



# **Country Waste Profile Report for FINLAND Reporting Year: 2007**

*For guidance on reading Country Waste Profile Reports,  
please refer to the following internet based document:*

*<http://www-newmdb.iaea.org/help/profiles9/guide.pdf>*

*For further information, please contact the Responsible Officer via e-mail:  
[NEWMDB@IAEA.org](mailto:NEWMDB@IAEA.org)*

## Waste Classification Schemes

Country: FINLAND

Reporting Year: 2007

Waste Class Matrix: **IAEA Def.**

This country does use the IAEA Scheme: No

Description: The Agency's standard matrix

| Waste Class Name | Distribution % |         |       |
|------------------|----------------|---------|-------|
|                  | LILW-SL        | LILW-LL | HLW   |
| LILW-SL          | 100.0          | 0.0     | 0.0   |
| LILW-LL          | 0.0            | 100.0   | 0.0   |
| HLW              | 0.0            | 0.0     | 100.0 |

Waste Class Matrix: **FIN\_RADW**

Yes

Description: Reactor wastes include solid and liquid waste arising from the controlled area of a nuclear power plant, see Comment #104. The portion of ILW is overestimated, especially what comes to disposed reactor waste.

| Waste Class Name | Distribution % |      |     |       |
|------------------|----------------|------|-----|-------|
|                  | VLLW           | LLW  | ILW | HLW   |
| reactor waste    | 0.0            | 99.0 | 1.0 | 0.0   |
| spent fuel       | 0.0            | 0.0  | 0.0 | 100.0 |

Comment **# 104: basis of the classification for reactor wastes**

The classification of reactor wastes used in Finland is given in Safety Guide 8.3, where the reactor wastes are divided into low level and intermediate level waste categories (<http://www.stuk.fi/saannosto/YVL8-3e.html>.) According to national laws, spent fuel is classified as waste but is not reported here. At the Loviisa site, wet reactor wastes are stored waiting for disposal starting in a few years. Long-lived reactor waste is mainly activated metal waste. Safety Guide 1.5 concerns on reporting.

Waste Class Matrix: **FIN\_RADW2**

Yes

Description:

| Waste Class Name | Distribution % |       |     |       |
|------------------|----------------|-------|-----|-------|
|                  | VLLW           | LLW   | ILW | HLW   |
| LILW             | 0.0            | 100.0 | 0.0 | 0.0   |
| spent fuel       | 0.0            | 0.0   | 0.0 | 100.0 |

Waste Class Matrix: **FIN\_RADW3**

Yes

Description:

| Waste Class Name | Distribution % |      |      |     |
|------------------|----------------|------|------|-----|
|                  | VLLW           | LLW  | ILW  | HLW |
| small user waste | 0.0            | 90.0 | 10.0 | 0.0 |

Comment **# 335: Meaning of the term**

"Small user waste" term includes some SRS and some contaminated material. The small user wastes are managed by the government and so far kept in a cave. It is planned to dispose them together with reactor waste.

**Definition of «unprocessed waste» and «processed waste»:**

## Waste Classification Schemes

Country: FINLAND

Reporting Year: 2007

Is not defined

## Groups Overview

Country: FINLAND

Reporting Year: 2007

|                           |               |
|---------------------------|---------------|
| <b>Reporting Group:</b>   | <b>Lo_NPP</b> |
| Inventory Reporting Date: | December 2007 |
| Waste Matrix Used:        | FIN_RADW      |
| Description:              | Loviisa NPP.  |

| Site Name | Facility Name | Facilities Defined |         |          |
|-----------|---------------|--------------------|---------|----------|
| Loviisa   | DT            |                    | storage | disposal |
|           | LO1           | processing         | storage |          |
|           | LO2           | processing         | storage |          |
|           | NPP-Area      |                    | storage |          |

|                           |               |
|---------------------------|---------------|
| <b>Reporting Group:</b>   | <b>OI_NPP</b> |
| Inventory Reporting Date: | December 2007 |
| Waste Matrix Used:        | FIN_RADW      |
| Description:              | Olkiluoto NPP |

| Site Name | Facility Name | Facilities Defined |         |          |
|-----------|---------------|--------------------|---------|----------|
| Olkiluoto | NPP-Area      |                    | storage |          |
|           | OL1           | processing         | storage |          |
|           | OL2           | processing         | storage |          |
|           | VLJ-KAJ       |                    |         | disposal |
|           | VLJ-MAJ       |                    |         | disposal |

|                           |   |
|---------------------------|---|
| <b>Reporting Group:</b>   | <b>Posiva</b>                               |
| Inventory Reporting Date: | December 2007                               |
| Waste Matrix Used:        | FIN_RADW                                    |
| Description:              | Posiva Oy, nuclear waste management company |

| Site Name | Facility Name | Facilities Defined |  |          |
|-----------|---------------|--------------------|--|----------|
| Olkiluoto | SFdisposal    |                    |  | disposal |

## Groups Overview

Country: FINLAND

Reporting Year: 2007

|                           |   |
|---------------------------|---|
| <b>Reporting Group:</b>   | <b>STUK/TKO</b>   |
| Inventory Reporting Date: | December 2007   |
| Waste Matrix Used:        | FIN_RADW3   |
| Description:              | STUK's Research and Environmental surveillance<br>(STUKin tutkimusosasto) |

| Site Name | Facility Name | Facilities Defined |         |  |
|-----------|---------------|--------------------|---------|--|
| SSOW      | SSOW          |                    | storage |  |

|                           |                                      |
|---------------------------|--------------------------------------|
| <b>Reporting Group:</b>   | <b>VTT/FIR</b>                       |
| Inventory Reporting Date: | December 2007                        |
| Waste Matrix Used:        | FIN_RADW2                            |
| Description:              | Technical Research Centre of Finland |

| Site Name | Facility Name | Facilities Defined |         |  |
|-----------|---------------|--------------------|---------|--|
| FIR       | LILW-Proc     | processing         |         |  |
|           | LILW-Store    |                    | storage |  |
|           | SF storage    |                    | storage |  |

## Site (Structure) : Loviisa

Country: FINLAND

Reporting Year: 2007

Full Name: Loviisa NPP

Location: Loviisa, Finland

Description:

Official Website:

License Holder(s): Fortum Power and Heat Oy

Waste management facilities that are located at this site:

|                     |   |
|---------------------|---|
| <b>Facility:</b>    | <b>DT</b>   |
| <b>Description:</b> | Disposal cave consists of tunnels designed with enough capacity for all reactor wastes from the power plant. The volume of packed waste to be disposed is estimated to be about 8740 m <sup>3</sup> . |

**Storage part of facility DT**

The following shows storage status for waste classes and SRS.

| Waste Class   | Actual | Planned |
|---------------|--------|---------|
| reactor waste | Yes    | Yes     |
| spent fuel    | No     | No      |

|            |    |
|------------|----|
| List SRS?  | No |
| List UMMT? | No |

|                  |  |
|------------------|--|
| <b>Capacity:</b> | Disposal tunnels are designed with enough capacity for all reactor wastes from the power plant, in addition, tunnels can be used for storage purposes. |
|------------------|--|

## Types of Storage Units

| Storage Unit Name | Type Name | Year Opened | Closed? | Full? | Modular? | Contains SRS? |
|-------------------|-----------|-------------|---------|-------|----------|---------------|
| DT-storage        | cave      | 1998        | No      | No    | No       | No            |

## Site (Structure) : Loviisa

Country: FINLAND

Reporting Year: 2007

**Disposal part of facility DT**

The following shows disposal status for waste classes and SRS.

| Waste Class   | Actual | Planned |
|---------------|--------|---------|
| reactor waste | Yes    | Yes     |
| spent fuel    | No     | No      |

|            |    |
|------------|----|
| List SRS?  | No |
| List UMMT? | No |

|                         |                     |                        |      |
|-------------------------|---------------------|------------------------|------|
| Type:                   | geological (cavern) |                        |      |
| Facility is modular?    | Yes                 |                        |      |
| Capacity existing (m3): | 2500                | Capacity planned (m3): | 8740 |

|            |     |              |                           |
|------------|-----|--------------|---------------------------|
| Depth (m): | 110 | Host medium: | crystalline rock (gneiss) |
|------------|-----|--------------|---------------------------|

| Phase Name                         | Start Year | End Year | Estimate |
|------------------------------------|------------|----------|----------|
| planning and/or concept assessment | 1980       | 1986     | False    |
| site selection                     | 1980       | 1983     | False    |
| design                             | 1983       | 1986     | False    |
| construction                       | 1993       | 1997     | False    |
| commissioning                      | 1997       | 1998     | False    |
| operation                          | 1998       |          | False    |

Comment **# 9656: Disposal Tunnels DT**

The first disposal tunnel is almost full in the end of 2004, and the second disposal tunnel is taken in use in 2005. Their capacity is about 2500 m3 and they are mainly meant for maintenance waste. A disposal room is also planned to be constructed in the future for waste immobilized in cement.

## Site (Structure) : Loviisa

Country: FINLAND

Reporting Year: 2007

|  |   |                    |                |              |                 |                      |
|--|---|--------------------|----------------|--------------|-----------------|----------------------|
| <b>Facility:</b>   | LO1   |                    |                |              |                 |                      |
| <b>Description:</b>  | processing and storage of reactor waste                       |                    |                |              |                 |                      |
| <b>Storage part of facility LO1</b>                              |   |                    |                |              |                 |                      |
| The following shows storage status for waste classes and SRS.    |   |                    |                |              |                 |                      |
| <b>Waste Class</b>   | <b>Actual</b>   | <b>Planned</b>     |                |              |                 |                      |
| reactor waste  | Yes   | Yes                |                |              |                 |                      |
| spent fuel   | No  | No                 |                |              |                 |                      |
| <b>List SRS?</b>   | No  |                    |                |              |                 |                      |
| <b>List UMMT?</b>  | No  |                    |                |              |                 |                      |
| <b>Capacity:</b>   | activated components can be stored here at loading ponds etc. |                    |                |              |                 |                      |
| Types of Storage Units   |   |                    |                |              |                 |                      |
| <b>Storage Unit Name</b>   | <b>Type Name</b>  | <b>Year Opened</b> | <b>Closed?</b> | <b>Full?</b> | <b>Modular?</b> | <b>Contains SRS?</b> |
| LO1  | building  | 1977               | No             | No           | No              | No                   |
| <b>Processing part of facility LO1</b>                           |   |                    |                |              |                 |                      |
| The following shows processing status for waste classes and SRS. |   |                    |                |              |                 |                      |
| <b>Waste Class</b>   | <b>Actual</b>   | <b>Planned</b>     |                |              |                 |                      |
| reactor waste  | No  | No                 |                |              |                 |                      |
| spent fuel   | No  | No                 |                |              |                 |                      |
| <b>Type:</b>   | Treatment, Conditioning                                       |                    |                |              |                 |                      |
| <b>Year opened:</b>  | 1977  |                    |                |              |                 |                      |



## Site (Structure) : Loviisa

Country: FINLAND

Reporting Year: 2007

|  |   |                    |                |              |                 |                      |
|--|---|--------------------|----------------|--------------|-----------------|----------------------|
| <b>Facility:</b>   | <b>LO2</b>  |                    |                |              |                 |                      |
| <b>Description:</b>  | processing and storage of reactor waste                       |                    |                |              |                 |                      |
| <b>Storage part of facility                      LO2</b>         |   |                    |                |              |                 |                      |
| The following shows storage status for waste classes and SRS.    |   |                    |                |              |                 |                      |
| <b>Waste Class</b>   | <b>Actual</b>   | <b>Planned</b>     |                |              |                 |                      |
| reactor waste  | Yes   | Yes                |                |              |                 |                      |
| spent fuel   | No  | No                 |                |              |                 |                      |
| <b>List SRS?</b>   | No  |                    |                |              |                 |                      |
| <b>List UMMT?</b>  | No  |                    |                |              |                 |                      |
| <b>Capacity:</b>   | activated components can be stored here at loading ponds etc. |                    |                |              |                 |                      |
| Types of Storage Units   |   |                    |                |              |                 |                      |
| <b>Storage Unit Name</b>   | <b>Type Name</b>  | <b>Year Opened</b> | <b>Closed?</b> | <b>Full?</b> | <b>Modular?</b> | <b>Contains SRS?</b> |
| LO2  | building  | 1980               | No             | No           | No              | No                   |
| <b>Processing part of facility                      LO2</b>      |   |                    |                |              |                 |                      |
| The following shows processing status for waste classes and SRS. |   |                    |                |              |                 |                      |
| <b>Waste Class</b>   | <b>Actual</b>   | <b>Planned</b>     |                |              |                 |                      |
| reactor waste  | No  | No                 |                |              |                 |                      |
| spent fuel   | No  | No                 |                |              |                 |                      |
| <b>Type:</b>   | Treatment, Conditioning                                       |                    |                |              |                 |                      |
| <b>Year opened:</b>  | 1980  |                    |                |              |                 |                      |

## Site (Structure) : Loviisa

Country: FINLAND

Reporting Year: 2007

|   |  |                    |                |              |                 |                      |
|---|--|--------------------|----------------|--------------|-----------------|----------------------|
| <b>Facility:</b>  | <b>NPP-Area</b>  |                    |                |              |                 |                      |
| <b>Description:</b>   | Nuclear power plant storage area   |                    |                |              |                 |                      |
| <b>Storage part of facility</b>                               |  | <b>NPP-Area</b>    |                |              |                 |                      |
| The following shows storage status for waste classes and SRS. |  |                    |                |              |                 |                      |
| <b>Waste Class</b>  | <b>Actual</b>  | <b>Planned</b>     |                |              |                 |                      |
| reactor waste   | Yes  | Yes                |                |              |                 |                      |
| spent fuel  | Yes  | Yes                |                |              |                 |                      |
| <b>List SRS?</b>  | No   |                    |                |              |                 |                      |
| <b>List UMMT?</b>   | No   |                    |                |              |                 |                      |
| <b>Capacity:</b>  | Nuclear power plant area can be used for storing purposes for waste that will not be disposed immediately, like liquid wastes waiting for cementation. |                    |                |              |                 |                      |
| <b>Types of Storage Units</b>                                 |  |                    |                |              |                 |                      |
| <b>Storage Unit Name</b>                                      | <b>Type Name</b>   | <b>Year Opened</b> | <b>Closed?</b> | <b>Full?</b> | <b>Modular?</b> | <b>Contains SRS?</b> |
| NPPStorage  | building   | 1977               | No             | No           | No              | No                   |

## Site (Data) : Loviisa

Stock of waste as at December 2007

Country: FINLAND

Reporting Year: 2007

Site Name: Loviisa

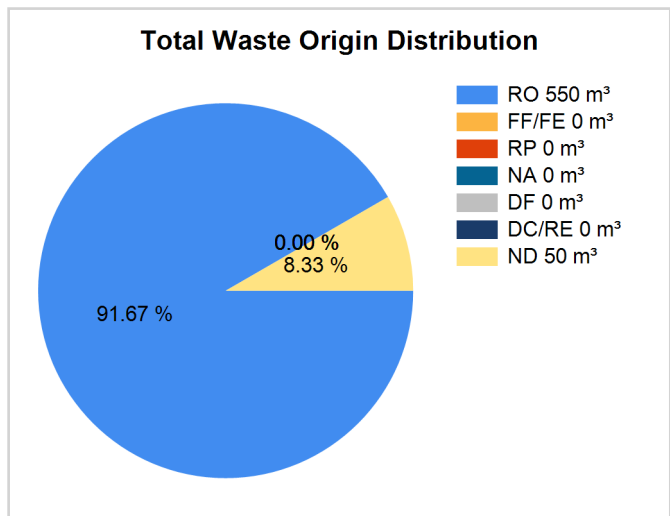
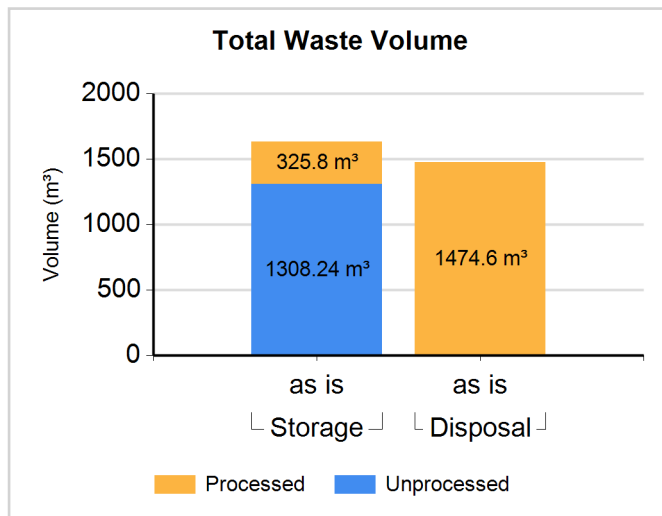
Full Name: Loviisa NPP

Inventory Reporting Date: December 2007

Waste Matrix Used: FIN\_RADW

## 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: reactor waste

| Waste Class Name | Location / Facility | Proc | Est. | Volume "as is" (m³) | Volume "as dispo" (m³) | RO %   | FF/FE % | RP % | NA % | DF % | DC/RE % | ND %  |
|------------------|---------------------|------|------|---------------------|------------------------|--------|---------|------|------|------|---------|-------|
| reactor waste    | Storage / LO1       | N    | Y    | 10.140              | 10.140                 | 100.00 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00  |
| reactor waste    | Storage / LO2       | N    | Y    | 11.100              | 11.100                 | 100.00 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00  |
| reactor waste    | Storage / LO2       | Y    | Y    | 202.300             | 202.300                | 100.00 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00  |
| reactor waste    | Storage / NPP-Area  | N    | Y    | 1287.000            | 1287.000               | 100.00 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00  |
| reactor waste    | Storage / NPP-Area  | Y    | Y    | 123.500             | 123.500                | 50.00  | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 50.00 |
| reactor waste    | Disposal / DT       | Y    | N    | 1474.600            | 1474.600               | 100.00 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00  |

## Processing - Treatment method(s)

| Method      | Status  |             |   |               |
|-------------|---------|-------------|---|---------------|
|             | Planned | R&D program | Current practice method use over the last 5 years | Past Practice |
| Compaction  | N       | N           | Same  | N             |
| Evaporation | N       | N           | Same  | N             |
| Filtration  | N       | N           | Same  | N             |

**Site (Data) : Loviisa**

Stock of waste as at December 2007

Country: FINLAND

Reporting Year: 2007

**Processing - Conditioning method(s)**

| Method      | Status  |             |   |               |
|-------------|---------|-------------|---|---------------|
|             | Planned | R&D program | Current practice method use over the last 5 years | Past Practice |
| Cementation | Y       | N           |   | N             |

## Site (Structure) : Olkiluoto

Country: FINLAND

Reporting Year: 2007

Full Name: Olkiluoto NPP

Location: Eurajoki, Finland

Description:

Official Website:

License Holder(s): Teollisuuden Voima Oy

Waste management facilities that are located at this site:

|   |  |                    |                |              |                 |                      |
|---|--|--------------------|----------------|--------------|-----------------|----------------------|
| <b>Facility:</b>  | <b>NPP-Area</b>  |                    |                |              |                 |                      |
| <b>Description:</b>   | Power plant storage area   |                    |                |              |                 |                      |
| <b>Storage part of facility                      NPP-Area</b> |  |                    |                |              |                 |                      |
| The following shows storage status for waste classes and SRS. |  |                    |                |              |                 |                      |
| <b>Waste Class</b>  | <b>Actual</b>  | <b>Planned</b>     |                |              |                 |                      |
| reactor waste   | Yes  | Yes                |                |              |                 |                      |
| spent fuel  | Yes  | Yes                |                |              |                 |                      |
| <b>List SRS?</b>  | No   |                    |                |              |                 |                      |
| <b>List UMMT?</b>   | No   |                    |                |              |                 |                      |
| <b>Capacity:</b>  | Nuclear power plant area can be used for storing purposes for waste that will not be disposed immediately. |                    |                |              |                 |                      |
| <b>Types of Storage Units</b>                                 |  |                    |                |              |                 |                      |
| <b>Storage Unit Name</b>                                      | <b>Type Name</b>   | <b>Year Opened</b> | <b>Closed?</b> | <b>Full?</b> | <b>Modular?</b> | <b>Contains SRS?</b> |
| NPPStorage  | building   | 2000               | No             | No           | No              | No                   |

## Site (Structure) : Olkiluoto

Country: FINLAND

Reporting Year: 2007

|                     |   |
|---------------------|---|
| <b>Facility:</b>    | <b>OL1</b>                              |
| <b>Description:</b> | processing and storage of reactor waste |

**Storage part of facility OL1**

The following shows storage status for waste classes and SRS.

| Waste Class   | Actual | Planned |
|---------------|--------|---------|
| reactor waste | Yes    | Yes     |
| spent fuel    | No     | No      |

|                   |    |
|-------------------|----|
| <b>List SRS?</b>  | No |
| <b>List UMMT?</b> | No |

|                  |   |
|------------------|---|
| <b>Capacity:</b> | activated components can be stored here at loading ponds etc. |
|------------------|---|

## Types of Storage Units

| Storage Unit Name | Type Name | Year Opened | Closed? | Full? | Modular? | Contains SRS? |
|-------------------|-----------|-------------|---------|-------|----------|---------------|
| OL1               | building  | 1978        | No      | No    | No       | No            |

**Processing part of facility OL1**

The following shows processing status for waste classes and SRS.

| Waste Class   | Actual | Planned |
|---------------|--------|---------|
| reactor waste | No     | No      |
| spent fuel    | No     | No      |

|                     |                         |
|---------------------|-------------------------|
| <b>Type:</b>        | Treatment, Conditioning |
| <b>Year opened:</b> | 1978                    |

## Site (Structure) : Olkiluoto

Country: FINLAND

Reporting Year: 2007

|  |   |                    |                |              |                 |                      |
|--|---|--------------------|----------------|--------------|-----------------|----------------------|
| <b>Facility:</b>   | <b>OL2</b>  |                    |                |              |                 |                      |
| <b>Description:</b>  | processing and storage of reactor waste                       |                    |                |              |                 |                      |
| <b>Storage part of facility</b>                                  |   |                    |                |              |                 |                      |
| <b>OL2</b>   |   |                    |                |              |                 |                      |
| The following shows storage status for waste classes and SRS.    |   |                    |                |              |                 |                      |
| <b>Waste Class</b>   | <b>Actual</b>   | <b>Planned</b>     |                |              |                 |                      |
| reactor waste  | Yes   | Yes                |                |              |                 |                      |
| spent fuel   | No  | No                 |                |              |                 |                      |
| <b>List SRS?</b>   | No  |                    |                |              |                 |                      |
| <b>List UMMT?</b>  | No  |                    |                |              |                 |                      |
| <b>Capacity:</b>   | activated components can be stored here at loading ponds etc. |                    |                |              |                 |                      |
| Types of Storage Units   |   |                    |                |              |                 |                      |
| <b>Storage Unit Name</b>   | <b>Type Name</b>  | <b>Year Opened</b> | <b>Closed?</b> | <b>Full?</b> | <b>Modular?</b> | <b>Contains SRS?</b> |
| OL2  | building  | 1980               | No             | No           | No              | No                   |
| <b>Processing part of facility</b>                               |   |                    |                |              |                 |                      |
| <b>OL2</b>   |   |                    |                |              |                 |                      |
| The following shows processing status for waste classes and SRS. |   |                    |                |              |                 |                      |
| <b>Waste Class</b>   | <b>Actual</b>   | <b>Planned</b>     |                |              |                 |                      |
| reactor waste  | No  | No                 |                |              |                 |                      |
| spent fuel   | No  | No                 |                |              |                 |                      |
| <b>Type:</b>   | Treatment, Conditioning                                       |                    |                |              |                 |                      |
| <b>Year opened:</b>  | 1980  |                    |                |              |                 |                      |

## Site (Structure) : Olkiluoto

Country: FINLAND

Reporting Year: 2007

|                     |  |
|---------------------|--|
| <b>Facility:</b>    | <b>VLJ-KAJ</b>   |
| <b>Description:</b> | KAJ silo in the VLJ-Cave repository. The KAJ silo is used to dispose of mainly the intermediate level waste (ILW) component of low and intermediate level (LILW) reactor waste |

**Disposal part of facility VLJ-KAJ**

The following shows disposal status for waste classes and SRS.

| Waste Class   | Actual | Planned |
|---------------|--------|---------|
| reactor waste | Yes    | Yes     |
| spent fuel    | No     | No      |

|            |    |
|------------|----|
| List SRS?  | No |
| List UMMT? | No |

|                         |                     |                        |      |
|-------------------------|---------------------|------------------------|------|
| Type:                   | geological (cavern) |                        |      |
| Facility is modular?    | No                  |                        |      |
| Capacity existing (m3): | 6400                | Capacity planned (m3): | 6400 |

|            |     |              |                            |
|------------|-----|--------------|----------------------------|
| Depth (m): | 100 | Host medium: | crystalline rock (granite) |
|------------|-----|--------------|----------------------------|

| Phase Name                         | Start Year | End Year | Estimate |
|------------------------------------|------------|----------|----------|
| planning and/or concept assessment | 1980       | 1986     | False    |
| site selection                     | 1980       | 1983     | False    |
| design                             | 1983       | 1986     | False    |
| construction                       | 1988       | 1991     | False    |
| commissioning                      | 1991       | 1991     | False    |
| operation                          | 1992       |          | False    |

**Comment # 9711: Disposal Facility VLJ-KAJ**

The total volume of disposed waste in MAJ- and KAJ-silos without overpackings will be about 8800 m3. The % capacity used reported in Framework is based on the volume of waste plus overpacks. However, the volume of waste disposed reported in Waste Data does not include overpack volumes. Therefore, if someone calculates % capacity used based on capacity of facility and volume of waste reported, the calculated value will not equal the reported % capacity used.



## Site (Structure) : Olkiluoto

Country: FINLAND

Reporting Year: 2007

|                     |   |
|---------------------|---|
| <b>Facility:</b>    | <b>VLJ-MAJ</b>  |
| <b>Description:</b> | MAJ silo in the VLJ-Cave repository. The MAJ silo is used to dispose of mainly the low level waste (LLW) component of low and intermediate level (LILW) reactor waste |

**Disposal part of facility VLJ-MAJ**

The following shows disposal status for waste classes and SRS.

| Waste Class   | Actual | Planned |
|---------------|--------|---------|
| reactor waste | Yes    | Yes     |
| spent fuel    | No     | No      |

|            |    |
|------------|----|
| List SRS?  | No |
| List UMMT? | No |

|                         |                     |                        |      |
|-------------------------|---------------------|------------------------|------|
| Type:                   | geological (cavern) |                        |      |
| Facility is modular?    | No                  |                        |      |
| Capacity existing (m3): | 9100                | Capacity planned (m3): | 9100 |

|            |     |              |                            |
|------------|-----|--------------|----------------------------|
| Depth (m): | 100 | Host medium: | crystalline rock (granite) |
|------------|-----|--------------|----------------------------|

| Phase Name                         | Start Year | End Year | Estimate |
|------------------------------------|------------|----------|----------|
| planning and/or concept assessment | 1980       | 1986     | False    |
| site selection                     | 1980       | 1983     | False    |
| design                             | 1983       | 1986     | False    |
| construction                       | 1988       | 1991     | False    |
| commissioning                      | 1991       | 1991     | False    |
| operation                          | 1992       |          | False    |

**Comment # 9710: Disposal Facility VLJ-MAJ**

The total volume of disposed waste in MAJ- and KAJ-silos without overpackings will be about 8800 m3. The % capacity used reported in Framework is based on the volume of waste plus overpacks. However, the volume of waste disposed reported in Waste Data does not include overpack volumes. Therefore, if someone calculates % capacity used based on capacity of facility and volume of waste reported, the calculated value will not equal the reported % capacity used.

## Site (Data) : Olkiluoto

Stock of waste as at December 2007

Country: FINLAND

Reporting Year: 2007

Site Name: Olkiluoto

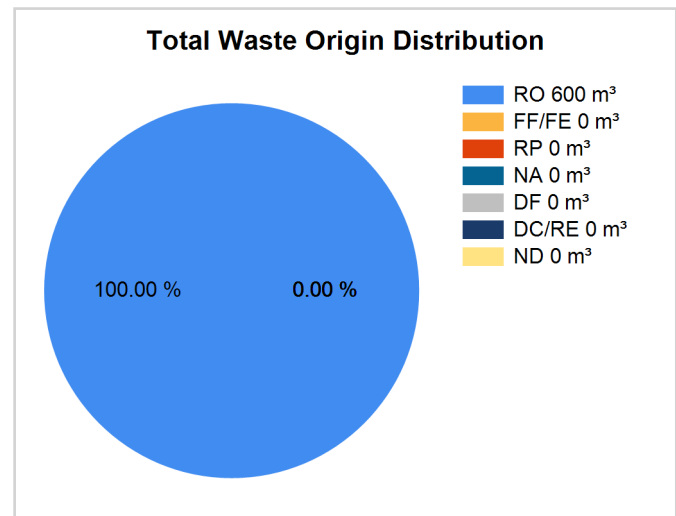
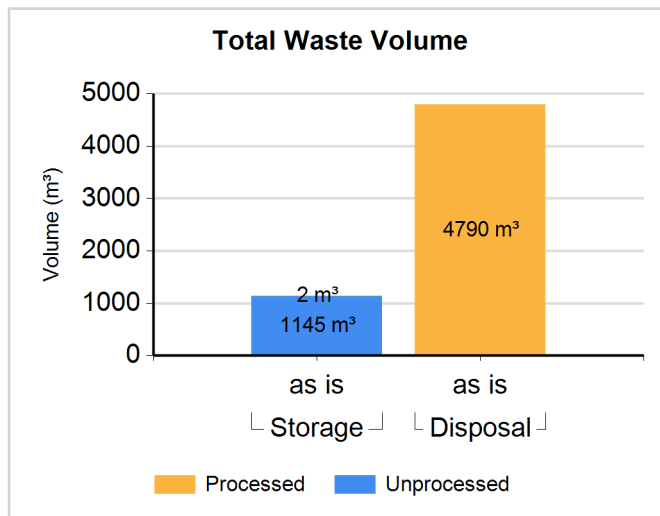
Full Name: Olkiluoto NPP

Inventory Reporting Date: December 2007

Waste Matrix Used: FIN\_RADW

## 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: reactor waste

| Waste Class Name | Location / Facility | Proc | Est. | Volume "as is" (m³) | Volume "as dispo" (m³) | RO %   | FF/FE % | RP % | NA % | DF % | DC/RE % | ND % |
|------------------|---------------------|------|------|---------------------|------------------------|--------|---------|------|------|------|---------|------|
| reactor waste    | Storage / NPP-Area  | N    | Y    | 1092.000            | 1092.000               | 100.00 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 |
| reactor waste    | Storage / OL1       | N    | Y    | 27.000              | 27.000                 | 100.00 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 |
| reactor waste    | Storage / OL1       | Y    | Y    | 2.000               | 2.000                  | 100.00 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 |
| reactor waste    | Storage / OL2       | N    | Y    | 26.000              | 26.000                 | 100.00 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 |
| reactor waste    | Disposal / VLJ-KAJ  | Y    | N    | 1627.000            | 1627.000               | 100.00 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 |
| reactor waste    | Disposal / VLJ-MAJ  | Y    | N    | 3163.000            | 3163.000               | 100.00 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 |

Comment # 7176: The additional characteristics of the waste

Unprocessed: solid (non-dispersible)

## Site (Data) : Olkiluoto

Stock of waste as at December 2007

Country: FINLAND

Reporting Year: 2007

**Processing - Treatment method(s)**

| Method               | Status  |             |   |               |
|----------------------|---------|-------------|---|---------------|
|                      | Planned | R&D program | Current practice method use over the last 5 years | Past Practice |
| Compaction           | N       | N           | Same  | N             |
| Decontamination      | N       | N           | Same  | N             |
| Evaporation          | N       | N           | Same  | N             |
| Filtration           | N       | N           | Same  | N             |
| Ion Exchange         | N       | N           | Same  | N             |
| Wastewater Treatment | N       | N           | Same  | N             |

**Processing - Conditioning method(s)**

| Method         | Status  |             |   |               |
|----------------|---------|-------------|---|---------------|
|                | Planned | R&D program | Current practice method use over the last 5 years | Past Practice |
| Bituminization | N       | N           | Same  | N             |
| Solidification | N       | N           | Same  | N             |

**Site (Structure) : Olkiluoto**

Country: FINLAND

Reporting Year: 2007

Full Name: Olkiluoto, the forthcoming repository for spent fuel

Location: Olkiluoto, Eurajoki municipality

Description:

Official Website:

License Holder(s): not licensed, the operator will be Posiva Oy.

Waste management facilities that are located at this site:

## Site (Structure) : Olkiluoto

Country: FINLAND

Reporting Year: 2007

|                     |  |
|---------------------|--|
| <b>Facility:</b>    | <b>SFdisposal</b>  |
| <b>Description:</b> | All Finnish spent nuclear fuel is planned to be disposed at the Olkiluoto SF repository. The construction licence application will be current in 2012 and the operating licence application in 2020. |

**Disposal part of facility**                      **SFdisposal**

The following shows disposal status for waste classes and SRS.

| Waste Class   | Actual | Planned |
|---------------|--------|---------|
| reactor waste | No     | No      |
| spent fuel    | No     | Yes     |

|           |    |
|-----------|----|
| List SRS? | No |
|-----------|----|

|            |    |
|------------|----|
| List UMMT? | No |
|------------|----|

|       |                     |
|-------|---------------------|
| Type: | geological (cavern) |
|-------|---------------------|

|                      |    |
|----------------------|----|
| Facility is modular? | No |
|----------------------|----|

|            |         |              |                           |
|------------|---------|--------------|---------------------------|
| Depth (m): | 400-700 | Host medium: | crystalline rock (gneiss) |
|------------|---------|--------------|---------------------------|

| Phase Name                         | Start Year | End Year | Estimate |
|------------------------------------|------------|----------|----------|
| planning and/or concept assessment | 1983       | 1985     | False    |
| site selection                     |            | 2001     | False    |
| design                             |            | 2003     | False    |
| construction                       | 2012       |          | True     |

**Comment                      # 9657: Disposal Facility SFdisposal**

Posiva has started grouting an underground rock laboratory, called ONKALO, in 2004. One of the main purposes of ONKALO is to verify the suitability of the site for disposal. ONKALO is also planned to be part of the forthcoming disposal repository.

## Site (Structure) : SSOW

Country: FINLAND

Reporting Year: 2007

Full Name: Storage for Stated Owned Waste

Location: Eurajoki, Finland

Description:

Official Website:

License Holder(s): The operating organisation for the SSOW is Research and Environmental Surveillance (STUK), and the authority is Nuclear Waste and Materials Regulation (STUK).

Waste management facilities that are located at this site:

|   |   |                    |                |              |                 |                      |
|---|---|--------------------|----------------|--------------|-----------------|----------------------|
| <b>Facility:</b>  | <b>SSOW</b>   |                    |                |              |                 |                      |
| <b>Description:</b>   | Storage of state owned waste (Pienjäteluola), located in the VLJ-cave.    |                    |                |              |                 |                      |
| <b>Storage part of facility SSOW</b>                          |   |                    |                |              |                 |                      |
| The following shows storage status for waste classes and SRS. |   |                    |                |              |                 |                      |
| <b>Waste Class</b>  | <b>Actual</b>   | <b>Planned</b>     |                |              |                 |                      |
| small user waste  | Yes   | Yes                |                |              |                 |                      |
| <b>List SRS?</b>  | No  |                    |                |              |                 |                      |
| <b>List UMMT?</b>   | No  |                    |                |              |                 |                      |
| <b>Capacity:</b>  | Amount of packed waste can not be >100 m3. Non nuclear waste is accepted. |                    |                |              |                 |                      |
| <b>Types of Storage Units</b>                                 |   |                    |                |              |                 |                      |
| <b>Storage Unit Name</b>                                      | <b>Type Name</b>  | <b>Year Opened</b> | <b>Closed?</b> | <b>Full?</b> | <b>Modular?</b> | <b>Contains SRS?</b> |
| SSOW  | cave  | 1997               | No             | No           | No              | Yes                  |

## Site (Data) : SSOW

Stock of waste as at December 2007

Country: FINLAND

Reporting Year: 2007

Site Name: SSOW

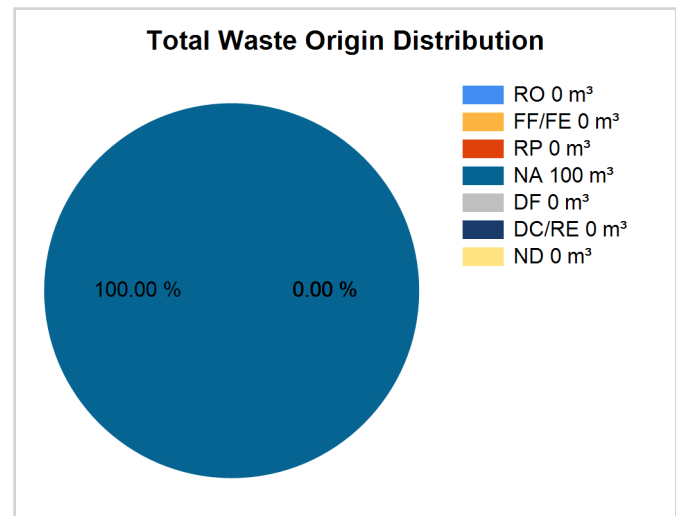
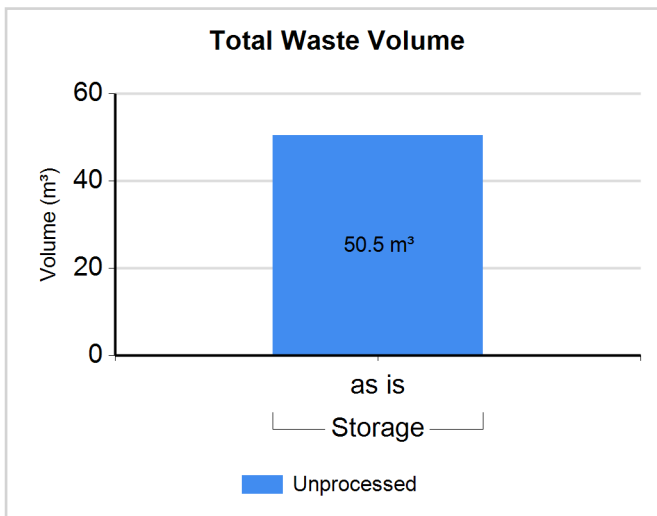
Full Name: Storage for Stated Owned Waste

Inventory Reporting Date: December 2007

Waste Matrix Used: FIN\_RADW3

## 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: small user waste

| Waste Class Name | Location / Facility | Proc | Est. | Volume "as is" (m³) | Volume "as dispo" (m³) | RO % | FF/FE % | RP % | NA %   | DF % | DC/RE % | ND % |
|------------------|---------------------|------|------|---------------------|------------------------|------|---------|------|--------|------|---------|------|
| small user waste | Storage / SSOW      | N    | N    | 50.500              | 50.500                 | 0.00 | 0.00    | 0.00 | 100.00 | 0.00 | 0.00    | 0.00 |

## Site (Structure) : FIR

Country: FINLAND

Reporting Year: 2007

Full Name: VTT FIR

Location: Espoo, Finland

Description:

Official Website:

License Holder(s): Technical Research Centre of Finland (Valtion Teknillinen Tutkimuskeskus)

Waste management facilities that are located at this site:

| <b>Facility:</b>  | <b>LILW-Proc</b>             |         |             |        |         |      |    |    |            |    |    |
|---|------------------------------|---------|-------------|--------|---------|------|----|----|------------|----|----|
| <b>Description:</b>   | processing facility for LILW |         |             |        |         |      |    |    |            |    |    |
| <p><b>Processing part of facility                      LILW-Proc</b></p> <p>The following shows processing status for waste classes and SRS.</p> <table border="1"> <thead> <tr> <th>Waste Class</th> <th>Actual</th> <th>Planned</th> </tr> </thead> <tbody> <tr> <td>LILW</td> <td>No</td> <td>No</td> </tr> <tr> <td>spent fuel</td> <td>No</td> <td>No</td> </tr> </tbody> </table> |                              |         | Waste Class | Actual | Planned | LILW | No | No | spent fuel | No | No |
| Waste Class   | Actual                       | Planned |             |        |         |      |    |    |            |    |    |
| LILW  | No                           | No      |             |        |         |      |    |    |            |    |    |
| spent fuel  | No                           | No      |             |        |         |      |    |    |            |    |    |
| <b>Type:</b>  | Treatment                    |         |             |        |         |      |    |    |            |    |    |
| <b>Year opened:</b>   | 1962                         |         |             |        |         |      |    |    |            |    |    |



## Site (Structure) : FIR

Country: FINLAND

Reporting Year: 2007

|   |  |                    |                |              |                 |                      |
|---|--|--------------------|----------------|--------------|-----------------|----------------------|
| <b>Facility:</b>  | <b>LILW-Store</b>  |                    |                |              |                 |                      |
| <b>Description:</b>   | storage facility for LILW  |                    |                |              |                 |                      |
| <b>Storage part of facility</b>                               |  |                    |                |              |                 |                      |
| <b>LILW-Store</b>   |  |                    |                |              |                 |                      |
| The following shows storage status for waste classes and SRS. |  |                    |                |              |                 |                      |
| <b>Waste Class</b>  | <b>Actual</b>  | <b>Planned</b>     |                |              |                 |                      |
| LILW  | Yes  | Yes                |                |              |                 |                      |
| spent fuel  | No   | No                 |                |              |                 |                      |
| <b>List SRS?</b>  | No   |                    |                |              |                 |                      |
| <b>List UMMT?</b>   | No   |                    |                |              |                 |                      |
| <b>Capacity:</b>  | The facility stores all waste produced by the research reactor of FIR. |                    |                |              |                 |                      |
| <b>Types of Storage Units</b>                                 |  |                    |                |              |                 |                      |
| <b>Storage Unit Name</b>                                      | <b>Type Name</b>   | <b>Year Opened</b> | <b>Closed?</b> | <b>Full?</b> | <b>Modular?</b> | <b>Contains SRS?</b> |
| Cellar  | building   | 1962               | No             | No           | No              | No                   |

## Site (Structure) : FIR

Country: FINLAND

Reporting Year: 2007

|   |   |                    |                |              |                 |                      |
|---|---|--------------------|----------------|--------------|-----------------|----------------------|
| <b>Facility:</b>  | <b>SF storage</b>   |                    |                |              |                 |                      |
| <b>Description:</b>   | Reactor hall storage for the spent fuel of the research reactor |                    |                |              |                 |                      |
| <b>Storage part of facility</b>                               |   | <b>SF storage</b>  |                |              |                 |                      |
| The following shows storage status for waste classes and SRS. |   |                    |                |              |                 |                      |
| <b>Waste Class</b>  | <b>Actual</b>   | <b>Planned</b>     |                |              |                 |                      |
| LILW  | No  | No                 |                |              |                 |                      |
| spent fuel  | Yes   | Yes                |                |              |                 |                      |
| <b>List SRS?</b>  | No  |                    |                |              |                 |                      |
| <b>List UMMT?</b>   | No  |                    |                |              |                 |                      |
| <b>Capacity:</b>  | Can contain all spent fuel of the research reactor.             |                    |                |              |                 |                      |
| <b>Types of Storage Units</b>                                 |   |                    |                |              |                 |                      |
| <b>Storage Unit Name</b>                                      | <b>Type Name</b>  | <b>Year Opened</b> | <b>Closed?</b> | <b>Full?</b> | <b>Modular?</b> | <b>Contains SRS?</b> |
| Well  | well  | 1962               | No             | No           | No              | No                   |

## Site (Data) : FIR

Stock of waste as at December 2007

Country: FINLAND

Reporting Year: 2007

Site Name: FIR

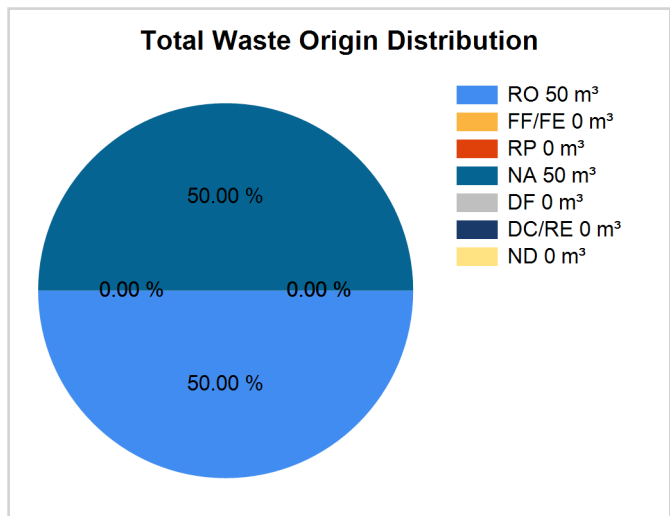
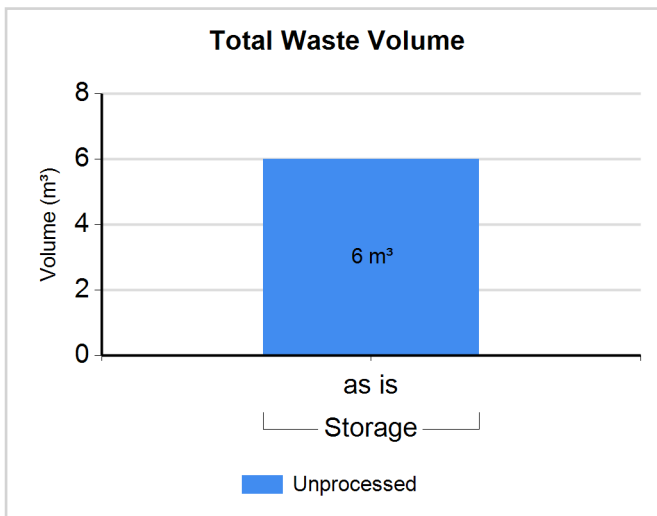
Full Name: VTT FIR

Inventory Reporting Date: December 2007

Waste Matrix Used: FIN\_RADW2

## 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

| 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             | Storage / LILW-Store | N    | N    | 6.000               | 6.000                  | 50.00 | 0.00    | 0.00 | 50.00 | 0.00 | 0.00    | 0.00 |

Comment # 7178: The additional characteristics of the waste

Unprocessed: resin, solid (non-dispersible)

## Processing - Treatment method(s)

| Method         | Status  |             |   |               |
|----------------|---------|-------------|---|---------------|
|                | Planned | R&D program | Current practice method use over the last 5 years | Past Practice |
| Compaction     | Y       | N           |   | N             |
| Size Reduction | Y       | N           |   | N             |

Country: FINLAND

Reporting Year: 2007

|               |  |
|---------------|--|
| <b>Name:</b>  | <b>STUK</b>                            |
| Full Name:    | Radiation and nuclear Safety Authority |
| Divison:      | Nuclear Waste and Materials Regulation |
| City or Town: | Helsinki                               |
| Main Website: |  |

Comment **# 7154: Wastes that are regulated by the Regulator**

Matrix FIN\_RADW - reactor waste; Matrix FIN\_RADW2 - LILW; Matrix FIN\_RADW3 - small waste; and also spent fuel

## Regulations / Laws

Country: FINLAND

Reporting Year: 2007

|                                 |                               |     |  |
|---------------------------------|-------------------------------|-----|--|
| <b>Name:</b>                    | <b>NE Act</b>                 |     |  |
| Title or Name:                  | Nuclear Energy Act (990/1987) |     |  |
| Reference Number:               | 990/1987                      |     |  |
| Date Promulgated or Proclaimed: | 12/11/1988                    | Law |  |

Comment **# 7155: Wastes that are regulated by the Law**

- Matrix FIN\_RADW - reactor waste; Matrix FIN\_RADW2 - LILW

|                                 |  |     |  |
|---------------------------------|--|-----|--|
| <b>Name:</b>                    | <b>NW Fund</b>   |     |  |
| Title or Name:                  | Decree on the State Nuclear Waste Management Fund (162/1988) |     |  |
| Reference Number:               | 162/1988   |     |  |
| Date Promulgated or Proclaimed: | 2/12/1988  | Law |  |

Comment **# 7156: Wastes that are regulated by the Regulation**

- Matrix FIN\_RADW - reactor waste; also SF

|                                 |                          |     |  |
|---------------------------------|--------------------------|-----|--|
| <b>Name:</b>                    | <b>Rad Act</b>           |     |  |
| Title or Name:                  | Radiation Act (592/1991) |     |  |
| Reference Number:               | 592/1991                 |     |  |
| Date Promulgated or Proclaimed: | 3/27/1991                | Law |  |

Comment **# 7158: Wastes that are regulated by the Law**

Matrix FIN\_RADW3 - small waste

|                                 |  |            |  |
|---------------------------------|--|------------|--|
| <b>Name:</b>                    | <b>Gov R 478</b>   |            |  |
| Title or Name:                  | Decision of the Government on the General Regulations for the Safety of Spent Fuel Disposal (478/1999) |            |  |
| Reference Number:               | 478/1999   |            |  |
| Date Promulgated or Proclaimed: | 3/25/1999  | Regulation |  |

|                                 |  |            |  |
|---------------------------------|--|------------|--|
| <b>Name:</b>                    | <b>Gov R 398</b>   |            |  |
| Title or Name:                  | Decision of the Government on the General Regulations for the Safety of a Disposal Facility for Reactor Waste (398/1991) |            |  |
| Reference Number:               | 398/1991   |            |  |
| Date Promulgated or Proclaimed: | 2/14/1991  | Regulation |  |

Comment **# 7160: Wastes that are regulated by the Regulation**

Matrix FIN\_RADW - reactor waste

## Regulations / Laws

Country: FINLAND

Reporting Year: 2007

|                                 |   |            |  |
|---------------------------------|---|------------|--|
| <b>Name:</b>                    | <b>Gov R 395</b>  |            |  |
| Title or Name:                  | Decision of the Government on the General Regulations for the Safety of Nuclear Power Plants (395/1991) |            |  |
| Reference Number:               | 395/1991  |            |  |
| Date Promulgated or Proclaimed: | 3/1/1991  | Regulation |  |

|                                 |  |            |  |
|---------------------------------|--|------------|--|
| <b>Name:</b>                    | <b>YVL 8.1</b>   |            |  |
| Title or Name:                  | Guide YVL 8.1, Disposal of low and intermediate level waste from the operation of nuclear power plants (2003). |            |  |
| Reference Number:               | YVL 8.1  |            |  |
| Date Promulgated or Proclaimed: | 9/10/2003  | Regulation |  |

Comment # 7162: Wastes that are regulated by the Regulation

Matrix FIN\_RADW - reactor waste

|                                 |  |            |  |
|---------------------------------|--|------------|--|
| <b>Name:</b>                    | <b>YVL 8.2</b>   |            |  |
| Title or Name:                  | Guide YVL 8.2, Premises for removal of regulatory control from nuclear waste (2002). |            |  |
| Reference Number:               | YVL 8.2  |            |  |
| Date Promulgated or Proclaimed: | 3/25/2002  | Regulation |  |

|                                 |   |            |  |
|---------------------------------|---|------------|--|
| <b>Name:</b>                    | <b>YVL 8.3</b>  |            |  |
| Title or Name:                  | Guide YVL 8.3, Treatment and storage of low and intermediate level waste at a nuclear power plant (2005). |            |  |
| Reference Number:               | YVL 8.3   |            |  |
| Date Promulgated or Proclaimed: | 6/29/2005   | Regulation |  |

|                                 |   |            |  |
|---------------------------------|---|------------|--|
| <b>Name:</b>                    | <b>YVL 8.4</b>  |            |  |
| Title or Name:                  | Guide YVL 8.4, Long-term safety of disposal of spent nuclear fuel (2001). |            |  |
| Reference Number:               | YVL 8.4   |            |  |
| Date Promulgated or Proclaimed: | 5/23/2001   | Regulation |  |

## Regulations / Laws

Country: FINLAND

Reporting Year: 2007

|                                 |   |            |
|---------------------------------|---|------------|
| <b>Name:</b>                    | <b>ST 6.2</b>   |            |
| Title or Name:                  | Guide ST 6.2, Radioactive wastes and discharges (1999). |            |
| Reference Number:               | ST 6.2  |            |
| Date Promulgated or Proclaimed: | 7/1/1999  | Regulation |

Comment # 7166: Wastes that are regulated by the Regulation

Matrix FIN\_RADW3 - small waste

|                                 |   |            |
|---------------------------------|---|------------|
| <b>Name:</b>                    | <b>ST 5.1</b>   |            |
| Title or Name:                  | ST Guide 5.1 Radiation Safety of Sealed Sources and Equipment Containing Them, 17 February 1999 |            |
| Reference Number:               | ST 5.1  |            |
| Date Promulgated or Proclaimed: | 2/17/1999   | Regulation |

Comment # 7167: Wastes that are regulated by the Regulation

Matrix FIN\_RADW3 - small waste

|                                 |   |            |
|---------------------------------|---|------------|
| <b>Name:</b>                    | <b>YVL 8.5</b>  |            |
| Title or Name:                  | Guide YVL 8.5, Operational safety of a disposal facility for spent nuclear fuel (2002). |            |
| Reference Number:               | YVL 8.5   |            |
| Date Promulgated or Proclaimed: | 12/23/2002  | Regulation |

|                                 |  |     |
|---------------------------------|--|-----|
| <b>Name:</b>                    | <b>STUK Act</b>  |     |
| Title or Name:                  | Act on the Finnish Centre for Radiation and Nuclear Safety (1069/1983) |     |
| Reference Number:               | 1069/1983  |     |
| Date Promulgated or Proclaimed: | 12/22/1983   | Law |

|                                 |   |     |
|---------------------------------|---|-----|
| <b>Name:</b>                    | <b>ACNS Dec</b>   |     |
| Title or Name:                  | Decree on Advisory Committee on Nuclear Safety (164/1988) |     |
| Reference Number:               | 164/1988  |     |
| Date Promulgated or Proclaimed: | 2/12/1988   | Law |

## Regulations / Laws

Country: FINLAND

Reporting Year: 2007

|                                 |                                  |     |  |
|---------------------------------|----------------------------------|-----|--|
| <b>Name:</b>                    | <b>NE Dec</b>                    |     |  |
| Title or Name:                  | Nuclear Energy Decree (161/1988) |     |  |
| Reference Number:               | 161/1988                         |     |  |
| Date Promulgated or Proclaimed: | 2/12/1988                        | Law |  |

|                                 |   |     |  |
|---------------------------------|---|-----|--|
| <b>Name:</b>                    | <b>TPL Act</b>                          |     |  |
| Title or Name:                  | Act on Third Party Liability (484/1972) |     |  |
| Reference Number:               | 484/1972                                |     |  |
| Date Promulgated or Proclaimed: | 6/6/1972                                | Law |  |

|                                 |  |     |  |
|---------------------------------|--|-----|--|
| <b>Name:</b>                    | <b>TPL Dec</b>   |     |  |
| Title or Name:                  | Decree on the Implementation of Third Party Liability (486/1972) |     |  |
| Reference Number:               | 486/1972   |     |  |
| Date Promulgated or Proclaimed: | 6/16/1972  | Law |  |

|                                 |                              |     |  |
|---------------------------------|------------------------------|-----|--|
| <b>Name:</b>                    | <b>Rad Dec</b>               |     |  |
| Title or Name:                  | Radiation Decree (1512/1991) |     |  |
| Reference Number:               | 1512/1991                    |     |  |
| Date Promulgated or Proclaimed: | 12/20/1991                   | Law |  |

|                                 |  |     |  |
|---------------------------------|--|-----|--|
| <b>Name:</b>                    | <b>STUK Dec</b>  |     |  |
| Title or Name:                  | Decree on the Finnish Centre for Radiation and Nuclear Safety (618/1997) |     |  |
| Reference Number:               | 618/1997   |     |  |
| Date Promulgated or Proclaimed: | 7/1/1997   | Law |  |

|                                 |   |     |  |
|---------------------------------|---|-----|--|
| <b>Name:</b>                    | <b>ACNE Dec</b>   |     |  |
| Title or Name:                  | Decree on Advisory Committee on Nuclear Energy (163/1988) |     |  |
| Reference Number:               | 163/1988  |     |  |
| Date Promulgated or Proclaimed: | 2/12/1988   | Law |  |



## Regulations / Laws

Country: FINLAND

Reporting Year: 2007

|                                 |   |     |  |
|---------------------------------|---|-----|--|
| <b>Name:</b>                    | <b>EIA Act</b>  |     |  |
| Title or Name:                  | Act on the Environmental Impact Assessment Procedure (468/1994) |     |  |
| Reference Number:               | 468/1994  |     |  |
| Date Promulgated or Proclaimed: | 6/10/1996   | Law |  |

|                                 |  |     |  |
|---------------------------------|--|-----|--|
| <b>Name:</b>                    | <b>EIA Dec</b>   |     |  |
| Title or Name:                  | Decree on Environmental Impact Assessment Procedure (792/1994) |     |  |
| Reference Number:               | 792/1994   |     |  |
| Date Promulgated or Proclaimed: | 8/25/1994  | Law |  |

|                                 |   |     |  |
|---------------------------------|---|-----|--|
| <b>Name:</b>                    | <b>OGA Act</b>  |     |  |
| Title or Name:                  | Act on the Openness of Government Activities (621/1999) |     |  |
| Reference Number:               | 621/1999  |     |  |
| Date Promulgated or Proclaimed: | 5/21/1999   | Law |  |

|                                 |   |     |  |
|---------------------------------|---|-----|--|
| <b>Name:</b>                    | <b>PNRE Dec</b>   |     |  |
| Title or Name:                  | Decree of Ministry of Interior Concerning Planning for Nuclear or Radiological Emergences and for Informing the Public about Radiation Hazards (774/2001) |     |  |
| Reference Number:               | 774/2001  |     |  |
| Date Promulgated or Proclaimed: | 8/31/2001   | Law |  |

|                                 |  |            |  |
|---------------------------------|--|------------|--|
| <b>Name:</b>                    | <b>DiP 1983</b>  |            |  |
| Title or Name:                  | Decision in Principle of 10th November 1983 by the Government on the Objectives to be Observed in Carrying out Research, Surveys and Planning in the Field of Nuclear Waste Management |            |  |
| Reference Number:               | Decision in Principle of 10th November 1983  |            |  |
| Date Promulgated or Proclaimed: | 11/10/1983   | Regulation |  |

|                                 |   |            |  |
|---------------------------------|---|------------|--|
| <b>Name:</b>                    | <b>Gov R 165</b>  |            |  |
| Title or Name:                  | Decision of the Government Concerning the Providing for Nuclear Waste Management Costs (165/1988) |            |  |
| Reference Number:               | 165/1988  |            |  |
| Date Promulgated or Proclaimed: | 2/18/1988   | Regulation |  |

## Regulations / Laws

Country: FINLAND

Reporting Year: 2007

|                                 |  |            |  |
|---------------------------------|--|------------|--|
| <b>Name:</b>                    | <b>Gov R 396</b>   |            |  |
| Title or Name:                  | Decision of the Government on the General Regulations for Physical Protection of Nuclear Power Plants (396/1991) |            |  |
| Reference Number:               | 396/1991   |            |  |
| Date Promulgated or Proclaimed: | 2/14/1991  | Regulation |  |

|                                 |  |            |  |
|---------------------------------|--|------------|--|
| <b>Name:</b>                    | <b>Gov R 397</b>   |            |  |
| Title or Name:                  | Decision of the Government on the General Regulations for Emergency Response Arrangements at Nuclear Power Plants (397/1991) |            |  |
| Reference Number:               | 397/1991   |            |  |
| Date Promulgated or Proclaimed: | 2/14/1991  | Regulation |  |

**Milestones**

Country: FINLAND

Reporting Year: 2007

|   |      |           |      |
|---|------|-----------|------|
| Start Year or Reference Year:                         | 2001 | End Year: | 2001 |
| Description of Milestone:                             |      |           |      |
| DiP and site selection for SF disposal.               |      |           |      |
| Start Year or Reference Year:                         | 1998 | End Year: | 1998 |
| Description of Milestone:                             |      |           |      |
| 1998 start of operation of Loviisa LILW repository.   |      |           |      |
| Start Year or Reference Year:                         | 1992 | End Year: | 1992 |
| Description of Milestone:                             |      |           |      |
| 1992 start of operation of Olkiluoto LILW repository. |      |           |      |

## Policies

Country: FINLAND

Reporting Year: 2007

## National Systems

| Policy  |  | (Yes;Partially;No) |
|---|--|--------------------|
| Q14   | Has your Country implemented a national policy for radioactive waste management? | Yes                |
| Comment <b># 9661: Policies National Systems-Policy</b>   |  |                    |
| Ref. to Decision in Principle of 10th November 1983 by the Government on the Objectives to be Observed in Carrying out Research, Surveys and Planning in the Field of Nuclear Waste Management. |  |                    |

| Strategies  |   | (Yes;Partially;No) |
|---|---|--------------------|
| Q15   | Has your country developed strategies to implement a national policy? | Yes                |
| Comment <b># 9662: Policies National Systems-Strategies</b>   |   |                    |
| Ref. to Decision in Principle of 10th November 1983 by the Government on the Objectives to be Observed in Carrying out Research, Surveys and Planning in the Field of Nuclear Waste Management. |   |                    |

| Requirements  |   | (Yes;Partially;No) |
|---|---|--------------------|
| Q17   | identified the parties involved in the different steps of radioactive waste management                                      | Yes                |
| Q18   | specified a rational set of safety, radiological and environmental protection objectives                                    | Yes                |
| Q19   | implemented a mechanism to identify existing and anticipated radioactive wastes   | Yes                |
| Q20   | implemented controls over radioactive waste generation  | Yes                |
| Q21   | identified available methods and facilities to process, store and dispose of radioactive waste on an appropriate time-scale | Yes                |
| Q22   | taken into account interdependencies among all steps in radioactive waste generation and management                         | Yes                |
| Q23   | implemented appropriate research and development to support the operational and regulatory needs                            | Yes                |
| Q24   | implemented a funding structure and the allocation of resources that are essential for radioactive waste management         | Yes                |
| Q25   | implemented formal mechanisms for disseminating information to the public and for public consultation                       | Yes                |
| Comment <b># 9663: Policies National Systems-Requirements</b>   |   |                    |
| Ref. to Nuclear Energy Act (990/1987), Nuclear Energy Decree (161/1988), Decree on the State Nuclear Waste Management Fund (162/1988), Act on Third Party Liability (484/1972), Decree on the Implementation of Third Party Liability (486/1972), Radiation Act (592/1991), Radiation Decree (1512/1991), Act on the Finnish Centre for Radiation and Nuclear Safety (1069/1983) and Decree on the Finnish Centre for Radiation and Nuclear Safety (1618/1997). |   |                    |

## Policies

Country: FINLAND

Reporting Year: 2007

|      | Responsibilities  | (Complete;Incomplete) |
|------|---|-----------------------|
| Q28  | establish and implement a legal framework for the management of radioactive waste   | Complete              |
| Q29  | establish or designate a regulatory body that has the responsibility for carrying out the regulatory function with regard to safety and the protection of human health and the environment. | Complete              |
| Q30  | define the responsibilities of waste generators and operators of waste management facilities  | Complete              |
| Q31  | provide for adequate resources  | Complete              |
| Q33  | enforce compliance with regulatory requirements   | Complete              |
| Q34  | implement the licensing process   | Complete              |
| Q35  | advise the government   | Complete              |
| Q37  | identify an acceptable destination for the radioactive waste  | Complete              |
| Q114 | comply with legal requirements  | Complete              |

Comment # 9664: Policies National Systems-Responsibilities

Ref. to Nuclear Energy Act (990/1987), Nuclear Energy Decree (161/1988), Decree on the State Nuclear Waste Management Fund (162/1988), Act on Third Party Liability (484/1972), Decree on the Implementation of Third Party Liability (486/1972), Radiation Act (592/1991), Radiation Decree (1512/1991), Act on the Finnish Centre for Radiation and Nuclear Safety (1069/1983) and Decree on the Finnish Centre for Radiation and Nuclear Safety (1618/1997).

|     | Activities   | (Yes;Partially;No) |
|-----|--|--------------------|
| Q43 | perform safety and environmental impact assessments for radioactive waste management facilities  | Yes                |
| Q44 | ensure adequate radiation protection for workers, the general public and the environment   | Yes                |
| Q45 | ensure suitable staff, equipment, facilities, training and operating procedures are available to perform the safe radioactive waste management steps                               | Yes                |
| Q46 | establish and implement a quality assurance programme for the radioactive waste generated or its processing, storage and disposal  | Yes                |
| Q47 | establish and keep records of appropriate information regarding the generation, processing, storage and disposal of radioactive waste, including an inventory of radioactive waste | Yes                |
| Q48 | provide surveillance and control of activities involving radioactive waste as required by the regulatory body  | Yes                |
| Q49 | collect, analyze and, as appropriate, share operational experience to ensure continued safety improvements in radioactive waste management   | Yes                |
| Q50 | conduct or otherwise ensure appropriate research and development to support operational needs in radioactive waste management  | Yes                |

## Policies

Country: FINLAND

Reporting Year: 2007

| Clearance |   | (Yes;No) |
|-----------|---|----------|
| Q128      | Does your country have "clearly defined clearance levels based on radiological criteria, with policy statements that material below those levels can be recycled or disposed of with non-radioactive wastes"? | Yes      |
| Q129      | Has your country ever used a "case-by-case" approach to clearing radioactive wastes (excluding spent/disused sealed radioactive sources)?   | Yes      |
| Q130      | Has your country ever used clearance levels to dispose of, reuse or recycle radioactive waste as non-radioactive waste or as a non-radioactive resource (excluding spent/disused sealed radioactive sources)? | Yes      |
| Comment   | # 9691: Policies National Systems-Clearance<br>YVL 8.2 Guide.   |          |

## Disposal Facilities

| Licensing |  | (Yes - All;Yes - Some;No) |
|-----------|--|---------------------------|
| Q53       | Environmental Assessment (EA)  | No                        |
| Q54       | Environmental Impact Statement (EIS)   | Yes - All                 |
| Q55       | Performance Assessment (PA)  | Yes - All                 |
| Q56       | Quality Assurance (QA)   | Yes - All                 |
| Q57       | Safety Assessment (SA)   | Yes - All                 |
| Q59       | If Quality Assurance is part of your Country's current, waste disposal facility licensing policy, does the QA Program conform to international standards (such as the ISO9000 series)? | Yes - All                 |
| Comment   | # 114: EIS<br>is called Environmental Impact Assessment  |                           |
| Comment   | # 115: PA<br>PA is part of the SA.   |                           |

| Operation |  | (Yes - All;Yes - Some;No) |
|-----------|--|---------------------------|
| Q60       | Does your Country have formal, documented waste acceptance criteria for its operating or proposed disposal facilities?   | Yes - Some                |
| Comment   | # 9685: Policies Disposal Facilities-Operation<br>Two operating disposal facilities for LILW exist. Regulatory guides include general criteria for waste packages to be disposed of. The FSAR's of the disposal facilities include waste package specifications which are to be approved by the regulator. |                           |

| Post-Closure |  | (Yes;No) |
|--------------|--|----------|
| Q61          | Does your Country have any written policies to address the maintenance of records that describe the design, location and inventory of waste disposal facilities?   | Yes      |
| Q62          | If the answer to the previous question was YES, does your Country have any policies, laws or regulations that prescribe what records are to be maintained?         | Yes      |
| Q63          | Does your Country have any written policies to address active institutional controls or passive institutional controls, such as monitoring or access restrictions? | No       |

## Policies

Country: FINLAND

Reporting Year: 2007

## Processing/Storage

| Policies/Procedures |  | (Yes;No) |
|---------------------|--|----------|
| Q73                 | waste sorting/segregation  | Yes      |
| Q74                 | waste minimization   | Yes      |
| Q75                 | waste storage  | Yes      |
| Q76                 | processing and/or storing and/or disposing of nuclear fuel cycle waste separately from non-nuclear fuel cycle waste (also known as nuclear applications waste) | No       |
| Q78                 | Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)                      | No       |

| Implementation |  | (Yes;No) |
|----------------|--|----------|
| Q80            | In your Country are there any waste processing facilities at the same location where the waste is generated? | Yes      |
| Q81            | In your Country are there any centralized waste processing facilities?                                       | No       |
| Q82            | In your Country are there any mobile waste processing facilities?  | No       |

Comment # 116: mobile waste processing facility

Finland has a mobile waste processing facility (NURES) which is used only at the Loviisa NPP site.

| Foreign |   | (Yes;No) |
|---------|---|----------|
| Q121    | Has your country sent any wastes or spent fuel to another country for processing (reprocessing for fuel)?       | No       |
| Q124    | Has your country accepted any wastes or spent fuel from another country for processing (reprocessing for fuel)? | No       |

## Policies

Country: FINLAND

Reporting Year: 2007

## Spent/Disused SRS

| Registration  |   | (Yes;No) |
|---|---|----------|
| Q84   | Is there a national level registry?   | Yes      |
| Q85   | If answer was yes, is the registry used only for disused/spent SRS?   | No       |
| Q87   | Are there regional-level registries (one or more)?  | No       |
| Q90   | Are there local-level registries (one or more)?   | No       |
| Procedures  |   | (Yes;No) |
| Q91   | Does your Country have documented procedures in place to ensure that sealed radioactive sources (SRS) are transferred to secure facilities in a timely manner after their user declares them to be spent? | Yes      |
| Comment   | # 117: Documented procedures  |          |
| ST 5.1 Guide.   |   |          |
| Agreements  |   | (Yes;No) |
| Q93   | Government to Government agreements   | No       |
| Q94   | Government - Supplier agreements  | No       |
| Q95   | Supplier-User agreements  | Yes      |
| Q97   | Do any agreements include suppliers that are outside of your Country?   | Yes      |
| Comment   | # 9686: Policies Spent SRS-Agreements   |          |
| Sealed sources are not manufactured in Finland but all are imported, thus the agreements are between Finnish users and foreign manufacturers. |   |          |
| Release / Disposal  |   | (Yes;No) |
| Q99   | Does your Country have any regulations to free-release spent sealed radioactive sources (SRS)?  | Yes      |
| Q100  | Has your Country disposed of spent SRS in existing disposal facilities for LILW or HLW waste?   | No       |
| Q101  | Does your Country plan to dispose of spent SRS in existing or planned disposal facilities for LILW or HLW waste?  | Yes      |
| Q102  | Has your Country implemented dedicated disposal facilities for spent SRS?   | No       |
| Q103  | Does your Country have plans to implement dedicated disposal facilities for spent SRS?  | No       |
| Comment   | # 118: Regulations for free-release SRS   |          |
| ST 6.2 Guide.   |   |          |
| Comment   | # 9687: Policies Spent SRS-Release / Disposal   |          |
| Spent sealed sources with activity inventories below specified limits will be disposed of with LILW from NPPs.                                |   |          |



## Policies

Country: FINLAND

Reporting Year: 2007

## Import-Export

## Radioactive Waste

(Yes;No)

Q104 Does your Country have laws or Regulations restricting either the import or export of radioactive waste (excluding spent fuel)? Yes

Comment # 9665: Policies Import-Export-Radioactive Waste

Also import/export of spent fuel is prohibited by the law.

## Spent Fuel

(Yes;No)

Q105 Does your Country have laws or Regulations restricting either the import or export of spent fuel? Yes

## Liquid HLW

## Storage

(Yes;No)

Q106 Does your Country have high-level liquid wastes in storage? No

## UMMT

## Responsibility

(Yes;No)

Q110 Does your Country have any Uranium Mine and Mill Tailings sites that do not have a designated authority to manage them? No

## Policies

Country: FINLAND

Reporting Year: 2007

## Decommissioning

| Funding |  | (Yes - All;Yes - Some;No) |
|---------|--|---------------------------|
| Q111    | Does your Country require that funds should be set aside in support of future waste management activities, such as decommissioning activities? | Yes - All                 |

| Facilities |   | (Yes;No) |
|------------|---|----------|
| Q119       | Does Your Country have any nuclear fuel cycle facilities?                               | Yes      |
| Q120       | Does Your Country have any nuclear applications facilities (non fuel cycle facilities)? | Yes      |

Comment **# 9688: Policies Decommissioning-Facilities**

Nuclear fuel cycle facilities: FiR, NPPs and related spent fuel and waste management facilities.

Non-fuel cycle facilities: particle accelerators, radiochemical laboratories, hot cell for material testing

| Timeframe |  | (Yes - All;Yes - Some;No) |
|-----------|--|---------------------------|
| Q112      | Does your Country require a time frame for the decommissioning of nuclear fuel cycle facilities once these facilities cease operation?     | No                        |
| Q113      | Does your Country require a time frame for the decommissioning of non-nuclear fuel cycle facilities once these facilities cease operation? | No                        |

Comment **# 9689: Policies Decommissioning-Timeframe**

Time frames of decommission for nuclear fuel cycle facilities are included in periodically updated decommissioning plans, which are reviewed by the regulator.

Comment **# 9690: Policies Decommissioning-Timeframe**

For non nuclear fuel cycle facilities is applied case-by-case judgement.

## Future Outlook

Country: FINLAND

Reporting Year: 2007

**Data not available.**

## Future Outlook

Country: FINLAND

Reporting Year: 2007

**Data not available.**

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