



# **Country Waste Profile Report for LITHUANIA Reporting Year: 2004**

*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: LITHUANIA

Reporting Year: 2004

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: **National**

Description:

| Waste Class Name | Distribution % |         |     |
|------------------|----------------|---------|-----|
|                  | LILW-SL        | LILW-LL | HLW |
| Group-III Solid  | 0.0            | 100.0   | 0.0 |
| Group-II Solid   | 100.0          | 0.0     | 0.0 |
| Group-I Solid    | 100.0          | 0.0     | 0.0 |
| LIQUID           | 100.0          | 0.0     | 0.0 |

Comment **# 447: Waste Classification**

Classification of the waste is performed according to Former Soviet Union regulation "Sanitary Rules for Design and Operation of Nuclear Power Plants, SP-AS-88/93. Moscow, Gosatomenergoprojekt, 1993 (in Russian)".

This old classification system of radioactive waste was formally abandoned when the "Regulation on the Pre-Disposal Management of Radioactive Waste at Nuclear Power Plant" was adopted in 2001 (VD-RA-01-2001, see Attachment No 184, our Reference No 3). However, the old classification system is still applied at Ignalina NPP not only for the historical, already stored waste but also for the new produced waste. The new classification system is applied in the planning of the radwaste processing in the new waste management facilities.

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

Is not defined

## Groups Overview

Country: LITHUANIA

Reporting Year: 2004

|                           |                 |
|---------------------------|-----------------|
| <b>Reporting Group:</b>   | <b>NATIONAL</b> |
| Inventory Reporting Date: | December 2004   |
| Waste Matrix Used:        | National        |
| Description:              |                 |

| Site Name  | Facility Name | Facilities Defined |         |          |
|------------|---------------|--------------------|---------|----------|
| Ignal-NPP  | WPF           | processing         |         |          |
|            | WSF           |                    | storage |          |
| Maisiagala | MWDF          |                    |         | disposal |

## Site (Structure) : Ignal-NPP

Country: LITHUANIA

Reporting Year: 2004

Full Name: Ignalina Nuclear Power Plant

Description:

Official Website:

License Holder(s): Ignalina NPP

Comment **# 404: Concrete Tanks**

Concrete tanks for spent resins and evaporator concentrates (sludge)

Comment **# 405: SRS**

Since the late 1980s SRS were shipped to INPP. Over the years, until late in 2000, the disused SRS were dumped, together with other wastes, into various storage areas of SB155/1, SB157 and SB157/1.

Beginning late in 2000, the disused SRS have been stored separately from other waste in the compartment in SB157/1 reserved for this waste. The SRS, still in their own-shielded packages, are loaded into cylindrical stainless steel containers for storage, which are then placed in the storage compartment.

Waste management facilities that are located at this site:

|                     |                                    |
|---------------------|------------------------------------|
| <b>Facility:</b>    | <b>WPF</b>                         |
| <b>Description:</b> | Ignalina Waste Processing Facility |

**Processing part of facility WPF**

The following shows processing status for waste classes and SRS.

| Waste Class     | Actual | Planned |
|-----------------|--------|---------|
| Group-III Solid | Yes    | Yes     |
| Group-II Solid  | Yes    | Yes     |
| Group-I Solid   | Yes    | Yes     |
| LIQUID          | Yes    | Yes     |

|                     |                         |
|---------------------|-------------------------|
| <b>Type:</b>        | Treatment, Conditioning |
| <b>Year opened:</b> | 1983                    |

Comment **# 7443: SWMSF**

In the frame of the pre-decommissioning support projects, a new Solid Waste Management and Storage Facility (SWMSF) will be built under the Grant Agreement between the EBRD as administrator of a grant fund provided by the Ignalina International Decommissioning Support Funds and Lithuanian Government. Tendering process has been started in 2003. It is expected that the contract for design, construction and licensing of the SWMSF will be signed in 2005. The SWMSF will be built in order to characterize, treat, condition and interim store the retrieved operational waste accumulated on the site as well as the future operational and decommissioning wastes of the same types. The SWMSF will comprise, among others, the capabilities for size reduction, super compaction, incineration, packaging, immobilization and interim storage.

Comment **# 7442: Cementation Facility**

Erection of a cementation facility of spent ion exchange resins, perlite mixtures and sediments as well as a new interim storage facility is now in progress. This cementation facility is expected to be operational in 2005.

## Site (Structure) : Ignal-NPP

Country: LITHUANIA

Reporting Year: 2004

|                     |                                  |
|---------------------|----------------------------------|
| <b>Facility:</b>    | <b>WSF</b>                       |
| <b>Description:</b> | Ignalina Waste Storage Facility. |

**Storage part of facility**                      **WSF**

The following shows storage status for waste classes and SRS.

| Waste Class     | Actual | Planned |
|-----------------|--------|---------|
| Group-III Solid | Yes    | Yes     |
| Group-II Solid  | Yes    | Yes     |
| Group-I Solid   | Yes    | Yes     |
| LIQUID          | Yes    | Yes     |

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

|           |  |
|-----------|--|
| Capacity: |  |
|-----------|--|

## Types of Storage Units

| Storage Unit Name | Type Name       | Year Opened | Closed? | Full? | Modular? | Contains SRS? |
|-------------------|-----------------|-------------|---------|-------|----------|---------------|
| CT                | tank (concrete) | 1983        | No      | No    | No       | No            |
| SB155             | building        | 1983        | No      | Yes   | No       | No            |
| SB155/1           | building        | 1990        | No      | Yes   | No       | Yes           |
| SB157             | building        | 1984        | No      | No    | No       | Yes           |
| SB157/1           | building        | 1989        | No      | No    | No       | Yes           |
| SB158             | building        | 1987        | No      | No    | Yes      | No            |

Comment                      **# 7441: Waste Storage Facility**

The INPP solid radwaste storage facility consists of four buildings, namely building No. 155, No. 155/1, No. 157 and No. 157/1. This facility is Soviet type facility designed for the interim storage of low and intermediate level radioactive waste arising as a consequence of operation of NPP. Since September 1990 institutional waste from Lithuanian small producers is stored in this facility too.

The solidified waste storage facility, building No. 158, is designed for the storage of bituminized radwaste arising as a product of radioactive liquid waste treatment at INPP. It contains 11 canyons with an effective volume of 2000 m<sup>3</sup> each. One canyon has an effective volume of 800 m<sup>3</sup>. It is intention to convert building 158 to a disposal facility.

Comment                      **# 7444: Licensed Landfill**

A Licensed Landfill for very low-level waste will be build at INPP site. A project is being launched in order to develop a Licensed Landfill concept, associated WAC, licensing requirements and tendering documents with intention to have this disposal facility in operation in 2007.

Site (Data) : Ignal-NPP

Stock of waste as at December 2004

Country: LITHUANIA

Reporting Year: 2004

Site Name: Ignal-NPP

Full Name: Ignalina Nuclear Power Plant

Inventory Reporting Date: December 2004

Waste Matrix Used: National

Comment # 404: Concrete Tanks

Concrete tanks for spent resins and evaporator concentrates (sludge)

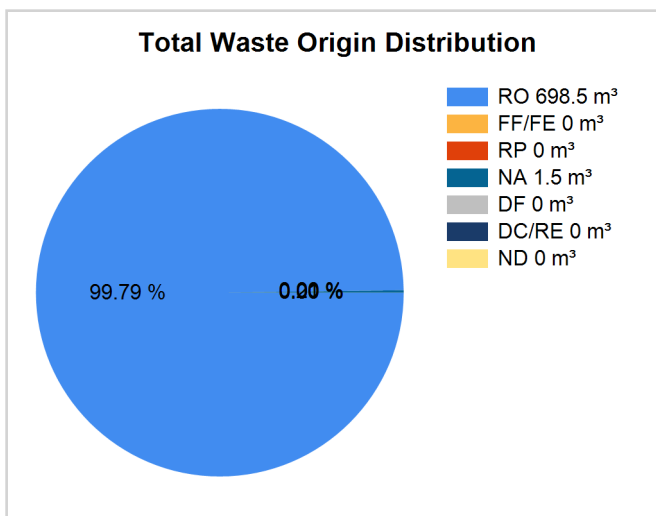
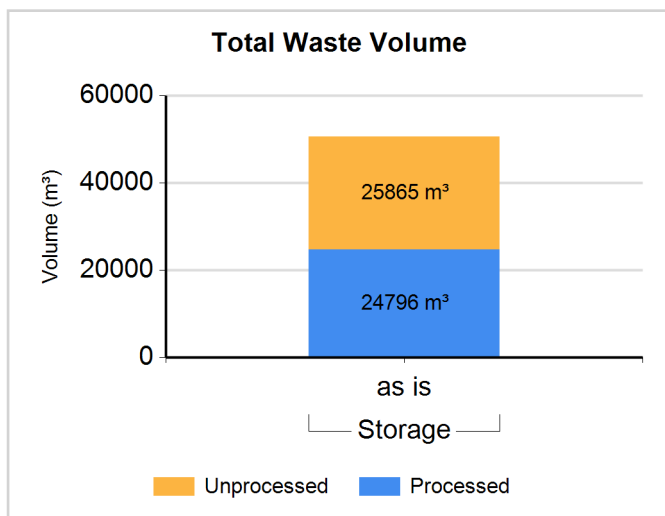
Comment # 405: SRS

Since the late 1980s SRS were shipped to INPP. Over the years, until late in 2000, the disused SRS were dumped, together with other wastes, into various storage areas of SB155/1, SB157 and SB157/1.

Beginning late in 2000, the disused SRS have been stored separately from other waste in the compartment in SB157/1 reserved for this waste. The SRS, still in their own-shielded packages, are loaded into cylindrical stainless steel containers for storage, which are then placed in the storage compartment.

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.

## Site (Data) : Ignal-NPP

Stock of waste as at December 2004

Country: LITHUANIA

Reporting Year: 2004

**Waste Class: Group-III Solid**

| Waste Class Name | Location / Facility | Proc | Est. | Volume "as is" (m <sup>3</sup> ) | Volume "as dispo" (m <sup>3</sup> ) | RO %  | FF/FE % | RP % | NA % | DF % | DC/RE % | ND % |
|------------------|---------------------|------|------|----------------------------------|-------------------------------------|-------|---------|------|------|------|---------|------|
| Group-III Solid  | Storage             | Y    | N    | 762.000                          | 762.000                             | 99.50 | 0.00    | 0.00 | 0.50 | 0.00 | 0.00    | 0.00 |

**Waste Class: Group-II Solid**

| Waste Class Name | Location / Facility | Proc | Est. | Volume "as is" (m <sup>3</sup> ) | Volume "as dispo" (m <sup>3</sup> ) | RO %   | FF/FE % | RP % | NA % | DF % | DC/RE % | ND % |
|------------------|---------------------|------|------|----------------------------------|-------------------------------------|--------|---------|------|------|------|---------|------|
| Group-II Solid   | Storage             | N    | N    | 4444.000                         | 4444.000                            | 99.50  | 0.00    | 0.00 | 0.50 | 0.00 | 0.00    | 0.00 |
| Group-II Solid   | Storage             | Y    | N    | 11772.000                        | 11772.000                           | 100.00 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 |

Comment # 9815: Class Group-II Solid/Site Ignal-NPP

The processed solid waste is bituminized waste.

**Waste Class: Group-I Solid**

| Waste Class Name | Location / Facility | Proc | Est. | Volume "as is" (m <sup>3</sup> ) | Volume "as dispo" (m <sup>3</sup> ) | RO %   | FF/FE % | RP % | NA % | DF % | DC/RE % | ND % |
|------------------|---------------------|------|------|----------------------------------|-------------------------------------|--------|---------|------|------|------|---------|------|
| Group-I Solid    | Storage             | N    | N    | 17911.000                        | 17911.000                           | 99.50  | 0.00    | 0.00 | 0.50 | 0.00 | 0.00    | 0.00 |
| Group-I Solid    | Storage             | Y    | N    | 490.000                          | 490.000                             | 100.00 | 0.00    | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 |

**Waste Class: LIQUID**

Data available but will not be reported.

**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  | Y       | N           |   | N             |
| Evaporation      | N       | N           | Same  | N             |
| Incineration     | Y       | N           |   | N             |
| Size Reduction   | N       | N           | Same  | N             |
| Super Compaction | Y       | N           |   | 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             |
| Cementation    | Y       | N           |   | N             |
| Grouting       | Y       | N           |   | N             |

## Site (Structure) : Maisiagala

Country: LITHUANIA

Reporting Year: 2004

Full Name: Maisiagala

Description:

Official Website:

License Holder(s): Not licensed - responsible organization is Radioactive Waste Management Agency (RATA)

Comment # 406: Group I and II

The split of volumes for Group I and II disposal is an estimate because the Nuclear Applications waste has not been classified according to the NPP classification (Group I, II, etc). The "Radon" type disposal facility is located at this site.

Waste management facilities that are located at this site:



## Site (Structure) : Maisiagala

Country: LITHUANIA

Reporting Year: 2004

|                     |                                    |
|---------------------|------------------------------------|
| <b>Facility:</b>    | <b>MWDF</b>                        |
| <b>Description:</b> | Maisiagala Waste Disposal Facility |

**Disposal part of facility                      MWDF**

The following shows disposal status for waste classes and SRS.

| Waste Class     | Actual | Planned |
|-----------------|--------|---------|
| Group-III Solid | No     | No      |
| Group-II Solid  | Yes    | No      |
| Group-I Solid   | Yes    | No      |
| LIQUID          | No     | No      |

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

|                         |                         |                        |     |
|-------------------------|-------------------------|------------------------|-----|
| Type:                   | engineered near surface |                        |     |
| Facility is modular?    | No                      |                        |     |
| Capacity existing (m3): | 200                     | Capacity planned (m3): | 200 |

|            |       |              |                    |
|------------|-------|--------------|--------------------|
| Depth (m): | 1 - 5 | Host medium: | sedimentary (sand) |
|------------|-------|--------------|--------------------|

| Phase Name            | Start Year | End Year | Estimate |
|-----------------------|------------|----------|----------|
| operation             | 1963       | 1988     | False    |
| closure               | 1988       |          | False    |
| institutional control | 1988       |          | False    |

**Comment                      # 7445: MWDF**

The existing disposal facility for radioactive waste from research, medicine and industry at Maisiagala was built in the early 1960's according to a concept typical of those applied in the former Soviet Union at that time. Maisiagala facility received institutional waste from 1963 until 1988, when the facility was closed.

**Comment                      # 7446: Upgrading of MWDF**

The supervision of the existing "Radon" type institutional radwaste disposal facility near Maisiagala was entrusted to the Lithuania's Radioactive Waste Management Agency (RATA) in 2002. RATA has applied for a PHARE project aiming for safety assessment and upgrading of Maisiagala repository. The project started in 2004. The project includes the preparation of Safety Analysis Report, conceptual and detail design of the facility upgrading, and documentation for works, supply tenders and repository licensing.

## Site (Data) : Maisiagala

Stock of waste as at December 2004

Country: LITHUANIA

Reporting Year: 2004

**Site Name:** Maisiagala

Full Name: Maisiagala

Inventory Reporting Date: December 2004

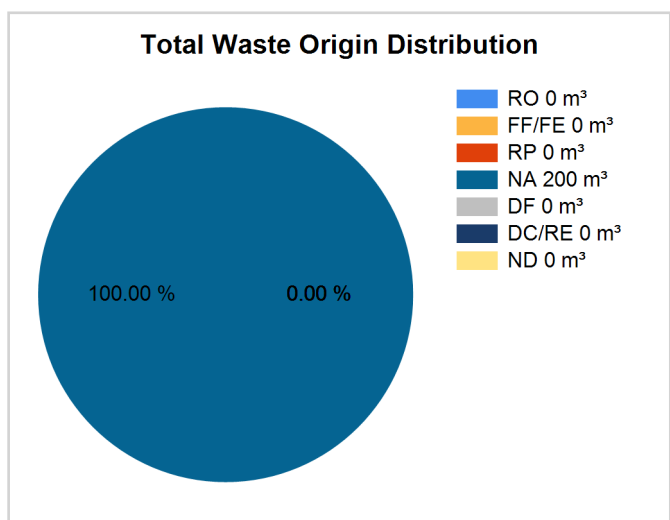
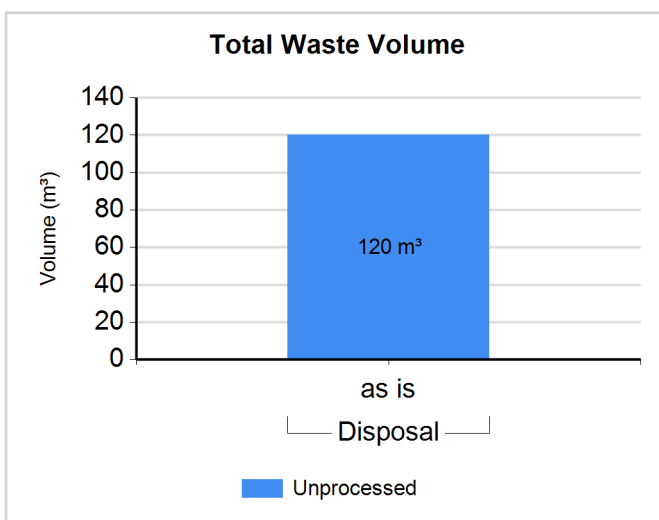
Waste Matrix Used: National

Comment # 406: Group I and II

The split of volumes for Group I and II disposal is an estimate because the Nuclear Applications waste has not been classified according to the NPP classification (Group I, II, etc). The "Radon" type disposal facility is located at this site.

**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: Group-II Solid**

| Waste Class Name | Location / Facility | Proc | Est. | Volume "as is" (m³) | Volume "as dispo" (m³) | RO % | FF/FE % | RP % | NA %   | DF % | DC/RE % | ND % |
|------------------|---------------------|------|------|---------------------|------------------------|------|---------|------|--------|------|---------|------|
| Group-II Solid   | Disposal            | N    | N    | 10.000              | 10.000                 | 0.00 | 0.00    | 0.00 | 100.00 | 0.00 | 0.00    | 0.00 |

**Waste Class: Group-I Solid**

| Waste Class Name | Location / Facility | Proc | Est. | Volume "as is" (m³) | Volume "as dispo" (m³) | RO % | FF/FE % | RP % | NA %   | DF % | DC/RE % | ND % |
|------------------|---------------------|------|------|---------------------|------------------------|------|---------|------|--------|------|---------|------|
| Group-I Solid    | Disposal            | N    | N    | 110.000             | 110.000                | 0.00 | 0.00    | 0.00 | 100.00 | 0.00 | 0.00    | 0.00 |

## Regulators

Country: LITHUANIA

Reporting Year: 2004

|               |   |
|---------------|---|
| <b>Name:</b>  | <b>VATESI</b>                           |
| Full Name:    | State Nuclear Power Safety Inspectorate |
| Divison:      |   |
| City or Town: | Vilnius                                 |
| Main Website: |   |

|               |                             |
|---------------|-----------------------------|
| <b>Name:</b>  | <b>RPC</b>                  |
| Full Name:    | Radiation Protection Center |
| Divison:      |                             |
| City or Town: | Vilnius                     |
| Main Website: |                             |

|               |                         |
|---------------|-------------------------|
| <b>Name:</b>  | <b>MoE</b>              |
| Full Name:    | Ministry of Environment |
| Divison:      |                         |
| City or Town: | Vilnius                 |
| Main Website: |                         |

## Regulations / Laws

Country: LITHUANIA

Reporting Year: 2004

|                                 |  |     |
|---------------------------------|--|-----|
| <b>Name:</b>                    | <b>Strategy</b>                          |     |
| Title or Name:                  | Strategy on Radioactive Waste Management |     |
| Reference Number:               | Attachment, our Reference No. 1          |     |
| Date Promulgated or Proclaimed: | 2/6/2002                                 | Law |

Attachment **#182: Regulation**  
 Strategy\_on\_Radioactive\_Waste\_Management.doc  
 Strategy on Radioactive Waste Management

|                                 |  |     |
|---------------------------------|--|-----|
| <b>Name:</b>                    | <b>VIII-1190</b>                       |     |
| Title or Name:                  | Law on Management of Radioactive Waste |     |
| Reference Number:               | Attachment, our Reference No. 2        |     |
| Date Promulgated or Proclaimed: | 5/20/1999                              | Law |

Attachment **#183: Regulation**  
 Law\_on\_Management\_of\_Radioactive\_Waste.doc  
 Law on Management of Radioactive Waste

|                                 |   |            |
|---------------------------------|---|------------|
| <b>Name:</b>                    | <b>VD-RA-01</b>   |            |
| Title or Name:                  | Regulation on the Pre-Disposal Management of Radioactive Waste at Nuclear Power Plant |            |
| Reference Number:               | Attachment, our Reference No. 3   |            |
| Date Promulgated or Proclaimed: | 7/27/2001   | Regulation |

Attachment **#184: Regulation**  
 Regulation on Pre-Disposal Management.doc  
 Regulation on the Pre-Disposal Management of Radioactive Waste at Nuclear Power Plant

|                                 |   |            |
|---------------------------------|---|------------|
| <b>Name:</b>                    | <b>P-2002-02</b>  |            |
| Title or Name:                  | Regulation on Disposal of Short-Lived Low- and Intermediate-Level Waste |            |
| Reference Number:               | Attachment, our Reference No. 4   |            |
| Date Promulgated or Proclaimed: | 10/28/2002  | Regulation |

Attachment **#185: Regulation**  
 Regulation on Disposal of LILW.doc  
 Regulation on Disposal of Short-Lived Low- and Intermediate-Level Waste

## Regulations / Laws

Country: LITHUANIA

Reporting Year: 2004

|                                 |                                 |     |
|---------------------------------|---------------------------------|-----|
| <b>Name:</b>                    | <b>I-1613</b>                   |     |
| Title or Name:                  | Law on Nuclear Energy           |     |
| Reference Number:               | Attachment, our Reference No. 5 |     |
| Date Promulgated or Proclaimed: | 11/14/1996                      | Law |

Attachment **#187: Regulation**

Law\_on\_Nuclear\_Energy.doc

Law on Nuclear Energy

|                                 |  |            |
|---------------------------------|--|------------|
| <b>Name:</b>                    | <b>LAND-34</b>   |            |
| Title or Name:                  | Clearance Levels of Radionuclides, Conditions for Reuse of Materials and Disposal of Waste |            |
| Reference Number:               | Attachment, our Reference No. 6  |            |
| Date Promulgated or Proclaimed: | 3/31/2000  | Regulation |

Attachment **#186: Regulation**

LAND 34-2000\_angl.doc

Clearance Levels of Radionuclides, Conditions for Reuse of Materials and Disposal of Waste

|                                 |  |            |
|---------------------------------|--|------------|
| <b>Name:</b>                    | <b>VD-EN-01</b>  |            |
| Title or Name:                  | General Requirements for Decommissioning of Ignalina NPP |            |
| Reference Number:               | Attachment, our reference No. 7                          |            |
| Date Promulgated or Proclaimed: | 10/6/1999  | Regulation |

Attachment **#188: Regulation**

VATESI\_VD-EN-01-99\_Decommiss.doc

General Requirements for Decommissioning of Ignalina NPP

|                                 |                                 |     |
|---------------------------------|---------------------------------|-----|
| <b>Name:</b>                    | <b>VIII-1019</b>                |     |
| Title or Name:                  | Law on Radiation Protection     |     |
| Reference Number:               | Attachment, our reference No. 8 |     |
| Date Promulgated or Proclaimed: | 1/12/1999                       | Law |

Attachment **#181: Regulation**

Law on Radiation Protection.doc

Law on Radiation Protection

## Regulations / Laws

Country: LITHUANIA

Reporting Year: 2004

|                                 |   |            |  |
|---------------------------------|---|------------|--|
| <b>Name:</b>                    | <b>P-2003-01</b>  |            |  |
| Title or Name:                  | General Waste Acceptance Criteria for Disposal in a Near Surface Repository |            |  |
| Reference Number:               | Our Reference No. 9   |            |  |
| Date Promulgated or Proclaimed: | 2/20/2003   | Regulation |  |

|                                 |  |            |  |
|---------------------------------|--|------------|--|
| <b>Name:</b>                    | <b>P-2003-02</b>                                 |            |  |
| Title or Name:                  | Requirements on Disposal of Very Low Level Waste |            |  |
| Reference Number:               | Our Reference No 10                              |            |  |
| Date Promulgated or Proclaimed: | 8/18/2003  | Regulation |  |

**Milestones**

Country: LITHUANIA

Reporting Year: 2004

|   |      |           |      |
|---|------|-----------|------|
| Start Year or Reference Year:   | 2005 | End Year: | 2007 |
| Description of Milestone:   |      |           |      |
| Programme for Decommissioning of Unit 1 at Ignalina NPP approved by the Government. This Programme defines also implementation of the radwaste treatment and conditioning facilities for operational waste. |      |           |      |
| Start Year or Reference Year:   | 2002 | End Year: | 2007 |
| Description of Milestone:   |      |           |      |
| Strategy on Radioactive Waste Management approved by the Government (First Strategy. According to the Law on Radioactive Waste Management the Strategy shall be updated every five years).                  |      |           |      |

## Policies

Country: LITHUANIA

Reporting Year: 2004

## National Systems

| Policy  |  | (Yes;Partially;No) |
|---------|--|--------------------|
| Q14     | Has your Country implemented a national policy for radioactive waste management?   | Yes                |
| Comment | <b># 422: The main objective of the national policy</b>  |                    |
|         | The main objective of the national policy is provide for the set of practical actions that shall bring management of radioactive waste in the Republic of Lithuania in compliance with the radioactive waste management principles of IAEA and with the good practices in force in EU Member States. |                    |

| Strategies |   | (Yes;Partially;No) |
|------------|---|--------------------|
| Q15        | Has your country developed strategies to implement a national policy?                               | Yes                |
| Comment    | <b># 413: National Strategy on Radioactive Waste Management</b>                                     |                    |
|            | Approved by resolution of the Government of the Republic of Lithuania No.174 dated February 6, 2002 |                    |
| Attachment | <b>#173: Questionnaire</b>  |                    |
|            | Strategy_on_Radioactive_Waste_Management.doc  |                    |
|            | Strategy on Radioactive 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                            | Partially          |
| Q24          | implemented a funding structure and the allocation of resources that are essential for radioactive waste management         | Partially          |
| Q25          | implemented formal mechanisms for disseminating information to the public and for public consultation                       | Yes                |
| Comment      | <b># 414: Law on the Management of Radioactive Waste</b>  |                    |
|              | May 20, 1999, No. VIII-1190, Vilnius  |                    |
| Attachment   | <b>#174: Questionnaire</b>  |                    |
|              | Law_on_Management_of_Radioactive_Waste.doc  |                    |
|              | Law on Management of Radioactive Waste  |                    |



## Policies

Country: LITHUANIA

Reporting Year: 2004

|      | 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  | Incomplete            |
| 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 **# 415: Radwaste classification systems**

The old classification system of radioactive waste was formally abandoned when the "Regulation on the Pre-Disposal Management of Radioactive Waste at Nuclear Power Plant" was adopted in 2001-07-27. However, the old classification system is still applied at Ignalina NPP not only for the old, already stored waste but also for the new produced waste. Solid waste continues to be separated into three groups. There can be the situation when two classification systems exist in the same time: the old classification system is applied for the stored accumulated waste and the new classification system is applied for the waste processed in the new waste management facilities.

Attachment **#175: Questionnaire**

Regulation on Pre-Disposal Management.doc

Regulation on the Pre-Disposal Management of Radioactive Waste at Nuclear Power Plant

## Policies

Country: LITHUANIA

Reporting Year: 2004

|     | 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                |

Comment **# 416: An inventory of radioactive waste**

As soon as possible correlations linking hard-to-measure radiologically relevant radionuclides to easily measurable gamma-emitters should be developed where possible for each waste stream and the validity of these correlations should be checked at predetermined intervals.

Comment **# 417: Retrieval of old accumulated solid radwaste**

The low and intermediate level solid waste previously classified as Group 1 and 2 being stored on the Ignalina NPP site, containing mainly short lived radionuclides, shall be retrieved for characterization followed by conditioning and subsequent storage/disposal.

Comment **# 7447: Storage and disposal plans**

The Ignalina NPP decommissioning process will generate large volumes of very low, low, intermediate and high-level radioactive waste. It is generally considered necessary to have a Licensed Landfill for very low level waste (VLLW) in operation in 2007 and a Near Surface Repository (NSR) for short-lived low- and intermediate-level waste (LILW) in operation in 2010-2012. It was decided that interim storage facility should be built in stages (modular design) for storing operational short-lived waste. It will be the possibility for future extensions in order to provide storage of waste packages generated during decommissioning after 2010, if necessary. The new interim storage facility should be also capable of storing the unprocessed long-lived waste. Therefore new interim storage facility will be designed for 50 years operation.

|      | 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      |

### Disposal Facilities

## Policies

Country: LITHUANIA

Reporting Year: 2004

| Licensing   |  | (Yes - All;Yes - Some;No) |
|---|--|---------------------------|
| Q53   | Environmental Assessment (EA)  | Yes - All                 |
| Q54   | Environmental Impact Statement (EIS)   | No                        |
| 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                 |
| <p>Comment <b># 418: Radioactive waste disposal facility at Maisiagala</b></p> <p>PHARE project has been started in 2004 to perform the safety analysis of existing "Radon" type radioactive waste disposal facility near Maisiagala as for a temporary storage facility and, if the safety requirements are met, to perform the licensing. Later on, the investigations shall be performed and it shall be decided whether this facility could be converted into a repository or the site shall be after remediation released for the free use</p> |  |                           |
| <p>Comment <b># 419: Reference design of a near surface repository</b></p> <p>Reference design of a near surface repository (NSR) for low- and intermediate-level short-lived radioactive waste has been accomplished in 2002. Candidate sites for a NSR has been identified in 2003. Environmental Impact Assessment for two candidate sites has been performed in 2004. It is foreseen to complete site selection, necessary investigations and draft recommendations on construction of NSR in 2006.</p>   |  |                           |
| <p>Comment <b># 420: Landfill repository for very low level radwaste</b></p> <p>Development of documents concerning site, design and construction of a landfill repository for very low level radioactive waste is in progress. The licensed landfill will be constructed on Ignalina NPP site.</p>   |  |                           |

| Operation  |  | (Yes - All;Yes - Some;No) |
|--|--|---------------------------|
| Q60  | Does your Country have formal, documented waste acceptance criteria for its operating or proposed disposal facilities? | Yes - All                 |
| <p>Comment <b># 421: Generic WAC and requirements for WPS</b></p> <p>Generic waste acceptance criteria (WAC) for conditioned LILW candidate for near surface disposal and requirements for waste package specifications (WPS) have been approved by the State Nuclear Power Safety Inspectorate in 2003 (see P-2003-01, our Reference No 9).</p> |  |                           |

## Policies

Country: LITHUANIA

Reporting Year: 2004

| 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? | Yes      |
| Q65          | access restrictions  | Yes      |
| Q66          | drainage and/or leachate collection system(s)  | Yes      |
| Q67          | leachate treatment systems   | No       |
| Q68          | environmental monitoring   | Yes      |
| Q69          | facility monitoring  | Yes      |
| Q70          | surveillance   | Yes      |
| Q71          | plans for intervention measures during active institutional control if there is an unplanned release of radioactive materials from the disposal facility           | Yes      |

Attachment **#176: Questionnaire**

Regulation on Disposal of LILW.doc

Regulation on Disposal of Short-Lived Low- and Intermediate-Level Waste

## Policies

Country: LITHUANIA

Reporting Year: 2004

## 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) | Yes      |
| Q78                 | Does your country have any legislation, regulation, or policy that waste processing must take place prior to storage (see following note)                      | Yes      |

Comment **# 423: Regulation on the Pre-Disposal Management**

See attachment No. 175 at Policies/National Systems/Responsibilities  
"Regulation on the Pre-Disposal Management of Radioactive Waste at Nuclear Power Plant"

Comment **# 7449: RMI waste**

Lithuania's Radioactive Waste Management Agency has applied for a PHARE project to establish the central institutional waste processing and buffer storage facility based on the Feasibility Study performed. Construction of the new facility at Maisiagala site will ensure the proper treatment and conditioning, and safe and secure buffer storage of the institutional radioactive waste.

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

Comment **# 424: Centralized RMI waste processing facility**

Feasibility study to establish a centralized RMI waste processing facility at Maisiagala has been performed. The material of this study shall be used as the input for a tendering process for construction of facility to be done within the expected upcoming IAEA project and Phare project.

| 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       |

## Spent/Disused SRS

## Policies

Country: LITHUANIA

Reporting Year: 2004

| 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       |
| Comment            | <b># 427: A national level registry</b>  |          |
|                    | A national level registry of all Lithuania's SRS is administrated and supervised by Radiation Protection Center. Radioactive Waste Management Agency (RATA) have another national level registry of spent SRS transferred or to be transferred to RATA as radioactive waste. |          |
| 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      |
| 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      |
| Release / Disposal |  | (Yes;No) |
| Q99                | Does your Country have any regulations to free-release spent sealed radioactive sources (SRS)?   | No       |
| 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            | <b># 428: Disposed disused SRS</b>   |          |
|                    | Disused SRS have been disposed of in "Radon" type radioactive waste disposal facility near Maisiagala before 1989.   |          |
| Comment            | <b># 429: Management of disused SRS</b>  |          |
|                    | Disused SRS are managed separately from other radioactive waste.   |          |
| Comment            | <b># 430: Spent SRS with long-lived radionuclides</b>  |          |
|                    | These disused radioactive sealed sources that could not be reused or sent back to the supplier are treated without the final immobilization until the WAC for a deep geological repository are established.  |          |
| Attachment         | <b>#178: Questionnaire</b>   |          |
|                    | LAND 34-2000_angl.doc  |          |
|                    | Normative document of environmental protection of the Republic of Lithuania "Clearance Levels of Radionuclides, Conditions of Reuse of Materials and Disposal of Waste".   |          |

## Policies

Country: LITHUANIA

Reporting Year: 2004

## 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           | <b># 431: Prohibition on import of radwaste</b><br>See Article 42 of the Law on Nuclear Energy  |          |
| Comment           | <b># 432: Re-entry of disused SRS</b><br>Pursuant to Article 30 of the Law on Radioactive Waste Management, a return into Lithuania of disused SRS is permitted, if they are intended for the legal person who manufactured them and who is authorized to receive and keep the disused SRS. |          |
| Attachment        | <b>#179: Questionnaire</b><br>Law_on_Nuclear_Energy.doc<br>Law on Nuclear Energy  |          |

| Spent Fuel |  | (Yes;No) |
|------------|--|----------|
| Q105       | Does your Country have laws or Regulations restricting either the import or export of spent fuel?  | Yes      |
| Comment    | <b># 433: Import of SNF</b><br>According to Article 2 of the Law on Nuclear Energy: "Radioactive waste - spent nuclear fuel and other radioactive materials the further technological use whereof is either not advisable or impossible".<br>According to Article 42 of the Law on Nuclear Energy: "It shall be prohibited to import radioactive waste into the territory of the Republic of Lithuania". |          |

## 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: LITHUANIA

Reporting Year: 2004

## 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

Comment **# 439: Law on INPP Decommissioning Fund**

Ignalina NPP's decommissioning fund was established by the law No. IX-466 on July 12, 2001

Comment **# 7448: Ignalina NPP decommissioning**

There is only one nuclear power plant in Lithuania - Ignalina NPP with two similar RBMK-1500 Units. The original design lifetime has been projected out to 2013-2017. The first Unit was shutdown at 31 December 2004, and second Unit will be shutdown in 2009 if funding for decommissioning is available from EU and other donors. Decommissioning of the Unit 1 will be implemented in accordance with the Immediate Dismantling Strategy.

## Facilities

(Yes;No)

Q119 Does Your Country have any nuclear fuel cycle facilities? No

Q120 Does Your Country have any nuclear applications facilities (non fuel cycle facilities)? Yes

## Timeframe

(Yes - All;Yes - Some;No)

Q113 Does your Country require a time frame for the decommissioning of non-nuclear fuel cycle facilities once these facilities cease operation? No

Attachment **#180: Questionnaire**

VATESI\_VD-EN-01-99-Decommiss.doc

General Requirements for Decommissioning of Ignalina NPP



## Future Outlook

Country: LITHUANIA

Reporting Year: 2004

**Data not available.**

## Future Outlook

Country: LITHUANIA

Reporting Year: 2004

**Data not available.**

## Future Outlook

Country: LITHUANIA

Reporting Year: 2004

**Data not available.**

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Country: LITHUANIA

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## Future Outlook

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**Data not available.**