Created: 2000-03-28

# IAEA Waste Management Database: Report 3 - L/ILW-LL

(management activities and arisings)

Reference Year: 1997

| Country | Record ID | Waste Type | Accumulated Quantity (in 1996) | Projected Quantity (in 2014) | Conditioning | Treatment |
|---|---|---|---|---|---|---|
| Argentina | 427 | L/ILW-LL | 126 cm | 306 cm | | C Compaction |
| | | Storage Time (years): | | Type: | | |
| | | Disposal Site: 1 | Name: Geological Repository | Status: Under preliminary site investigation | Location: TBD | |
| | | Capacity: cm | Investigation: | Selection: | Characterization: | Construction: Operation Start: |
| | | Disposal Methods: | | Status: | Depth (m): | |
| | | Geologic repositories | | P | 600 | |
| Australia | 335 | L/ILW-LL | 300 cm | cm | P Cementation<br>P yet to be determined, synroc, ceramic, or glass | P Evaporation |
| | | Storage Time (years): TBD | | Type: Engineered storage facility | | |
| | | Disposal Site: 1 | Name: National Storage Facility | Status: Under preliminary site investigation | Location: Consider co-location with L/ILW-SL repository | |
| | | Capacity: cm | Investigation: | Selection: | Characterization: | Construction: Operation Start: |
| | | Disposal Methods: | | Status: | Depth (m): | |
| Belgium | 212 | L/ILW-LL | 3400 cm | 6600 cm | C Cementation<br>C Bituminization | C Compaction<br>C Chemical precipitation<br>C Evaporation<br>C Incineration |
| | | Storage Time (years): 50 | | Type: Engineered storage facility | | |
| | | Disposal Site: 1 | Name: TBD | Status: Under preliminary site investigation | Location: TBD | |
| | | Capacity: 10000 cm | Investigation: 1980-2020 | Selection: 1980-2020 | Characterization: 1980-2020 | Construction: 2020-2035 Operation Start: 2080 |
| | | Disposal Methods: | | Status: | Depth (m): | |
| | | Geologic repositories | | P | | |
| Bulgaria | 219 | L/ILW-LL | 15 cm | 23 cm | P Cementation<br>P others under study in IAEA project BUL/4/005 | P Compaction<br>P Chemical precipitation<br>P Ion-exchange |
| | | Storage Time (years): undecided | | Type: see Events and Milestones section | | |
| | | Disposal Site: 1 | Name: Novi Han | Status: Shut down/closed | Location: Lozen Mountain near Sophia | |
| | | Capacity: 578 cm | Investigation: | Selection: | Characterization: | Construction: Operation Start: |
| | | Disposal Methods: | | Status: | Depth (m): | |
| | | Near surface disposal; Engineered facilities; Novi Han closed for upgrading, depth = 5 to 6 m | | C | 5 | |

cm = cubic meters, mt = metric tonnes, C = current, P = planned, R = research and revelopment



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Reference Year: 1997

| Country | Record ID | Waste Type | Accumulated Quantity (in 1996) | Projected Quantity (in 2014) | Conditioning | Treatment |
|---|---|---|---|---|---|---|
| Canada | 361 | L/ILW-LL | 3735 cm | 4735 cm | C Bituminization | C Evaporation<br>C Membrane Separation |

Storage Time (years): 10- 30 Type: Engineered storage facility; Shallow ground storage facility; Tank storage for liquid waste

Disposal Site: 1 Name: IRUS Status: Under detailed site characterization/exploration Location: Chalk River Laboratories

Capacity: 2000 cm Investigation: - Selection: 1986 Characterization: 1986 Construction: 1999 Operation Start: 2001

| Disposal Methods: | Status | Depth (m) |
|---|---|---|
| Near surface disposal; Engineered facilities | P | 8 |

| Country | Record ID | Waste Type | Accumulated Quantity (in 1996) | Projected Quantity (in 2014) | Conditioning | Treatment |
|---|---|---|---|---|---|---|
| Chile | 430 | L/ILW-LL | 3 cm | 50 cm | C Cementation | C Compaction<br>P Chemical precipitation<br>P Ion-exchange |

Storage Time (years): 30 Type: Engineered storage facility

| Country | Record ID | Waste Type | Accumulated Quantity (in 1996) | Projected Quantity (in 2014) | Conditioning | Treatment |
|---|---|---|---|---|---|---|
| Cuba | 314 | L/ILW-LL | 2.5 cm | 7 cm | C Cementation | P Compaction |

Storage Time (years): 30 Type: above ground storage buildings

Disposal Site: 1 Name: TBD Status: Under detailed site characterization/exploration Location: Central region of the country

Capacity: 12300 cm Investigation: 1990-1994 Selection: 1994-1997 Characterization: 1997- Construction: Operation Start:

| Disposal Methods: | Status | Depth (m) |
|---|---|---|
| Rock cavities | P | 15 |

| Country | Record ID | Waste Type | Accumulated Quantity (in 1996) | Projected Quantity (in 2014) | Conditioning | Treatment |
|---|---|---|---|---|---|---|
| Cyprus | 351 | L/ILW-LL | .1 cm | 1 cm | P Cementation | C Stored in lead pots |

Storage Time (years): Type:

| Country | Record ID | Waste Type | Accumulated Quantity (in 1996) | Projected Quantity (in 2014) | Conditioning | Treatment |
|---|---|---|---|---|---|---|
| Czech Republic | 456 | L/ILW-LL | 349 cm | 550 cm | C Cementation | C Compaction<br>C Evaporation |

Storage Time (years): 1 Type: Engineered storage facility

Disposal Site: 1 Name: Richard Status: Construction/operation Location: Litomerice

Capacity: 8396 cm Investigation: 1959 Selection: 1960 Characterization: 1961 Construction: 1962-63 Operation Start: 1964

| Disposal Methods: | Status | Depth (m) |
|---|---|---|
| Near surface disposal; Rock cavities | C | 60 |

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# IAEA Waste Management Database: Report 3 - L/ILW-LL

(management activities and arisings)

Reference Year: 1997

| Country | Record ID | Waste Type | Accumulated Quantity (in 1996) | Projected Quantity (in 2014) | Conditioning | Treatment |
|---|---|---|---|---|---|---|
| Czech Republic | 450 | L/ILW-LL | 1 cm | 5 cm | | P Compaction<br>P Super compaction |
| | | Storage Time (years): 40 | Type: storage pits in the reactor hall | | | |
| | | Disposal Site: 1 | Name: to be decided | Status: Under preliminary site investigation | Location: | |
| | | Capacity: cm | Investigation: 2010 | Selection: 2020 | Characterization: 2030 | Construction: 2035 | Operation Start: 2040 |
| | | Disposal Methods: | | Status: P | Depth (m): 500 | |
| | | Geologic repositories | | | | |
| Denmark | 397 | L/ILW-LL | 90 cm | 110 cm | | |
| | | Storage Time (years): ~ 30 | Type: Engineered storage facility | | | |
| France | 487 | L/ILW-LL | 23000 cm | 44000 cm | C Cementation<br>C Bituminization | C Compaction<br>C Chemical precipitation<br>C Incineration |
| | | Storage Time (years): > 50 | Type: Engineered storage facility | | | |
| | | Disposal Site: 1 | Name: unspecified | Status: Under preliminary site investigation | Location: unspecified | |
| | | Capacity: mt | Investigation: 1992 | Selection: 1998 | Characterization: 1999-2006 | Construction: | Operation Start: |
| | | Disposal Methods: | | Status: P | Depth (m): 500 | |
| | | Geologic repositories | | | | |
| | | Disposal Site: 2 | Name: not specified | Status: Under preliminary site investigation | Location: unspecified | |
| | | Capacity: mt | Investigation: 1992 | Selection: | Characterization: | Construction: | Operation Start: |
| | | Disposal Methods: | | Status: P | Depth (m): 500 | |
| | | Geologic repositories | | | | |
| Guatemala | 464 | L/ILW-LL | 1 cm | 2 cm | C Cementation | P Incineration |
| | | Storage Time (years): 50 | Type: Engineered storage facility | | | |
| | | Disposal Site: 1 | Name: to be named | Status: Construction/operation | Location: | |
| | | Capacity: 10 cm | Investigation: | Selection: | Characterization: | Construction: 1990 | Operation Start: 1996 |
| | | Disposal Methods: | | Status: C | Depth (m): 6 | |
| | | Near surface disposal | | | | |

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# IAEA Waste Management Database: Report 3 - L/ILW-LL

(management activities and arisings)



| Country | Record ID | Waste Type | Accumulated Quantity (in 1996) | Projected Quantity (in 2014) | Conditioning | Treatment |
|---|---|---|---|---|---|---|
| India | 233 | L/ILW-LL | 4700 cm | 7500 cm | C Cementation<br>C Polymerization | C Compaction<br>C Chemical precipitation<br>C Evaporation<br>R Incineration<br>C Ion-exchange |

Storage Time (years): 30-40 Type:

Disposal Site: 1 Name: SWMF, Trombay Status: Construction/operation Location: Trombay

Capacity: 26000 cm Investigation: Selection: Characterization: Construction: Operation Start: 1964

| Disposal Methods: | Status | Depth (m) |
|---|---|---|
| Engineered surface disposal facility; Near surface disposal; Engineered facilities | C | 5 |

Disposal Site: 2 Name: SWMF, Tarapur Status: Construction/operation Location: Tarapur

Capacity: 57000 cm Investigation: Selection: Characterization: Construction: Operation Start: 1975

| Disposal Methods: | Status | Depth (m) |
|---|---|---|
| Engineered surface disposal facility; Near surface disposal; Engineered facilities | C | 5 |

| Country | Record ID | Waste Type | Accumulated Quantity (in 1996) | Projected Quantity (in 2014) | Conditioning | Treatment |
|---|---|---|---|---|---|---|
| Indonesia | 235 | L/ILW-LL | 39 cm | 169 cm | C Cementation<br>R Polymerization | C Compaction<br>C Evaporation<br>C Incineration |

Storage Time (years): 30 Type: Engineered storage facility

Disposal Site: 1 Name: TBD Status: Under preliminary site investigation Location: TBD

Capacity: 1200 cm Investigation: 1987-1996 Selection: 1997-2004 Characterization: 2005-2007 Construction: 2008-2010 Operation Start: 2011

| Disposal Methods: | Status | Depth (m) |
|---|---|---|

| Country | Record ID | Waste Type | Accumulated Quantity (in 1996) | Projected Quantity (in 2014) | Conditioning | Treatment |
|---|---|---|---|---|---|---|
| Italy | 308 | L/ILW-LL | 320 cm | 1200 cm | C Cementation | |

Storage Time (years): 50 Type: Engineered storage facility

Disposal Site: 1 Name: Unknown Status: Under preliminary site investigation Location: Unknown

Capacity: cm Investigation: Selection: Characterization: Construction: Operation Start:

| Disposal Methods: | Status | Depth (m) |
|---|---|---|
| Geologic repositories | P | |

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Created: 2000-03-28

# IAEA Waste Management Database: Report 3 - L/ILW-LL

(management activities and arisings)

Reference Year: 1997

| Country | Record ID | Waste Type | Accumulated Quantity (in 1996) | | Projected Quantity (in 2014) | | Conditioning | | Treatment | |
|---|---|---|---|---|---|---|---|---|---|---|
| Kazakhstan | 359 | L/ILW-LL | 9330 | cm | 86000 | cm | P | Cementation | P | Evaporation |
| | | Storage Time (years): 5-10 | Type: Engineered storage facility | | | | | | P | oxidation, vitrification of sodium heat carrier |
| Kuwait | 406 | L/ILW-LL | | cm | | cm | | | C | No special treatment procedure |
| | | Storage Time (years): | Type: | | | | | | | |
| Lebanon | 341 | L/ILW-LL | | cm | | cm | C | NOT APPLICABLE | C | NOT APPLICABLE |
| | | Storage Time (years): | Type: NOT APPLICABLE | | | | | | | |
| Lithuania | 257 | L/ILW-LL | 300 | cm | 1100 | cm | | | | |
| | | Storage Time (years): 50-100 | Type: Engineered storage facility | | | | | | | |
| Malaysia | 262 | L/ILW-LL | | cm | | cm | | | | |
| | | Storage Time (years): | Type: | | | | | | | |
| Mexico | 269 | L/ILW-LL | | cm | | cm | | | | |
| | | Storage Time (years): | Type: | | | | | | | |
| Netherlands | 328 | L/ILW-LL | | cm | 400 | cm | P | Cementation | P | Direct packaging |
| | | Storage Time (years): > 50 | Type: Engineered storage facility | | | | | | | |
| Norway | 388 | L/ILW-LL | 5 | cm | 8 | cm | C | Cementation | C | Compaction |
| | | Storage Time (years): 1-5 | Type: Engineered storage facility | | | | | | | |

Disposal Site: 1 Name: Himdalen Status: Construction/operation Location: Aurskog-Holand municipality

Capacity: 3200 cm Investigation: Selection: 1994 Characterization: 1994-97 Construction: 1997-98 Operation Start: March 1999

| Disposal Methods: | Status | Depth (m) |
|---|---|---|
| Rock cavities | C | 45 |

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# IAEA Waste Management Database: Report 3 - L/ILW-LL

(management activities and arisings)

Reference Year: 1997

| Country | Record ID | Waste Type | Accumulated Quantity (in 1996) | | Projected Quantity (in 2014) | | Conditioning | | Treatment | |
|---|---|---|---|---|---|---|---|---|---|---|
| Philippines | 409 | L/ILW-LL | | cm | | cm | C | Cementation | C | Compaction |
| | | | | | | | | | C | Chemical precipitation |
| | | | | | | | | | R | Ion-exchange |
| | | Storage Time (years): 30 | | Type: Engineered storage facility | | | | | | |
| | | Disposal Site: 1 | Name: undecided | Status: Under preliminary site investigation | Location: undecided | | | | | |
| | | Capacity: cm | Investigation: | Selection: | Characterization: | Construction: | Operation Start: | | | |
| | | Disposal Methods: | | | Status | Depth (m) | | | | |
| | | Engineered surface disposal facility | | | P | 0 | | | | |
| Poland | 441 | L/ILW-LL | 680 | cm | 780 | cm | C | Cementation | C | Compaction |
| | | | | | | | C | Polymerization | C | Chemical precipitation |
| | | | | | | | | | P | Evaporation |
| | | | | | | | | | P | reverse osmosis |
| | | Storage Time (years): 50 | | Type: Engineered storage facility | | | | | | |
| | | Disposal Site: 1 | Name: to be decided | Status: Under preliminary site investigation | Location: | | | | | |
| | | Capacity: cm | Investigation: 1997-2000 | Selection: | Characterization: | Construction: | Operation Start: | | | |
| | | Disposal Methods: | | | Status | Depth (m) | | | | |
| | | Geologic repositories | | | P | 600 | | | | |
| Slovenia | 380 | L/ILW-LL | 30 | cm | 130 | cm | | | P | Compaction |
| | | | | | | | | | P | Incineration |
| | | Storage Time (years): about 40 | | Type: Engineered storage facility | | | | | | |
| | 379 | L/ILW-LL | 30 | cm | 0 | mt | | | P | Compaction |
| | | | | | | | | | P | Incineration |
| | | Storage Time (years): 5 | | Type: Engineered storage facility | | | | | | |
| South Africa | 401 | L/ILW-LL | 15000 | cm | 15000 | cm | C | Cementation | | |
| | | Storage Time (years): 50 | | Type: Engineered storage facility | | | | | | |

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Reference Year: 1997

| Country | Record ID | Waste Type | Accumulated Quantity (in 1996) | Projected Quantity (in 2014) | Conditioning | Treatment |
|---|---|---|---|---|---|---|
| Sweden | 289 | L/ILW-LL | cm | 25000 cm | C Cementation | P Chemical precipitation<br>C Incineration<br>C Ion-exchange |
| | | Storage Time (years): 0-30 | Type: Engineered storage facility | | | |
| | | Disposal Site: 1 | Name: SFL3-5 | Status: Under preliminary site investigation | Location: TBD | |
| | | Capacity: 25000 cm | Investigation: 2001 | Selection: | Characterization: | Construction: Operation Start: 2015-2030 |
| | | Disposal Methods: | | Status: P | Depth (m): 300 | |
| | | Geologic repositories | | | | |
| Switzerland | 321 | L/ILW-LL | 500 cm | 2000 cm | P Cementation<br>P Bituminization | C Compaction<br>C Chemical precipitation<br>C Evaporation |
| | | Storage Time (years): 40 | Type: Engineered storage facility | | | |
| | | Disposal Site: 1 | Name: not yet defined | Status: Under preliminary site investigation | Location: Northern Switzerland | |
| | | Capacity: 2000 cm | Investigation: 1979-2001 | Selection: 2027 | Characterization: | Construction: Operation Start: 2050 |
| | | Disposal Methods: | | Status: P | Depth (m): 1000 | |
| | | Geologic repositories | | | | |
| Ukraine | 469 | L/ILW-LL | cm | cm | C Cementation<br>C Bituminization<br>P Polymerization<br>R unspecified | P Compaction<br>P Chemical precipitation<br>C Evaporation<br>P Incineration<br>C Ion-exchange<br>R unspecified |
| | | Storage Time (years): | Type: | | | |
| United States of America | 467 | L/ILW-LL | cm | cm | | P see "Events and Milestones" section |
| | | Storage Time (years): | Type: see "Events and Milestones" section | | | |
| Uzbekistan | 415 | L/ILW-LL | 3 cm | 50 cm | C Cementation | C Compaction<br>C Incineration |
| | | Storage Time (years): undefined | Type: Engineered storage facility | | | |
| | | Disposal Site: 1 | Name: name not provided | Status: Construction/operation | Location: | |
| | | Capacity: cm | Investigation: | Selection: | Characterization: | Construction: Operation Start: |
| | | Disposal Methods: | | Status: C | Depth (m): 5 | |
| | | Near surface disposal; Simple trenches | | | | |

cm = cubic meters, mt = metric tonnes, C = current, P = planned, R = research and revelopment



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