

| WASTE STREAM | 2D24.2 | MSSS Compartment 17 |
|--------------|--------|---------------------|
|--------------|--------|---------------------|

**SITE** Sellafield

**SITE OWNER** Nuclear Decommissioning Authority

**WASTE CUSTODIAN** Sellafield Ltd

**WASTE TYPE** ILW

#### WASTE VOLUMES

|                        | Reported (m <sup>3</sup> ) | OR | Conditioned (m <sup>3</sup> ) | Packaged (m <sup>3</sup> ) |
|------------------------|----------------------------|----|-------------------------------|----------------------------|
| Stocks:                | At 1.4.2025                |    |                               |                            |
| Future arisings:       | ~ 442.0                    |    |                               |                            |
| Total future arisings: | 0.0                        |    |                               |                            |
| Total waste volume:    | 442.0                      |    |                               |                            |

Number of waste packages in stock: At 1.4.2025..... - packages

Comment on arising rates: There are no future arisings.

Additional information on quantities: Waste volume includes volume of swarf/sludge, miscellaneous beta/gamma and aggregate. Waste volumes are estimates derived from known fuel decanning campaigns and storage volumes.

Uncertainty factors on volumes:

|                |        |                   |     |
|----------------|--------|-------------------|-----|
| Stock (upper): | x 1.50 | Arisings (upper): | x - |
| Stock (lower): | x 0.66 | Arisings (lower): | x - |

**WASTE SOURCE** Wastes associated with Magnox fuel decanning and off-site processes (mainly CX) and their subsequent underwater storage.

#### PHYSICAL CHARACTERISTICS

General description: The waste is debris from the process of decanning Magnox reactor fuel elements plus some Magnox waste contained in mild steel drums and tins from Chapelcross. Both have been stored under water since processing. The waste includes pieces of Magnox cans, fins and all other fuel element components, including fuel. Magnox components are corroded by the storage water, and partially converted to magnesium hydroxide as a fixed surface layer and a loose sludge. Fuel is similarly corroded to oxides of uranium. Mild steel cans may be partially corroded.

Changes since waste generated: Both Swarf and uranium from Magnox decanning, and Magnox and debris from miscellaneous processes (mainly from Chapelcross) have reacted with storage cover water to form corrosion products.

Bulk density (t/m<sup>3</sup>): ~ 0.82

Comment on density: Bulk density is solids only - includes water content based on assumptions of draining characteristics. Bulk density including interstitial liquor = 1.46t/m<sup>3</sup>, bulk density with cover liquor and interstitial liquor = 1.43t/m<sup>3</sup>. Average decanning debris is ~1.6t/m<sup>3</sup> and average MBGW is ~3.2t/m<sup>3</sup>.

#### CHEMICAL COMPOSITION

General description and components (%wt): Magnox swarf (22.95%), Magnox sludge (16.91%), Al/Al(OH)<sub>3</sub> (0%), U/UO<sub>2</sub>/U<sub>3</sub>O<sub>8</sub> (11.85%), MBGW (scrap, filters, cans, etc.) (0.79%), aggregate (limestone) (0%), water (46.84%), others (0.66%). Includes interstitial liquor and cover liquor. Total volume including cover liquor = 474 m<sup>3</sup>.

Chemical state: Neutral

Sheet metal proportion / thickness: No significant quantities of sheet metal, although fabricated items are present, e.g. Chapelcross buckets, together with small quantities of miscellaneous items of decanner waste, such as HEPA filters are present. Pieces of Magnox metal are present.

Metals and alloys (%wt):

|                           | (%wt)  | Type(s) / Grades(s) with proportions | % of total C14 activity |
|---------------------------|--------|--------------------------------------|-------------------------|
| Stainless steel.....      | ~ 0.05 | Mainly SS316 and SS304.              |                         |
| Other ferrous metals..... | ~ 4.5  | Carbon steels.                       |                         |
| Iron.....                 | NE     | -                                    |                         |
| Aluminium.....            | < 0.01 | -                                    |                         |
| Beryllium.....            | NE     | -                                    |                         |
| Cobalt.....               | NE     | -                                    |                         |
| Copper.....               | NE     | -                                    |                         |
| Lead.....                 | NE     | -                                    |                         |
| Magnox/Magnesium.....     | ~ 22.2 | Predominantly Magnox.                |                         |
| Nickel.....               | NE     | -                                    |                         |
| Titanium.....             | NE     | -                                    |                         |
| Uranium.....              | ~ 7.3  | -                                    |                         |
| Zinc.....                 | NE     | -                                    |                         |
| Zircaloy/Zirconium.....   | ~ 0.05 | -                                    |                         |
| Other metals.....         | ~ 0.07 | -                                    |                         |

Organics (%wt):

|                                     | (%wt)  | Type(s) and comment | % of total C14 activity |
|-------------------------------------|--------|---------------------|-------------------------|
| Total cellulotics.....              | = 0    | -                   |                         |
| Paper, cotton.....                  | -      | -                   |                         |
| Wood.....                           | -      | -                   |                         |
| Halogenated plastics.....           | ~ 0.06 | -                   |                         |
| Total non-halogenated plastics..... | = 0    | -                   |                         |
| Condensation polymers.....          | -      | -                   |                         |
| Others.....                         | -      | -                   |                         |
| Organic ion exchange materials..... | -      | -                   |                         |
| Total rubber.....                   | NE     | -                   |                         |
| Halogenated rubber.....             | -      | -                   |                         |
| Non-halogenated rubber.....         | -      | -                   |                         |
| Hydrocarbons.....                   | -      | -                   |                         |
| Oil or grease.....                  | ~ 0.01 | -                   |                         |
| Fuel.....                           | NE     | -                   |                         |
| Asphalt/Tarmac (cont.coal tar)..... | NE     | -                   |                         |
| Asphalt/Tarmac (no coal tar).....   | NE     | -                   |                         |
| Bitumen.....                        | NE     | -                   |                         |
| Others.....                         | NE     | -                   |                         |
| Other organics.....                 | = 0    | -                   |                         |

Other materials (%wt):

|                                       | (%wt)  | Type(s) and comment                                                                          | % of total C14 activity |
|---------------------------------------|--------|----------------------------------------------------------------------------------------------|-------------------------|
| Inorganic ion exchange materials..... | NE     | -                                                                                            |                         |
| Inorganic sludges and flocs.....      | ~ 20.1 | -                                                                                            |                         |
| Soil.....                             | NE     | -                                                                                            |                         |
| Brick/Stone/Rubble.....               | = 0    | -                                                                                            |                         |
| Cementitious material.....            | NE     | -                                                                                            |                         |
| Sand.....                             | NE     | -                                                                                            |                         |
| Glass/Ceramics.....                   | ~ 0.46 | -                                                                                            |                         |
| Graphite.....                         | = 0    | -                                                                                            |                         |
| Desiccants/Catalysts.....             | NE     | -                                                                                            |                         |
| Asbestos.....                         | NE     | -                                                                                            |                         |
| Non/low friable.....                  | -      | -                                                                                            |                         |
| Moderately friable.....               | -      | -                                                                                            |                         |
| Highly friable.....                   | -      | -                                                                                            |                         |
| Free aqueous liquids.....             | ~ 44.6 | Includes interstitial liquor and cover liquor. Total volume including cover liquor = 474 m3. |                         |
| Free non-aqueous liquids.....         | NE     | -                                                                                            |                         |
| Powder/Ash.....                       | NE     | -                                                                                            |                         |

#### COMPONENTS OF MATERIALS, WASTE PROPERTIES, MATERIALS NOT CONTRIBUTING TO MASS

Inorganic anions (%wt):

|                | (%wt) | Type(s) and comment |
|----------------|-------|---------------------|
| Fluoride.....  | TR    | -                   |
| Chloride.....  | TR    | -                   |
| Iodide.....    | TR    | -                   |
| Cyanide.....   | NE    | -                   |
| Carbonate..... | P     | -                   |
| Nitrate.....   | TR    | -                   |
| Nitrite.....   | TR    | -                   |
| Phosphate..... | TR    | -                   |
| Sulphate.....  | TR    | -                   |
| Sulphide.....  | TR    | -                   |

Materials of interest for waste acceptance criteria:

|                                                | (%wt) | Type(s) and comment                              |
|------------------------------------------------|-------|--------------------------------------------------|
| Combustible metals.....                        | = 0   | -                                                |
| Low flash point liquids.....                   | = 0   | -                                                |
| Explosive materials.....                       | = 0   | -                                                |
| Phosphorus.....                                | = 0   | -                                                |
| Hydrides.....                                  | P     | Trace, passivated.                               |
| Biological etc. materials.....                 | = 0   | -                                                |
| Biodegradable materials.....                   |       |                                                  |
| Putrescible wastes.....                        | P     | Cellulosics.                                     |
| Non-putrescible wastes.....                    | P     | Organics - plastics and rubbers.                 |
| Corrosive materials.....                       | = 0   | -                                                |
| Pyrophoric materials.....                      | P     | -                                                |
| Generating toxic gases.....                    | = 0   | -                                                |
| Reacting with water.....                       | P     | <5%.                                             |
| Higher activity particles.....                 | P     | Radioactive sludges and solids.                  |
| Soluble solids as bulk chemical compounds..... | P     | Elemental and hydroxides, oxides and carbonates. |
| .....                                          |       |                                                  |

Hazardous substances / non hazardous pollutants:

-

|                             | (%wt) | Type(s) and comment             |
|-----------------------------|-------|---------------------------------|
| Acrylamide.....             |       | -                               |
| Benzene.....                | = 0   | -                               |
| Chlorinated solvents.....   |       | -                               |
| Formaldehyde.....           |       | -                               |
| Organometallics.....        |       | -                               |
| Phenol.....                 | = 0   | -                               |
| Styrene.....                |       | -                               |
| Tri-butyl phosphate.....    | = 0   | -                               |
| Other organophosphates..... |       | -                               |
| Vinyl chloride.....         | P     | -                               |
| Arsenic.....                | = 0   | -                               |
| Barium.....                 |       | -                               |
| Boron.....                  | NE    | Traces - elemental and borates. |
| Boron (in Boral).....       |       | -                               |
| Boron (non-Boral).....      |       | -                               |
| Cadmium.....                | = 0   | -                               |
| Caesium.....                |       | -                               |
| Selenium.....               | = 0   | -                               |
| Chromium.....               | P     | In steels.                      |
| Molybdenum.....             | P     | In steels.                      |
| Thallium.....               |       | -                               |
| Tin.....                    | P     | Traces.                         |
| Vanadium.....               | P     | In steels.                      |
| Mercury compounds.....      |       | -                               |
| Others.....                 | NE    | -                               |

Complexing agents (%wt):

No

|                                | (%wt) | Type(s) and comment |
|--------------------------------|-------|---------------------|
| EDTA.....                      |       | -                   |
| DPTA.....                      |       | -                   |
| NTA.....                       |       | -                   |
| Polycarboxylic acids.....      |       | -                   |
| Other organic complexants..... |       | -                   |
| Total complexing agents.....   |       | -                   |

Physical components:

|                                         | Number | Type(s) and comment |
|-----------------------------------------|--------|---------------------|
| Sources.....                            |        | -                   |
| Electronic & Electrical Equipment (EEE) |        | -                   |
| EEE Type 1.....                         |        | -                   |
| EEE Type 2.....                         |        | -                   |
| EEE Type 3.....                         |        | -                   |
| EEE Type 4.....                         |        | -                   |
| EEE Type 5.....                         |        | -                   |

## TREATMENT, PACKAGING AND DISPOSAL

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

| Treatment                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | On-site / Off-site | Stream volume % |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|
| Size reduction<br>Decay storage<br>Low force compaction<br>Supercompaction (HFC)<br>Incineration<br>Drying/dewatering/liquid separation<br>Tie down/fixatives/strippable coating/painting application<br>Decontamination<br>Metal treatment<br>Recycling / reuse<br>Thermal treatment, including vitrification<br>Encapsulation<br>Polymer encapsulation<br>Other physical treatment<br>Other chemical treatment<br>Containerisation<br>Treatment not yet determined<br>None |                    | 100.0           |

Comments on planned treatments:

-

Conditioning method:

The waste will be retrieved from MSSS and stored in an unconditioned state for a period of 70 years. Following the period of storage, it will be retrieved (from storage) and conditioned for ultimate disposal to the GDF.

Conditioning plants:

| Plant Name | Location |
|------------|----------|
|            |          |

Likely conditioning matrix:

Non-standard

Further information on the conditioning matrix:

5:1 GGBS/CEM 1

### Waste Packaging:

Likely container type:

| Container                    | Waste packaged (vol%) | Waste loading (m³) | Payload (m³) | Number of packages | Estimated start date for packaging |
|------------------------------|-----------------------|--------------------|--------------|--------------------|------------------------------------|
| Sellafield enhanced 3 m³ box | 100.0                 | 1.0                | 2.1          | 442                | -                                  |

Range in container waste loading:

There will be considerable variability in unconditioned waste volume per package due to variations in skip loading and content. The actual number of packages produced is identified in the Sellafield Decommissioning Product and Secondary Waste Plan.  
391 Boxes plus 51 from residuals = 442 Boxes

Other information on packaging and conditioning:

Waste matrix (as retrieved) will be in-filled with grout. A second pour of capping grout will be added. Void spaces between Skip wall and Box wall will be filled with grout.

Conditioned density (t/m³):

~ 2.0

Conditioned density comment:

Density of conditioned waste will be fairly uniform.

### Management Routes:

| Disposal Route                                                                     | Stream volume % | Raw density t/m³ | Start date |
|------------------------------------------------------------------------------------|-----------------|------------------|------------|
| Expected to be consigned to a Near Site, Near Surface Disposal Facility (Scotland) | 100.0           |                  |            |
| Expected to be Non-NSD HAW managed under Scottish Government's policy              |                 |                  |            |
| Expected to be disposed to LLW Vaults NRS Dounreay                                 |                 |                  |            |
| Expected to be consigned to the Geological Disposal Facility                       |                 |                  |            |
| Expected to be consigned to a Near Surface Disposal Facility                       |                 |                  |            |
| Expected to be consigned to the LLW Repository                                     |                 |                  |            |
| Expected to be consigned to a Landfill Facility                                    |                 |                  |            |
| Expected to be disposed On-Site                                                    |                 |                  |            |
| Expected to be managed by In-Situ Disposal                                         |                 |                  |            |
| Expected to be consigned to an Incineration Facility                               |                 |                  |            |
| Expected to be consigned to a Metal Treatment Facility                             |                 |                  |            |
| Expected to be Out of Scope                                                        |                 |                  |            |
| Expected to be recycled / reused                                                   |                 |                  |            |
| Disposal route not known                                                           |                 |                  |            |

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

Opportunities for alternative disposal routing: No

| Baseline Management Route | Opportunity Management Route | Stream volume (%) | Opportunity Confidence | Comment |
|---------------------------|------------------------------|-------------------|------------------------|---------|
| -                         | -                            | -                 | -                      | -       |

#### RADIOACTIVITY

Source: Irradiated fuel, fuel components residues from isotope handling operations

Uncertainty: Accuracy is generally good for fuel based residues, based on decanning records arisings and fuel carry over evaluations. For miscellaneous waste items, where records are incomplete, the accuracy is worse.

Measurement of radioactivities: Isotopic specific activity (TBq/m<sup>3</sup>) is derived by dividing the estimated total activity of the isotope by the total volume of the waste.

Chemical form of radionuclides:

- H-3: Present in elemental and reacted forms.
- C-14: Present in elemental and reacted forms.
- Cl-36: Present in elemental and reacted forms.
- Se-79: Present in elemental and reacted forms.
- Tc-99: Present in elemental and reacted forms.
- I-129: Present in elemental and reacted forms.
- Ra: Present in elemental forms
- Th: Present in elemental and reacted forms.
- U: Present in metallic and reacted forms (oxides and possibly hydride).
- Np: Present in elemental and reacted forms.
- Pu: Present in metallic and mixed oxide forms.

| WASTE STREAM |                            |                   | 2D24.2          |                   | MSSS Compartment 17 |                            |                   |                 |                   |
|--------------|----------------------------|-------------------|-----------------|-------------------|---------------------|----------------------------|-------------------|-----------------|-------------------|
| Nuclide      | Mean radioactivity, TBq/m³ |                   |                 |                   | Nuclide             | Mean radioactivity, TBq/m³ |                   |                 |                   |
|              | Waste at<br>1.4.2025       | Bands and<br>Code | Future Arisings | Bands and<br>Code |                     | Waste at<br>1.4.2025       | Bands and<br>Code | Future Arisings | Bands and<br>Code |
| H 3          | 6.55E-02                   | A A 2             |                 |                   | Gd 153              | 2.03E-18                   | A A 2             |                 |                   |
| Be 10        | 4.92E-07                   | A A 2             |                 |                   | Ho 163              | 6.52E-11                   | A A 2             |                 |                   |
| C 14         | 6.76E-03                   | A A 2             |                 |                   | Ho 166m             | 6.31E-07                   | A A 2             |                 |                   |
| Na 22        |                            |                   |                 |                   | Tm 170              | 3.79E-34                   | A A 2             |                 |                   |
| Al 26        |                            |                   |                 |                   | Tm 171              | 1.17E-09                   | A A 2             |                 |                   |
| Cl 36        |                            |                   |                 |                   | Lu 174              |                            |                   |                 |                   |
| Ar 39        |                            |                   |                 |                   | Lu 176              |                            |                   |                 |                   |
| Ar 42        |                            |                   |                 |                   | Hf 178n             |                            |                   |                 |                   |
| K 40         | 1.92E-08                   | A A 2             |                 |                   | Hf 182              | 1.39E-15                   | A A 2             |                 |                   |
| Ca 41        | 2.08E-04                   | A A 2             |                 |                   | Pt 193              |                            |                   |                 |                   |
| Mn 53        | 5.79E-12                   | A A 2             | Tl 204          | 3.22E-14          | A A 2               |                            |                   |                 |                   |
| Mn 54        |                            |                   | Pb 205          |                   |                     |                            |                   |                 |                   |
| Fe 55        | 6.61E-04                   | A B 2             | Pb 210          | 1.97E-09          | A A 2               |                            |                   |                 |                   |
| Co 60        | 9.55E-02                   | A A 2             | Bi 208          |                   |                     |                            |                   |                 |                   |
| Ni 59        | 7.72E-03                   | A A 2             | Bi 210m         | 1.66E-22          | A A 2               |                            |                   |                 |                   |
| Ni 63        | 7.54E-01                   | A A 2             | Po 210          | 1.90E-09          | A A 2               |                            |                   |                 |                   |
| Zn 65        |                            |                   | Ra 223          | 2.85E-08          | A A 2               |                            |                   |                 |                   |
| Se 79        | 5.64E-05                   | A A 2             | Ra 225          | 6.84E-11          | A A 2               |                            |                   |                 |                   |
| Kr 81        |                            |                   | Ra 226          | 6.16E-09          | A A 2               |                            |                   |                 |                   |
| Kr 85        | 8.83E-01                   | A A 2             | Ra 228          | 1.28E-13          |                     |                            |                   |                 |                   |
| Rb 87        | 3.55E-21                   | A A 2             | Ac 227          | 2.86E-08          | A A 2               |                            |                   |                 |                   |
| Sr 90        | 2.95E+01                   | A A 2             | Th 227          | 2.82E-08          | A A 2               |                            |                   |                 |                   |
| Zr 93        | 1.76E-03                   | A A 2             | Th 228          | 2.21E-06          | A A 2               |                            |                   |                 |                   |
| Nb 91        |                            |                   | Th 229          | 6.86E-11          | A A 2               |                            |                   |                 |                   |
| Nb 92        | 7.56E-15                   | A A 2             | Th 230          | 7.00E-07          | A A 2               |                            |                   |                 |                   |
| Nb 93m       | 1.42E-03                   | A A 2             | Th 232          | 4.37E-13          | A A 2               |                            |                   |                 |                   |
| Nb 94        | 1.03E-07                   | A A 2             | Th 234          | 2.13E-03          | A A 2               |                            |                   |                 |                   |
| Mo 93        | 4.86E-06                   | A B 2             | Pa 231          | 5.73E-08          | A A 2               |                            |                   |                 |                   |
| Tc 97        |                            |                   | Pa 233          | 1.12E-04          | A A 2               |                            |                   |                 |                   |
| Tc 99        | 1.43E-02                   | A A 2             | U 232           | 2.15E-06          | A A 2               |                            |                   |                 |                   |
| Ru 106       | 1.97E-08                   | A B 2             | U 233           | 2.16E-08          | A A 2               |                            |                   |                 |                   |
| Pd 107       | 1.06E-04                   | A A 2             | U 234           | 1.87E-03          | A A 2               |                            |                   |                 |                   |
| Ag 108m      | 1.64E-08                   | A A 2             | U 235           | 5.06E-05          | A A 2               |                            |                   |                 |                   |
| Ag 110m      | 9.07E-16                   | A A 2             | U 236           | 2.29E-04          | A A 2               |                            |                   |                 |                   |
| Cd 109       | 3.40E-16                   | A A 2             | U 238           | 2.13E-03          | A A 2               |                            |                   |                 |                   |
| Cd 113m      | 2.31E-14                   | A A 2             | Np 237          | 1.12E-04          | A A 2               |                            |                   |                 |                   |
| Sn 119m      |                            |                   | Pu 236          | 5.19E-09          | A A 2               |                            |                   |                 |                   |
| Sn 121m      | 1.79E-07                   | A A               | Pu 238          | 3.65E-01          | A A 2               |                            |                   |                 |                   |
| Sn 123       |                            |                   | Pu 239          | 8.93E-01          | A A 2               |                            |                   |                 |                   |
| Sn 126       | 7.74E-04                   | A A 2             | Pu 240          | 1.06E+00          | A A 2               |                            |                   |                 |                   |
| Sb 125       | 1.47E-03                   | A A 2             | Pu 241          | 1.78E+01          | A A 2               |                            |                   |                 |                   |
| Sb 126       | 1.08E-04                   | A A 2             | Pu 242          | 6.62E-04          | A A 2               |                            |                   |                 |                   |
| Te 125m      | 3.69E-04                   | A A 2             | Am 241          | 2.83E+00          | A A 2               |                            |                   |                 |                   |
| Te 127m      |                            |                   | Am 242m         | 4.57E-03          | A A 2               |                            |                   |                 |                   |
| I 129        | 3.15E-05                   | A A 2             | Am 243          | 1.51E-03          | A A 2               |                            |                   |                 |                   |
| Cs 134       | 2.48E-04                   | A A 2             | Cm 242          | 3.77E-03          | A A 2               |                            |                   |                 |                   |
| Cs 135       | 7.60E-04                   | A A 2             | Cm 243          | 7.02E-04          | A A 2               |                            |                   |                 |                   |
| Cs 137       | 4.38E+01                   | A A 2             | Cm 244          | 1.02E-02          | A A 2               |                            |                   |                 |                   |
| Ba 133       | 8.32E-10                   | A A 2             | Cm 245          | 9.60E-07          | A A 2               |                            |                   |                 |                   |
| La 137       |                            |                   | Cm 246          | 7.18E-08          | A A 2               |                            |                   |                 |                   |
| La 138       | 9.84E-14                   | A A 2             | Cm 248          | 3.70E-23          |                     |                            |                   |                 |                   |
| Ce 144       | 4.91E-11                   | A A 2             | Cf 249          | 5.66E-14          | A A 2               |                            |                   |                 |                   |
| Pm 145       |                            |                   | Cf 250          | 3.08E-14          | A A 2               |                            |                   |                 |                   |
| Pm 147       | 1.90E-02                   | A A 2             | Cf 251          | 5.18E-16          | A A 2               |                            |                   |                 |                   |
| Sm 147       | 5.69E-13                   |                   | Cf 252          | 4.11E-18          | A A 2               |                            |                   |                 |                   |
| Sm 151       | 3.42E-01                   | A A 2             | Unsp a          | 8.97E-01          |                     |                            |                   |                 |                   |
| Eu 152       | 2.12E-03                   | A A 2             | Unsp b/g        | 7.63E+01          |                     |                            |                   |                 |                   |
| Eu 154       | 1.50E-01                   | A A 2             | Total a         | 6.07E+00          | *                   |                            |                   | 0               | *                 |
| Eu 155       | 1.36E-02                   | A A 2             | Total b/g       | 1.70E+02          | *                   |                            |                   | 0               | *                 |

#### 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 the 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  
\* Total calculated from the 114 declared radionuclides