

Site (Data) : Richard

Stock of waste as at December 2011

Country: CZECH REPUBLIC

Reporting Year: 2011

Site Name: Richard

Full Name: URAO Richard

Inventory Reporting Date: December 2011

Waste Matrix Used: cz-eu

Comment # 380: Information

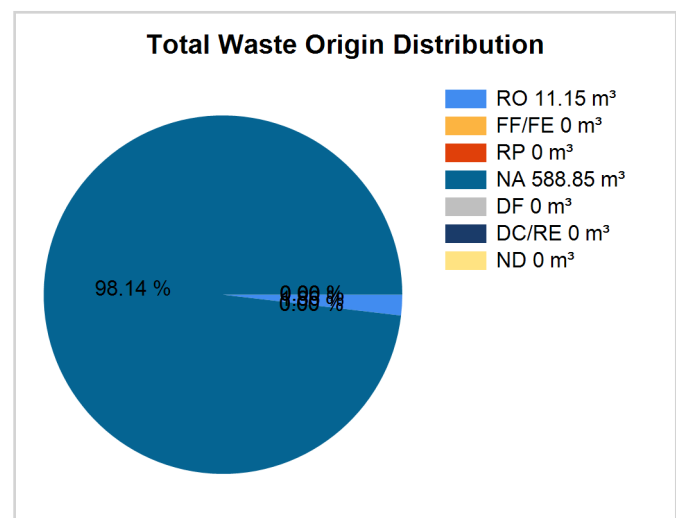
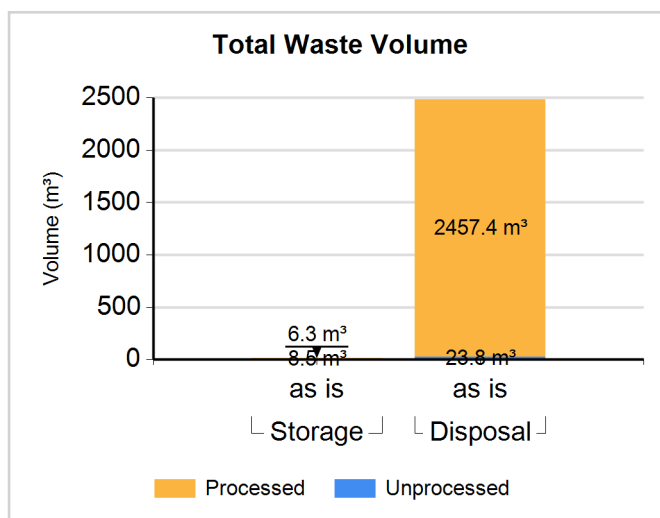
Abandoned mine Richard (60 km N of Prague) serves as repository for radioactive waste from research, industry and medicine.

Comment # 14555: Site Richard

In 2006 and 2007 disposal chambers 8/2, 9 a 12 were upgraded (hydraulic cage) and filled with waste. New concrete floor was laid down in chambers 13 and 22 and these chambers will be used for the disposal of waste.

Waste Inventory

Est=distribution is an estimate, Proc.=Is the waste processed (Yes/No)? RO=Reactor Operations, FF/FE=Fuel Fabrication/Fuel Enrichment, RP=Reprocessing, NA=Nuclear Applications,DF=Defence, DC/RE=Decommissioning/Remediation, ND=Not Determined



Note: where volume "as dispo" is provided, volume "as is" is used in the graph instead.

Waste Class: LILW-SL

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
LILW-SL	Storage	N	N	4.600	4.600	0.00	0.00	0.00	100.00	0.00	0.00	0.00
LILW-SL	Storage	Y	N	1.200	1.200	0.00	0.00	0.00	100.00	0.00	0.00	0.00
LILW-SL	Disposal	N	N	23.800	23.800	0.00	0.00	0.00	100.00	0.00	0.00	0.00
LILW-SL	Disposal	Y	N	2457.400	2457.400	0.00	0.00	0.00	100.00	0.00	0.00	0.00

Waste Class: LILW-LL

Waste Class Name	Location / Facility	Proc	Est.	Volume "as is" (m³)	Volume "as dispo" (m³)	RO %	FF/FE %	RP %	NA %	DF %	DC/RE %	ND %
LILW-LL	Storage	N	N	3.900	3.900	11.15	0.00	0.00	88.85	0.00	0.00	0.00
LILW-LL	Storage	Y	N	5.100	5.100	0.00	0.00	0.00	100.00	0.00	0.00	0.00

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Spent Sources <=30 years in Storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)			c o n d	u n c o n d	c a t	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II m ore than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num/activity	num/activity	num/activity					
Cf-252	7			Y	N	Y	3.200E-002	2011.12
	3.200E-002							
Co-60	939	53		Y	N	Y	1.480E+005	2011.12
	6.590E+000	1.480E+005						
Cs-137	35	15	3	Y	N	Y	4.311E+005	2011.12
	9.140E+001	2.350E+005	1.960E+005					
Eu-152			1	Y	N	Y	4.280E+004	2011.12
			4.280E+004					
Na-22	1			Y	N	Y	7.850E-005	2011.12
	7.850E-005							
Pm-147	1			Y	N	Y	2.120E-006	2011.12
	2.120E-006							
Sr-90	3828			Y	N	Y	2.780E+002	2011.12
	2.780E+002							

Spent Sources <=30 years in Disposition

Nuclide	Number of Sources/Total Activity of Sources (GBq)			c o n d	u n c o n d	c a t	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 4GBq	Group II m ore than 4GBq but less than or equal 4E+4GBq	Group III more than 4E+4GBq					
	num/activity	num/activity	num/activity					
Ba-133	7			Y	N	Y	1.270E-004	2011.12
	1.270E-004							
Cd-109	18			Y	N	Y	2.750E-001	2011.12
	2.750E-001							
Ce-144	2			Y	N	Y	3.700E-006	2011.12
	3.700E-006							

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Cf-252	21			Y	N	Y	2.336E+000	2011.12
	2.336E+000							
Co-57	22			Y	N	Y	8.530E-003	2011.12
	8.530E-003							
Co-60	1381	206		Y	N	Y	1.962E+005	2011.12
	1.690E+002	1.960E+005						
Cs-134	1			Y	N	Y	2.580E-005	2011.12
	2.580E-005							
Cs-137	552	189		Y	N	Y	3.083E+005	2011.12
	2.740E+002	3.080E+005						
Eu-152	36	6		Y	N	Y	1.600E+002	2011.12
	1.200E+001	1.480E+002						
Fe-55	43	6		Y	N	Y	5.538E+001	2011.12
	4.480E+000	5.090E+001						
H-3	3	7		Y	N	Y	2.961E+003	2011.12
	6.670E-001	2.960E+003						
Kr-85	79	34		Y	N	Y	9.966E+002	2011.12
	9.060E+001	9.060E+002						
Mn-54	1			Y	N	Y	1.580E-009	2011.12
	1.580E-009							
Na-22	2			Y	N	Y	2.110E-006	2011.12
	2.110E-006							
Pb-210	1			Y	N	Y	9.100E-005	2011.12
	9.100E-005							
Pm-147	35			Y	N	Y	2.710E+001	2011.12
	2.710E+001							
Ru-106	4			Y	N	Y	5.130E-004	2011.12
	5.130E-004							
Se-75	16			Y	N	Y	3.470E-007	2011.12
	3.470E-007							

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Sr-90	305	31		Y	N	Y	2.383E+003	2011.12
	1.530E+002	2.230E+003						
TI-204	4			Y	N	Y	2.730E-002	2011.12
	2.730E-002							
Zn-65	1			Y	N	Y	1.540E-006	2011.12
	1.540E-006							

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Spent Sources > 30 years in Storage

Nuclide	Number of Sources/Total Activity of Sources (GBq)		c o n d	u n c o n d	c a t	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 2 GBq	Group II more than 2GBq					
	num/activity	num/activity					
Am-241	12011	128	Y	N	Y	6.315E+003	2011.12
	1.349E+002	6.180E+003					
Pu-238	9	2	Y	N	Y	1.122E+002	2011.12
	5.230E+000	1.070E+002					
Pu-239	2	71	Y	N	Y	6.802E+003	2011.12
	2.210E+000	6.800E+003					
Ra-226	1		Y	N	Y	3.690E-001	2011.12
	3.690E-001						

Spent Sources > 30 years in Disposition

Nuclide	Number of Sources/Total Activity of Sources (GBq)		c o n d	u n c o n d	c a t	Total Activity for all Groups (GBq)	Decay Date
	Group I less than or equal 2 GBq	Group II more than 2GBq					
	num/activity	num/activity					
Am-241	2899	66	Y	N	Y	7.428E+003	2011.12
	6.780E+001	7.360E+003					
C-14	13	2	Y	N	Y	1.431E+001	2011.12
	3.310E+000	1.100E+001					
K-40	2		Y	N	Y	6.920E-007	2011.12
	6.920E-007						
Ni-63	2		Y	N	Y	7.800E-001	2011.12
	7.800E-001						
Pu-239	17	25	Y	N	Y	1.206E+003	2011.12
	6.200E+000	1.200E+003					

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RadioNuclide Inventory in Disposal

Total Alpha Activity (GBq):	15710
Total Beta/Gamma Activity (GBq):	0

RadioNuclide	Activity (GBq)
Carbon (C-14)	8200
Cesium (Cs-137)	473000
Chlorine (Cl-36)	8.9
Hydrogen (H-3)	37020
Iodine (I-129)	0.00505
Strontium (Sr-90)	23560
Technetium (Tc-99)	0.104