110m Cd 109										8
Cd 109 8 U 238 Cd 113m 8 Np 237 Sn 119m 8 Pu 236 Sn 121m 8 Pu 238 Sn 123 8 Pu 239 Sn 126 8 Pu 240 Sb 125 8 Pu 241 Sb 126 8 Pu 242 Te 125m 8 Am 241 Te 127m 8 Am 243 Cs 134 8 Cm 242 Cs 134 8 Cm 243 Cs 137 8 Cm 243 Cs 137 8 Cm 245 Ba 133 8 Cm 246 La 137 8 Cm 246 La 138 8 Cm 248 Ce 144 8 Cf 250 Pm 145 8 Cf 251 Sm 151 8 Other a Eu 152 8 Other b/g Eu 154 0 0	-									8
Cd 113m 8 Np 237 Sn 119m 8 Pu 236 Sn 121m 8 Pu 238 Sn 123 8 Pu 240 Sh 126 8 Pu 241 Sb 125 8 Pu 242 Te 125m 8 Am 241 Te 127m 8 Am 242m I 129 8 Am 243 Cs 134 8 Cm 242 Cs 135 6 Cm 244 Ba 133 8 Cm 245 La 137 8 Cm 246 La 138 6 Cm 248 Ce 144 8 Cf 249 Pm 145 8 Cf 250 Pm 147 8 Cf 251 Sm 151 8 Other a Eu 152 8 Other b/g Eu 154 Total a 0	_									8
Sn 119m 8 Pu 236 Sn 121m 8 Pu 238 Sn 123 8 Pu 239 Sn 126 8 Pu 240 Sb 125 8 Pu 241 Sb 126 8 Pu 242 Te 125m 8 Am 241 Te 127m 8 Am 243 I 129 8 Am 243 Cs 134 8 Cm 242 Cs 135 8 Cm 243 Cs 137 6 Cm 244 Ba 133 8 Cm 245 La 137 8 Cm 246 La 138 Cm 248 Cf 249 Ce 144 8 Cf 250 Pm 147 8 Cf 251 Sm 151 8 Other a Eu 152 8 Other b/g Eu 154 8 Total a 0										
Sn 121m 8 Pu 238 Sn 123 8 Pu 239 Sn 126 8 Pu 240 Sb 125 8 Pu 241 Sb 126 8 Pu 242 Te 125m 8 Am 241 Te 127m 8 Am 243 I 129 8 Am 243 Cs 134 Cm 242 Cm 242 Cs 135 Cm 243 Cm 243 Cs 137 6 Cm 244 Ba 133 Cm 246 Cm 246 La 137 8 Cm 248 Ce 144 8 Cf 249 Pm 145 8 Cf 250 Pm 147 8 Cf 251 Sm 151 8 Other a Eu 152 8 Other b/g Eu 154 8 Total a 0						-				8 8
Sn 123 8 Pu 239 Sn 126 8 Pu 240 Sb 125 8 Pu 241 Sb 126 8 Pu 242 Te 125m 8 Am 241 Te 127m 8 Am 242m I 129 8 Am 243 Cs 134 8 Cm 242 Cs 135 8 Cm 243 Cs 137 8 Cm 244 Ba 133 8 Cm 245 La 137 8 Cm 246 La 138 6 Cm 248 Ce 144 8 Cf 249 Pm 145 8 Cf 250 Pm 147 8 Cf 252 Sm 147 8 Other a Sm 151 8 Other a Eu 154 8 Other b/g Eu 154 8 Total a 0										
Sn 126 8 Pu 240 Sb 125 8 Pu 241 Sb 126 8 Pu 242 Te 125m 8 Am 241 Te 127m 8 Am 242m I 129 8 Am 243 Cs 134 8 Cm 242 Cs 135 6 Cm 243 Cs 137 6 Cm 244 Ba 133 8 Cm 245 La 137 8 Cm 246 La 138 Cm 248 Cf 249 Ce 144 8 Cf 250 Pm 145 8 Cf 251 Sm 147 8 Cf 252 Sm 147 8 Other a Eu 152 8 Other b/g Eu 154 Total a 0										8
Sb 125 8 Pu 241 Sb 126 8 Pu 242 Te 125m 8 Am 241 Te 127m 8 Am 242m I 129 8 Am 243 Cs 134 8 Cm 242 Cs 135 8 Cm 243 Cs 137 6 Cm 244 Ba 133 8 Cm 245 La 137 8 Cm 246 La 138 Cm 248 Cf 249 Ce 144 8 Cf 250 Pm 145 8 Cf 250 Pm 147 8 Cf 251 Sm 147 8 Cf 252 Sm 151 8 Other a Eu 152 8 Other b/g Eu 154 8 Total a 0										8
Sb 126 8 Pu 242 Te 125m 8 Am 241 Te 127m 8 Am 242m I 129 8 Am 243 Cs 134 8 Cm 242 Cs 135 8 Cm 243 Cs 137 6 Cm 244 Ba 133 8 Cm 245 La 137 8 Cm 246 La 138 Cm 248 Cf 249 Ce 144 8 Cf 250 Pm 145 8 Cf 251 Pm 147 8 Cf 252 Sm 151 8 Other a Eu 152 8 Other b/g Eu 154 8 Total a 0										8
Te 125m Te 127m I 129										8 8
Te 127m I 129										· ·
I 129 8 Am 243 Cs 134 8 Cm 242 Cs 135 8 Cm 243 Cs 137 6 Cm 244 Ba 133 8 Cm 245 La 137 8 Cm 246 La 138 Cm 248 Cf 249 Ce 144 8 Cf 250 Pm 145 8 Cf 251 Pm 147 8 Cf 251 Sm 147 8 Cf 252 Sm 151 8 Other a Eu 152 8 Other b/g Eu 154 8 Total a 0 0										8
Cs 134 8 Cm 242 Cs 135 8 Cm 243 Cs 137 6 Cm 244 Ba 133 8 Cm 245 La 137 8 Cm 246 La 138 6 Cm 248 Ce 144 8 Cf 249 Pm 145 8 Cf 250 Pm 147 8 Cf 251 Sm 147 8 Cf 252 Sm 151 8 Other a Eu 152 8 Other b/g Eu 154 8 Total a 0										8
Cs 135 8 Cm 243 Cs 137 6 Cm 244 Ba 133 8 Cm 245 La 137 8 Cm 246 La 138 6 Cm 248 Ce 144 8 Cf 249 Pm 145 8 Cf 250 Pm 147 8 Cf 251 Sm 147 8 Cf 252 Sm 151 8 Other a Eu 152 8 Other b/g Eu 154 8 Total a 0		İ								8
Cs 137 6 Cm 244 Ba 133 8 Cm 245 La 137 8 Cm 246 La 138 6 Cm 248 Ce 144 8 Cf 249 Pm 145 8 Cf 250 Pm 147 8 Cf 251 Sm 147 8 Cf 252 Sm 151 8 Other a Eu 152 8 Other b/g Eu 154 8 Total a 0										8
Ba 133 La 137 La 138 Ce 144 Pm 145 Pm 147 Sm 147 Sm 151 Eu 152 Eu 154 Ba 138 C m 248 C m 248 C m 248 C m 249 C m 249 C m 249 C f 250 C f 250 C f 251 C f 252 C		İ								8
La 137 La 138 Ce 144 Pm 145 Pm 147 Sm 147 Sm 151 Eu 152 Eu 154 R										8
La 138 Ce 144 Pm 145 Pm 147 Sm 147 Sm 151 Eu 152 Eu 154 R		İ								8
Ce 144 8 Cf 249 Pm 145 8 Cf 250 Pm 147 8 Cf 251 Sm 147 8 Cf 252 Sm 151 8 Other a Eu 152 8 Other b/g Eu 154 8 Total a 0 0										8
Pm 145 8 Cf 250 Pm 147 8 Cf 251 Sm 147 8 Cf 252 Sm 151 8 Other a Eu 152 8 Other b/g Eu 154 8 Total a 0 0		İ								8
Pm 147 8 Cf 251 Sm 147 8 Cf 252 Sm 151 8 Other a Eu 152 8 Other b/g Eu 154 8 Total a 0										8
Sm 147 8 Cf 252 Sm 151 8 Other a Eu 152 8 Other b/g Eu 154 8 Total a 0 0		İ								8
Sm 151 8 Other a Eu 152 8 Other b/g Eu 154 8 Total a 0 0										8
Eu 152 8 Other b/g Eu 154 8 Total a 0 0		İ								8
Eu 154 8 Total a 0 0										
		İ								
Eu 155 8 Total b/g 0 1.26E-02 C	Eu 155	İ			8	Total b/g	0		1.26E-02	CC 2

Bands (Upper and Lower)

A a factor of 1.5 B a factor of 3 C a factor of 10

D a factor of 100

E a factor of 1000

Note: Bands quantify uncertainty in

mean radioactivity.

Code

- 1 Measured activity
- 2 Derived activity (best estimate)
- 3 Derived activity (upper limit)
- 4 Not present
- 5 Present but not significant
- 6 Likely to be present but not assessed
- 7 Present in significant quantities but not determined
- 8 Not expected to be present in significant quantity