

WASTE STREAM	9G73	Wet / Mobile Waste - WRATS
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SITE Trawsfynydd

SITE OWNER Nuclear Decommissioning Authority

WASTE CUSTODIAN Magnox Limited

WASTE TYPE ILW

WASTE VOLUMES

	Reported
Stocks: At 1.4.2019.....	3.0 m ³
Total future arisings:	0 m ³
Total waste volume:	3.0 m ³

Comment on volumes: There are no more arisings of this waste stream.

Uncertainty factors on volumes: Stock (upper): x 1.2 Arisings (upper) x
 Stock (lower): x 0.8 Arisings (lower) x

WASTE SOURCE Walnut Shells, dusts, pond scabbing dust, wet solids from aqueous slurries. No % data available.

PHYSICAL CHARACTERISTICS

General description: No breakdown of the waste in this stream is available.

Physical components (%vol): No breakdown of the waste in this stream is available.

Sealed sources: -

Bulk density (t/m³): 1.5

Comment on density: No data available.

CHEMICAL COMPOSITION

General description and components (%wt): No breakdown of the waste in this stream is available.

Chemical state: -

Chemical form of radionuclides: H-3: Tritium may be present as water or in the form of other inorganic or organic compounds.
 C-14: Chemical form of carbon 14 has not been determined but may be graphite.
 Se-79: The chemical form of selenium has not been determined.
 Tc-99: The chemical form of technetium has not been determined.
 Ra: Radium isotope content is insignificant.
 Th: Thorium isotope content is insignificant.
 U: Chemical form of uranium isotopes has not been determined but may be uranium oxides.
 Np: The chemical form of neptunium has not been determined.
 Pu: Chemical form of plutonium isotopes has not been determined but may be plutonium oxides.

Metals and alloys (%wt): -

Stainless steel.....	NE
Other ferrous metals.....	NE
Iron.....	
Aluminium.....	NE
Beryllium.....	
Cobalt.....	
Copper.....	NE
Lead.....	NE
Magnox/Magnesium.....	NE
Nickel.....	
Titanium.....	

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	Uranium.....	
	Zinc.....	NE
	Zircaloy/Zirconium.....	NE
	Other metals.....	NE
Organics (%wt):	-	
	Total cellulose.....	NE
	Paper, cotton.....	NE
	Wood.....	NE
	Halogenated plastics	NE
	Total non-halogenated plastics.....	NE
	Condensation polymers.....	NE
	Others.....	NE
	Organic ion exchange materials....	NE
	Total rubber.....	NE
	Halogenated rubber	NE
	Non-halogenated rubber.....	NE
	Hydrocarbons.....	
	Oil or grease	
	Fuel.....	
	Asphalt/Tarmac (cont.coal tar)...	
	Asphalt/Tarmac (no coal tar)....	
	Bitumen.....	
	Others.....	
	Other organics.....	NE
Other materials (%wt):	-	
	Inorganic ion exchange materials.	0
	Inorganic sludges and flocs.....	0
	Soil.....	0
	Brick/Stone/Rubble.....	0
	Cementitious material.....	0
	Sand.....	
	Glass/Ceramics.....	0
	Graphite.....	0
	Desiccants/Catalysts.....	
	Asbestos.....	NE
	Non/low friable.....	
	Moderately friable.....	
	Highly friable.....	
	Free aqueous liquids.....	NE
	Free non-aqueous liquids.....	NE
	Powder/Ash.....	NE
Inorganic anions (%wt):	-	

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Fluoride.....	NE
Chloride.....	NE
Iodide.....	NE
Cyanide.....	NE
Carbonate.....	NE
Nitrate.....	NE
Nitrite.....	NE
Phosphate.....	NE
Sulphate.....	NE
Sulphide.....	NE

Materials of interest for waste acceptance criteria:

The possible presence of materials likely to represent a fire or other non-radiological hazard has not been fully assessed.

Combustible metals.....	NE
Low flash point liquids.....	NE
Explosive materials.....	NE
Phosphorus.....	NE
Hydrides.....	NE
Biological etc. materials.....	NE
Biodegradable materials.....	
Putrescible wastes.....	NE
Non-putrescible wastes.....	
Corrosive materials.....	NE
Pyrophoric materials.....	NE
Generating toxic gases.....	NE
Reacting with water.....	NE
Active particles.....	
Soluble solids as bulk chemical compounds.....	

Hazardous substances / non hazardous pollutants:

-	
Acrylamide.....	
Benzene.....	
Chlorinated solvents.....	
Formaldehyde.....	
Organometallics.....	
Phenol.....	
Styrene.....	
Tri-butyl phosphate.....	
Other organophosphates.....	
Vinyl chloride.....	
Arsenic.....	
Barium.....	
Boron.....	

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Cadmium.....
 Caesium.....
 Selenium.....
 Chromium.....
 Molybdenum.....
 Thallium.....
 Tin.....
 Vanadium.....
 Mercury compounds.....
 Others.....
 Electronic Electrical Equipment (EEE)
 EEE Type 1.....
 EEE Type 2.....
 EEE Type 3.....
 EEE Type 4.....
 EEE Type 5.....

Complexing agents (%wt): No
 EDTA.....
 DPTA.....
 NTA.....
 Polycarboxylic acids.....
 Other organic complexants.....
 Total complexing agents..... 0

PACKAGING AND CONDITIONING

Conditioning method: This waste stream will be co-packaged with 9G64, 9G72, 9G125, 9G126, 9G129 & 9G131. Container numbers are allocated to 9G131.
 Plant Name: -
 Location: -
 Plant startup date: -
 Total capacity (m³/y incoming waste): -
 Target start date for packaging this stream: -
 Throughput for this stream (m³/y incoming waste): -
 Other information: -

Likely container type:

Container	Waste packaged (%vol)	Waste loading (m ³)	Payload (m ³)	Number of packages

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Likely container type comment: -

Range in container waste volume: -

Other information on containers: -

Likely conditioning matrix: Other information: -

Conditioned density (t/m³): -

Conditioned density comment: -

Other information on conditioning: -

Opportunities for alternative disposal routing:

Treatment	Stream volume (%)	Comment
-	-	-

RADIOACTIVITY

Source: This is a holding waste stream until the wastes are identified and allocated to the relevant stream for disposal.

Uncertainty: No data is available at the moment.

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: -

Other information: -

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Nuclide	Mean radioactivity, TBq/m ³				Nuclide	Mean radioactivity, TBq/m ³			
	Waste at 1.4.2019	Bands and Code	Future arisings	Bands and Code		Waste at 1.4.2019	Bands and Code	Future arisings	Bands and Code
H 3		8			Gd 153		8		
Be 10		8			Ho 163		8		
C 14		8			Ho 166m		8		
Na 22		8			Tm 170		8		
Al 26		8			Tm 171		8		
Cl 36		8			Lu 174		8		
Ar 39		8			Lu 176		8		
Ar 42		8			Hf 178n		8		
K 40		8			Hf 182		8		
Ca 41		8			Pt 193		8		
Mn 53		8			Tl 204		8		
Mn 54		8			Pb 205		8		
Fe 55		8			Pb 210		8		
Co 60		8			Bi 208		8		
Ni 59		8			Bi 210m		8		
Ni 63		8			Po 210		8		
Zn 65		8			Ra 223		8		
Se 79		8			Ra 225		8		
Kr 81		8			Ra 226		8		
Kr 85		8			Ra 228		8		
Rb 87		8			Ac 227		8		
Sr 90		8			Th 227		8		
Zr 93		8			Th 228		8		
Nb 91		8			Th 229		8		
Nb 92		8			Th 230		8		
Nb 93m		8			Th 232		8		
Nb 94		8			Th 234		8		
Mo 93		8			Pa 231		8		
Tc 97		8			Pa 233		8		
Tc 99		8			U 232		8		
Ru 106		8			U 233		8		
Pd 107		8			U 234		8		
Ag 108m		8			U 235		8		
Ag 110m		8			U 236		8		
Cd 109		8			U 238		8		
Cd 113m		8			Np 237		8		
Sn 119m		8			Pu 236		8		
Sn 121m		8			Pu 238		8		
Sn 123		8			Pu 239		8		
Sn 126		8			Pu 240		8		
Sb 125		8			Pu 241		8		
Sb 126		8			Pu 242		8		
Te 125m		8			Am 241		8		
Te 127m		8			Am 242m		8		
I 129		8			Am 243		8		
Cs 134		8			Cm 242		8		
Cs 135		8			Cm 243		8		
Cs 137		8			Cm 244		8		
Ba 133		8			Cm 245		8		
La 137		8			Cm 246		8		
La 138		8			Cm 248		8		
Ce 144		8			Cf 249		8		
Pm 145		8			Cf 250		8		
Pm 147		8			Cf 251		8		
Sm 147		8			Cf 252		8		
Sm 151		8			Other a	NE			
Eu 152		8			Other b/g	NE			
Eu 154		8			Total a	NE		0	
Eu 155		8			Total b/g	NE		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 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