



# **Republic of Latvia National Report**

## **On the implementation of the obligations under the Convention on Nuclear Safety**

**4<sup>th</sup> Review meeting of the Contracting Parties**

2007

### **EXECUTIVE SUMMARY**

Latvia submits the present report for peer review at the fourth Review Meeting of the Nuclear Safety Convention (hereinafter: the Convention or CNS) at the International Atomic Energy Agency in April 2008. This report demonstrates how the Latvia meets the main objective of the Convention — to achieve and maintain a high level of nuclear safety worldwide by enhancing national measures and international cooperation. It also shows how the Latvia meets the obligations of the applicable articles established by the CNS.

Based on legal requirements and outcomes from the previous three Review Meetings Latvia noted that there are two basic commitments for each Contracting Party:

- to prepare and make available a National Report for review,
- to submit National Report to a peer review by the other Contracting Parties.

Therefore, as it was done also in past (already three times), Latvia:

- prepared the report,
- made it accessible for other Contracting Parties by posting the National Report on the CNS web site,
- is ready to review National Reports of other Contracting Parties,

- after receiving the questions and comments about our report prepared and posted answers on CNS web site,
- actively participates in Review Meeting.

Latvia recognizes that preparation of the National Report includes a self-assessment and preparation of the safety enhancement measures to meet national and international obligations. We are sure, that international review provides plenty of opportunities for continuous learning from others and the review of the National Report by our peers ensure illumination of issues of special interest, which will improve Latvia's action program to enhance safety.

The scope of this report is limited to those articles from NSC, which are relevant to the particular situation in Latvia, as the Convention applies mainly to nuclear power reactors, but Latvia does not possess any nuclear power plant and the only research reactor is in early stage of decommissioning.

The present report is structured according to the Guidelines regarding national reports under the Convention on Nuclear Safety established by the Contracting Parties to the Convention (INFCIRC/572/Rev.2). Report is a comprehensive compilation and has been updated on the basis of all past reports. It contains changes and new developments since the last report of 2005 as well as new additional information of explanatory nature answering questions received during the last Review Meeting in April 2005.

- Section 1 – Introduction – explains the status, organisation and competences of the Radiation Safety Centre and gives an overview of the nuclear infrastructure in Latvia.
- Section 2 – Implementation of the Convention – contains the article by article review.
- Section 3 – Activities aiming at improving safety – refers to ongoing and future activities carried out by Latvia, mainly by Radiation Safety Centre and Hazardous Waste Management Agency in the field of the Convention.

## Table of Content

Republic of Latvia National Report On the implementation of the obligations under the Convention on Nuclear Safety.....	1
EXECUTIVE SUMMARY .....	1
1. The Radiation Safety Centre.....	4
2. The Hazardous Waste Management Agency.....	4
3. Latvia's accession to the Convention on Nuclear Safety .....	4
4. Scope of application of the Convention on Nuclear Safety for Latvia.....	5
5. National policy regarding nuclear activities.....	5
SECTION II IMPLEMENTATION OF THE CONVENTION.....	6
Chapter 2 (a) of the Convention – General Provisions.....	6
Article 6: Existing nuclear installations.....	6
Chapter 2 (b) of the Convention – Legislation and Regulation.....	7
Article 7: Legislative and regulatory framework .....	7
1. Three sources for legal acts .....	7
2. EU legislation .....	8
3. National legal acts .....	9
Article 8: Regulatory body .....	9
Article 9: Responsibility of the licence holder .....	10
Chapter 2 (c) of the Convention – General Safety Considerations .....	10
Article 10: Priority to safety .....	10
Article 11: Financial and human resources .....	11
Article 12: Human factors .....	11
Article 13: Quality assurance .....	12
Article 14: Assessment and verification of safety.....	12
Article 15: Radiation protection .....	13
1. Legal provisions .....	13
2. Implementation measures .....	14
2.1. Radiation dose limits .....	14
2.2. Fulfilment of conditions for the release of radioactive materials.....	14
2.3. Environmental monitoring.....	15
Article 16: Emergency preparedness.....	17
1. General provisions.....	17
2. Implementation measures .....	17
2.1. Bilateral agreements and arrangements.....	17
2.2. National emergency preparedness plan .....	18
2.3. Information activities.....	18
2.4. Early Warning.....	18
Chapter 2 (d) of the Convention – Safety of Installations.....	19
Article 17: Siting .....	19
Article 18: Design and construction .....	20
Article 19: Operation .....	20
SECTION III ACTIVITIES AIMING AT IMPROVING SAFETY .....	22
1. Activities related to the radiation safety.....	22
2. Activities related to the nuclear safety .....	22
3. Activities related to the emergency preparedness .....	23
SECTION IV IMPLEMENTATION OF THE RECOMMENDATIONS FROM PREVIOUS REVIEW MEETINGS.....	23
1. Recommendations from the 1 <sup>st</sup> Review conference .....	23
2. Recommendations from the 2 <sup>nd</sup> Review conference .....	23
3. Recommendations from the 3 <sup>rd</sup> Review conference.....	24

## SECTION I INTRODUCTION

### 1. The Radiation Safety Centre

The Radiation Safety Centre (hereinafter also RDC) is the national regulatory authority in the field of radiation and nuclear safety. Radiation Safety Centre has licensing, supervisory and control functions, maintains relevant databases. RDC together with representatives from other institutions and professional associations deals with certification of radiation safety and nuclear safety officers and recognition of radiation and nuclear safety experts.

RDC was established in July 2001 based on framework law “On Radiation Safety and Nuclear Safety”, which entitled the Government (the Cabinet of Ministers) to issue regulations “Statutes of Radiation Safety Centre” and also empowered the Cabinet of Ministers to issue (in majority of cases re-issue updated regulations, because the system for radiation and nuclear safety was established already in 1994 based on the previous act with the same title) regulations, which were needed to implement requirements prescribed by this act.

According to the law “On Radiation Safety and Nuclear Safety” and within the line with “State Administration Structure Law” and regulations “Statutes of the Ministry of Environmental Protection” the Radiation Safety Centre is under supervision of Ministry of Environment.

### 2. The Hazardous Waste Management Agency

The main operator in Latvia is the State Agency “Hazardous Waste Management Agency” (hereinafter also BAPA). In the past it was the state agency for radioactive waste management “RAPA” with the main tasks to safely maintain Salaspils research reactor in the shutdown stage and to manage radioactive waste repository. Later on, based on the decision of the Government, more tasks for RAPA were added in relation to the management of other types of waste (mainly toxic chemical waste), thus RAPA became as BAPA.

BAPA is subordinated to the Ministry of Environment, which through State budget and other extra-budgetary sources, provides funds for safety upgrades and decommissioning.

### 3. Latvia’s accession to the Convention on Nuclear Safety

**Accession:** Decision about accession of the CNS was made by the Government (the proposal was prepared by the Ministry of Environment) on 1 November 1995<sup>1</sup>. The Cabinet authorised the Ministry of Foreign Affairs to deposit instrument of accession and entitled the Ministry of Environment and Regional Development to coordinate implementation of obligations under Nuclear Safety Convention. Since 1995 there were several administrative changes in the Government, currently the tasks relevant to environmental protection is under the Ministry of Environment, but since 2001 all radiation and nuclear safety issues (including activities relevant to the CNS) are under responsibility of RDC.

Latvia acceded to the CNS after deposition of the accession document on 25 October 1996 consequently Latvia became the Contracting Party to the Convention on 23 January 1997.

Latvia has participated in all Review Meetings. Latvia submits the present report for peer review at the fourth Review Meeting of the Convention at the International Atomic Energy Agency in April 2008.

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<sup>1</sup> The Order of the Cabinet of Ministers No.619 of 1 November 1995, OJ (Vēstnesis) 173, 08.11.1995

#### **4. Scope of application of the Convention on Nuclear Safety for Latvia**

Latvia does not have any nuclear installation, which is defined in Article 2(1) of the Convention. Despite the fact that research reactors are not formally covered by the Convention (see Art.2), Latvia (as well as some other Contracting Parties of CNS) agreed to include them in national report for previous CNS peer review conferences. Latvia owns only one research reactor, which is permanently closed down and currently is in early stage of decommissioning. The spent nuclear fuel still is in the storage basin adjacent to the reactor pool, thus the main activities for decommissioning and dismantling cannot be implemented.

Taking into account current nuclear framework, the National Report is mostly oriented to the issues related to radiation safety and emergency preparedness. However other aspects from CNS are covered in limited degree, because many of the requirements relevant to the nuclear power are not explicitly introduced by the legal framework. However main principles and requirements for any practice with the sources of ionising radiation are applied. Latvia's legal system will be further developed in the case if any new nuclear facility would be envisaged.

#### **5. National policy regarding nuclear activities**

There are no changes in national policy regarding nuclear activities in energy sector. Thus Latvia has no any NPP and there is no intention to build such plant in Latvia. Latvia always support the safety upgrades for nuclear facilities and, if such upgrades are not manageable in reasonable time, the relevant facilities shall be closed down and decommissioned.

Since the last report Prime Minister of Latvia together with PM's from Estonia and Lithuania signed Memorandum of Understanding (later also Poland has joined) regarding proposal to start preparatory activities for building of new NPP in Lithuania at the Ignalina site. The Law on Nuclear Power Plant was passed by the Seimas (Parliament of Lithuania) on 28 June 2007. According to the law, the Seimas approved the construction of a new nuclear power plant in Lithuania and appointed Lietuvos Energija, which had expressed a private initiative to invest in the project, to act as the project's National Investor.

In 2007 Lietuvos Energija AB initiated environmental impact assessment procedure to investigate the impacts of new nuclear power plant, which would have the net electrical output at most 3400 MW. Lithuania scheduled to complete environmental impact assessment by the end of 2008.

Electricity production companies from all 4 countries have intention to participate in this project, but there is still a lot of not solved issues, starting from the proposed shares, legal status (either it would be joint facility with responsibility shared among countries or joint business company will operate NPP and some additional funds for investments will be made available from the state budget of respective countries), responsibilities (for civil liability, waste management, decommissioning etc.).

## SECTION II IMPLEMENTATION OF THE CONVENTION

### Chapter 2 (a) of the Convention – General Provisions

#### *Article 6: Existing nuclear installations*

In Latvia there is no any nuclear installation according the definition<sup>2</sup> of the Nuclear Safety Convention.

There is a Soviet designed pool type research reactor, which had maximum thermal power 5000 kW utilising U-235 with 90% enrichment. Reactor was operated from 1961 to 1998. It is permanently shutdown and is in early stage of decommissioning. The spent HEU is stored in the storage basin, which is adjusted to the reactor pool. The total inventory of spent HEU is around 10 kg (~80 fuel assemblies of IRT-2M and IRT-3M type). The decommissioning shall be finished in 2010.

As the research reactor was built long time before introduction of probabilistic safety assessment (PSA) for such facilities and decision to shutdown was already envisaged at the time when Latvia introduced current legal framework, no specific legal requirements for PSA have been elaborated. There are also deviations from IAEA recommendations about time and content of periodic safety review (PSR) – as both operator (BAPA) and regulator (RDC) have limited capabilities to use full scope PSR and research reactor is in the phase when many changes are introduced frequently (activities related D&D), then it is not justifiable to use 10 years period for PSR.

Recommendations from IAEA Nuclear safety standards (NS.R.2) regarding PSR are incorporated in national legal system by re-licensing – regulations on licensing<sup>3</sup> provide requirements for reviews of all safety aspects of radiation facility, including on- and off-site emergency planning and radiation safety. Regulations stipulate that re-licensing shall be done on 3 years base if there are no objections or special conditions.

Since the Concept for decommissioning was approved by the Government in 1998, the current operator of facility – Hazardous Waste Management State Agency has reached around 20% implementation level of all activities planned for decommissioning.

It is envisaged to send back the spent fuel to the country of origin (the Russian Federation). There is an Agreement between the USA Department of Energy and the Ministry of Environment about financial support from USA to cover expenses related the preparatory activities for such shipment, for reprocessing and down-blending of spent HEU in Russia, but Latvia shall cover the transport expenses and treatment of the radioactive waste.

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<sup>2</sup> *“any land-based civil nuclear power plant under its jurisdiction including such storage, handling and treatment facilities for radioactive material as are on the same site and are directly related to the operation of the nuclear power plant. Such a plant ceases to be a nuclear installation when all nuclear fuel elements have been removed permanently from the reactor core and have been stored safely in accordance with approved procedure, and a decommissioning programme has been agreed to by the regulatory body”*

<sup>3</sup> 7. The Cabinet Regulations on the Procedure of Issuing of a Special Permit (Licence) or Permit for Activities Involving Ionising Radiation Sources and Procedure for Public Dispute on the Establishment of Ionising Radiation Facilities of State Significance or on Essential Modifications thereto, No.301 (03.07.2001)

There are delays in D&D activities due to lack of agreement on return of spent fuel. Therefore Government has accepted an updated plan, which includes temporary solutions and clarifications regarding future of the site – it is planned to build on the Salaspils site the National Cyclotron Centre.

There was small radioactive waste storage on the site of research reactor (in operation from 1975-2005) where some parts dismantled from reactor core were stored after reconstruction activities in 1975. All the waste after characterisation and re-packing was transferred to the radioactive waste repository at Baldone.

Radioactive waste repository will be expanded to accommodate all radioactive waste from decommissioning and dismantling of research reactor. More detailed information on these issues will be provided under Joint Convention.

Since late 90-ies RAPA (now BAPA, see above) operates radioactive waste treatment and temporary storage facilities on the Salaspils site. Radioactive waste repository at Baldone site is mainly dealing with conditioned and packed radioactive waste. During the period of 2001-03, under the project financed by the Government of Latvia and also under the IAEA TC project LAT/4/005 two facilities were introduced on the Salaspils site – for conditioning of tritium containing liquid waste together with solid waste and for short term storage of conditioned waste packs.

Environmental Impact Assessments for decommissioning and expansion of radioactive waste repository were accomplished in 2004 and 2005. Additional studies for updates of decommissioning project including definition for further activities of the site were made and proposal for next decisions was submitted to the Government. The latest decisions on these subjects were done in July 2007 by the Cabinet of Ministers.

## **Chapter 2 (b) of the Convention – Legislation and Regulation**

### ***Article 7: Legislative and regulatory framework***

#### ***1. Three sources for legal acts***

There are three types of legal acts in Latvia, which are applicable for review under NSC: primary national legislation, secondary legislation (regulations) and EU legal acts.

The main act is the Law on Radiation Safety and Nuclear Safety. In parallel with this framework act, there is also a set of international agreements ratified or acceded by Latvia and several general legal acts, which have some provisions relevant to the NSC (e.g. legislation relevant to the state institutions in general, environmental protection legislation, building codes, administrative and criminal acts).

The secondary sources for Latvia's legal system are regulations and decisions issued by the Government. Majority of applicable regulations are issued on the basis of the Law on Radiation Safety and Nuclear Safety, but some – based on other primary legal acts (e.g. the Cabinet Regulations on Procedures for Building of Facilities Related to Radiation Safety, No.600 (13.07.2004) were issued based on Construction Law, but the Cabinet Regulations on Radiation Safety Centre Statute, No.123 (15.02.2005) were issued based on State Administration Structure Law).

The third source of law for Latvia, as for any other EU member state, is Euratom law. This system in general is based on the Euratom Treaty and secondary legal acts, which are regulations, directives, decisions, recommendations and opinions on the basis of the Treaty issued by the EU Institutions (Commission or the Council), including also the case law – interpretation of treaties and institutional acts carried out by the European Court of Justice and the Court of First Instance. The whole body of EU law together is called the "*acquis communautaire*" and Latvia made all efforts to harmonize its national legislation with the legal provisions set in force within EU.

## **2. EU legislation**

To date no specific legislation on nuclear installation safety has been developed at EU level, and thus mainly legislation related to the radiation safety and emergency preparedness has to be harmonized within EU legal system.

Relevant to the NSC, and enforced for Latvia and harmonised by Latvia are<sup>4</sup>:

1. **set of regulations** under the Euratom treaty, which are relevant to emergency preparedness, mainly concerning maximum permissible levels for contamination in food and feeding products – two groups of them:
  - post-Chernobyl,
  - future accidents,
2. **some directives:**
  - Council Directive 96/29/Euratom of 13 May 1996 laying down basic safety standards for the health protection of the general public and workers against the dangers of ionizing radiation, OJ L-159 of 29.06.1996;
  - Council Directive 90/641/Euratom of 4 December 1990 on the operational protection of outside workers exposed to the risk of ionizing radiation during their activities in controlled areas, OJ L-349 of 13.12.1990;
  - Council Directive 89/618/Euratom of 27 November 1989 on informing the general public about health protection measures to be applied and steps to be taken in the event of a radiological emergency, OJ L-357 of 7.12.1989;
3. **some recommendations and communications:**
  - Communication 2006/C/155/02 from the Commission on Verification of environmental radioactivity monitoring facilities under the terms of Article 35 of the Euratom Treaty — Practical arrangements for the conduct of verification visits in Member States, OJ C-155 of 4 July 2006;
  - Commission Recommendation 2000/473/Euratom of 8 June 2000 on the application of Article 36 of the Euratom Treaty concerning the monitoring of the levels of radioactivity in the environment for the purpose of assessing the exposure of the population as a whole, OJ L-191 of 27.7.2000;
  - Council Decision 87/600/Euratom of 14 December 1987 on Community arrangements for the early exchange of information in the event of a radiological emergency, OJ L-371 of 30.12.1987.

National draft legislation is submitted to the Commission under the terms of the procedure laid down in Article 33 of the Euratom Treaty. The Commission gives an opinion on the national draft legislation in order to make sure that it is in conformity with the terms of the directive.

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<sup>4</sup> It is not the comprehensive list of all legal provisions under the Euratom Treaty, because such will be presented by the Commission of the European Communities and also some legal documents are only partly relevant to the NSC, thus they are not mentioned in the Latvia's National Report

### **3. National legal acts**

The main approach used in Latvia is clear separation of responsibilities between operators and regulatory authority maintaining at the same time high level of professionalism and availability of technical tools in order to ensure and to verify safety. The operator has to have comprehensive set of safety and QA/QC related requirements in internal documents for facility. The RDC controls how these provisions and requirements are fulfilled.

Latvia applies *top - bottom* approach in developing our nuclear legislation – preparation a set of legal documents. In the initial phase (early 90-ies) international agreements ratified by the parliament were used as the legal background (including decisions by the parliament about responsibilities). In 1994 the first framework law was adopted and several regulations approved by the Cabinet were introduced, but there were still two regulatory systems (under the former Ministry of Environment Protection and Regional Development and the former Ministry of Welfare). In late 2000 the Parliament approved the next law, which introduced a single regulatory authority.

In summary regarding legislative and regulatory framework it could be recognised, that recommendations by IAEA (GS-R-1) are implemented in Latvia. External assessment of the situation was done in 2007, when Latvia had IAEA RASSIA mission, which made an assessment of entire regulatory system. The main outcomes are as follows:

- 1) there is a comprehensive legal infrastructure;
- 2) there are needs for minor amendments in legal documents and in working practices to be fully in line with IAEA BSS.

#### **Article 8: Regulatory body**

Radiation Safety Centre executes the radiation and nuclear safety supervision and authorisation for all facilities. RDC has legal rights and duties for enforcement of applicable regulations – there had been few cases for suspension and modifications of licenses due to violations of relevant provisions and conditions of licenses by their holders.

The Parliament delegated the regulatory functions to the Radiation Safety Centre, which is a single regulatory authority in field of radiation and nuclear safety. Functions and duties are prescribed by the Law on Radiation Safety and Nuclear Safety. More detailed duties, rights and working procedures are defined in regulations approved by the Cabinet of Ministers.

Based on the Law and Statutes according the legal requirements RDC developed and agreed with the minister for environment about Working Procedures of RDC, more over under the Phare-2002 project the initial system for management system, including QA/QC based on ISO 9001 and ISO 17025 were developed. Introduction of management system in the work of RDC is in the line with recommendations from GS-R-1.

RDC is supervised by the Ministry of Environment, which is neither responsible for promotion nor utilisation of nuclear energy. The Law on state institutions in details prescribes system of supervision – in short, there is no rights for the supervisor directly affect decisions on the subject matters, only financial control and compliance with requirements from the Law on State civil servants. Thus recommendations about independency are implemented.

As mentioned above, regulatory framework in Latvia regarding IAEA recommendations (GS-R-1) has been assessed by RASSIA mission in 2007. The main outcomes are as follows:

- 1) there is a comprehensive legal infrastructure;
- 2) the regulatory body is established and functionally independent;

- 3) regulatory body has an organisational structure and size commensurate with the extent and nature of facilities and activities it must regulate.

The main problem as it was recognised by RASSIA team is understaffing and resources for activities of the regulator. Despite all efforts by RDC and Ministry of Environment the plans for capacity building are implemented rather slowly. There is the negative trend – outflow of qualified personnel due to non-adequate salary level, lack of interest for students to apply for jobs in state institutions. The Government approved the plan, which should ensure, that in year 2010 average salary in public sector should be the same as average in country (including business and industry), but there are doubts that planned yearly increases of funds will be adequate, taking into account also inflation rate.

***Article 9: Responsibility of the licence holder***

For any facility with radiation sources in Latvia is applicable civil liability regime, which was developed, based on legal provisions from Vienna Convention on Civil Liability. There is clear statement in the Law – only operator is liable. Thus it is assumed, that recommendation from IAEA safety standard GS-R-1 2.3 – “*The prime responsibility for safety shall be assigned to the operator [licensee]. The operator shall have the responsibility for ensuring safety in the siting, design, construction, commissioning, [and] operation.*” is fully implemented.

According to the Law on Radiation Safety and Nuclear Safety, the main person in any facility is the Job Supervisor, who bears major License Holder functions, prescribed by the Law. License holder shall nominate the Job Supervisor, who has to be certified. RDC leads the work of Certification Commission, which includes also experts from professional associations and educational centres. Certificates are issued by RDC, based on positive opinion from the Commission.

The operator shall demonstrate to the RDC that this responsibility for safety has been met and will continue to be in compliance of all relevant requirements. RDC inspectors verify safety situation at all facilities and RDC has power to request (usually these issues are included in inspector’s findings) any relevant safety upgrades. Moreover, during the re-licensing activities, the operator has to demonstrate by reports, programs for activities etc., that facility is safe to continue operations.

To enable that the RDC performs its functions, the operator shall provide necessary assistance and, definitely, shall grant access to the facilities and all relevant documentation. When so required by the RDC (it had been some cases where occupational exposures seem higher than dose constrains, also few cases with non-compliances), the operator shall undertake special analyses, tests and investigations to demonstrate that exposures are controlled (only TLD badges received higher doses) or non-compliances are recognised and will be eliminated.

**Chapter 2 (c) of the Convention – General Safety Considerations**

***Article 10: Priority to safety***

National BSS lay down the principle for Radiation safety and nuclear safety – priority of protection measures in comparison with other measures.

In order to fulfil the requirements (set out in the quality assurance programme, currently, where it is possible RDC are trying to introduce comprehensive management systems for

operators, but many small operators are not capable to do so in full form according the IAEA relevant recommendations) the operator shall budget the financial resources required for the performance of protection measures and regularly take inventory and examine material resources. Moreover, operators have to ensure that they have sufficient technically qualified and appropriately trained staff at all levels. Unfortunately, sometimes there are discussions on term “sufficient” (many small operators have intention to interpret this “as low as possible”).

For all large facilities there is a requirement to establish radiation safety unit, which shall be independent from routine operations of the facility. Composition and number of staff for such radiation protection units are prescribed by regulations.

Plans for any activities that may directly affect the safety are submitted by the operator to the RDC for approval, if so required, or in majority of cases are discussed with inspectors. In some cases special procedures had been written in accordance with established administrative procedures by operator and then agreed with RDC.

Verifications of these actions are performed by RDC during inspections and licensing.

Implementation of recommendations from NS.R.2: “*Consideration shall be given to ... review of the overall safety performance of the organization in order to assess the effectiveness of safety management and to identify opportunities for improvement*”, unfortunately, is in early stage – based on recommendations made by WENRA RDC strives to make self assessment of its effectiveness, after that more systematic assessment will be done.

***Article 11: Financial and human resources***

Research Reactor and Radioactive Waste Disposal are mainly financed from the State Budget (there are some incomes from services and from tax on utilisation of natural resources for waste disposal). The Ministry of Environment explains and gives proof to the Government concerning adequate funding for each fiscal year and long-term programmes

For the specific project – decommissioning of the research reactor, the Parliament or Government approves special funds or investment projects.

For staff training and post-graduate studies, there were used special funds for drafting of the Radiation Protection manual, Quality Assurance Manuals etc. The RDC assists the universities to improve their syllabus according to the IAEA recommendations. Under the technical cooperation project LAT/9/006 teaching materials for some professions were improved. Similar activities are carried out under EU projects and bilateral cooperation with donor countries.

Since late 2003 the system for certification of radiation safety officers (job supervisors) are emplaced. This system ensures that all leading persons have to have adequate education and training and have to undergo regular re-training. Before this certification system the similar requirements had been used during the licensing process (in examination of applications).

For other personnel of facilities, the operator has prime responsibility to ensure qualification, training and re-training. Three universities have special programs for re-training of different groups of radiation workers.

***Article 12: Human factors***

The prevention of human errors is set up in National BSS (for example, requirements for defence in depth, quality assurance programmes etc.).

Another type of activities to reduce possibilities for human failures is introduction of the system for marking (regulations). RDC continues to request that all safety relevant information should be available for operators in the national language.

Licensing Regulations and National BSS require adequate staff training; set up educational requirements for experts. The licensing procedure requires the applicants to submit also information about available staff and their level of education.

Verification of activities is performed by RDC during inspections (annual plan for RDC is around 400 inspections). Findings from inspections are used to impose additional requirements for the licensees and also in licensing conditions during the re-licensing.

***Article 13: Quality assurance***

The Quality assurance programmes are requested by the national BSS. Any facility (especially “facilities of state significance”) is requested to have QA and QC programmes. QA systems are developed by the operators and service companies.

More stringent requirements are introduced for accreditation of laboratories and certification of dangerous goods.

According the regulations related to the criteria for applicants<sup>5</sup> the potential operator shall:

- “ensure that the qualifications of employees and the supervisor conform to the duties to be performed”,
- “ensure the development of a quality assurance programme and quality control programme”.

During the assessment of applications the Commission for licensing is examining the documents submitted by the applicant. According to the regulations on licensing procedures<sup>6</sup> one of the main documents is – “a quality-assurance programme and quality-control programme for operations with sources of ionising radiation”.

***Article 14: Assessment and verification of safety***

The national regulations (Regulations on Protection against Ionising Radiation, No.149 (09.04.2002) and Regulations on the Procedure of issuing of a Special Permit (Licence) or Permit for Activities involving Ionising Radiation Sources and Procedure for Public Dispute on the Establishment of Ionising Radiation Facilities of State Significance or on Essential Modifications thereto, No.301 (03.07.2001)) require, that in order to be authorized, the following tasks shall be ensured:

- Examination and approval of plans for installations and of the proposed siting,
- Acceptance into service of the installations,
- Examination and approval of plans for the discharge of radioactive effluents.

There are similar provisions also in the Council Directive 96/29/Euratom, which requires that Member States shall require prior authorization in particular for the operation and

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<sup>5</sup> The Cabinet Regulations on the Criteria in order to require a Special Permit (Licence) or Permit for Activities involving Ionising Radiation Sources, No.290 (03.07.2001)

<sup>6</sup> The Cabinet Regulations on the Procedure of Issuing of a Special Permit (Licence) or Permit for Activities Involving Ionising Radiation Sources and Procedure for Public Dispute on the Establishment of Ionising Radiation Facilities of State Significance or on Essential Modifications thereto, No.301 (03.07.2001)

decommissioning of any facility of the nuclear fuel cycle and exploitation and closure of uranium mining.

Information about planned activities and major changes at nuclear or radiation facilities should also be provided to the public. All this information is used for decisions regarding licensing, licensing conditions and implementation is verified by inspections.

The Licensing Regulations and National BSS prescribe the duties for RDC in the field of inspections. Practical activities are regulated by internal document of RDC “Inspection Manual”, which was developed during the 2004-2005, based on Law on State authorities. This law prescribes, that such internal/external documents (in this case – regulatory provisions of RDC) shall be developed to ensure knowledge for operators about working procedures of regulatory authority.

RDC inspectors carry out verification of safety on regular basis and also perform non-announced inspections.

More over there is additional legal base for safety impact assessment, which is given in the law On Environmental Impact Assessment. That system was extensively used during the planning phase of decommissioning and activities for expansion of radioactive waste repository.

Periodic safety assessments of nuclear installations using deterministic and probabilistic analysis methods is used in very limited scope – mainly during the re-licensing (Latvia has legal provisions for renewal of licenses for the practices with sources of ionising radiation each 3 years (there are some exemptions for small risk facilities – 5 years, if previous safety records are acceptable). This system was introduced mainly due to the fact, that both – regulator (RDC) and operators (for nuclear facility – BAPA) have very limited capabilities to make full safety assessment, thus re-licensing together with frequent inspections and environmental impact assessments for major modifications provides additional assessments (mainly provided by external experts from countries with developed nuclear power systems).

## ***Article 15: Radiation protection***

### ***1. Legal provisions***

The Law “On Radiation Safety and Nuclear Safety” introduced these basic principles of limitation and optimisation. Verification of compliance is a duty for RDC, which also provides as services the occupational exposure control for all radiation workers in country and maintains relevant database. These requirements are further elaborated in National BSS.

As regards practices involving a risk from ionising radiation for the population, the Law requires to apply the fundamental principles governing operational protection of the population. In particular:

1. the public and the environment may not be exposed to a dose of ionising radiation which exceeds the established dose limits;
2. the positive results achieved shall exceed the negative impact or loss caused by practices involving ionising radiation sources;
3. optimum radiation safety measures are chosen, taking into account economical and social circumstances, as well as technical capabilities, so that the exposure level is reasonably low and does not exceed the established dose limits;

4. workers, who carry out practices involving ionising radiation sources, are insured against occupational accidents and illnesses, as well as the operator's civil liability for damage that may be caused to a third party and its property or the environment;
5. practices involving ionising radiation sources may only be conducted upon receipt of a special permit (licence) or permit, except for circumstances prescribed by the Cabinet of Ministers regulations.

## ***2. Implementation measures***

### **2.1. Radiation dose limits**

Regarding dose limitation the National BSS, which were elaborated based on IAEA BSS and EU Basic Safety Standards Directive, set out dose limits for exposed workers, for apprentices and students and for members of the public. The limits are the same as in IAEA BSS and in EU Basic Safety Directive.

There are ongoing investigations around the major radiation facilities and in different regions of country to assess and monitor public exposures. Addition to these activities, based on requests from individual persons, in few cases from other authorities, the RDC made task oriented investigations at certain regions where was practices with radiation sources in the past or was suspicions about naturally enhanced radiation.

Based on the Cabinet Regulations on the Procedure for Control and Accounting of Exposure of Workers, No.454 (23.10.2001) the RDC provides services for all facilities, which have practices with the sources of ionizing radiation and all radiation workers (currently more than 2800). RDC maintains the national register of occupational exposures and also issues Dose Passbooks to the radiation workers.

### **2.2. Fulfilment of conditions for the release of radioactive materials**

RDC has responsibility to examine and approve the plans for installations involving an exposure risk, and of the proposed siting of such installations from the point of view of radiation protection. The data about assessment of the risks, including planned releases, shall be submitted by the applicant prior to receiving of authorization. Facilities, which may release radionuclides into the environment, have to prepare plans for control of such releases and they have to provide regular reports to the RDC.

There is very limited utilization for the controlled releases – only one hospital (Latvian Oncology Centre) is authorized to release short-lived isotopes (mainly I-131 after decay storage) together with the sewage water.

Another option for controlled releases is the clearance – regulations<sup>7</sup> provide possibilities for operators to discharge (mainly together with solid waste or as re-usable materials) some amount of radioactivity. Currently only BAPA (for decommissioning activities at Salaspils site and also for on small laboratory, which in the past used to work with Ra for production of concentrate of Rn for “medical” purposes) asked permission to the RDC and received authorization.

Verification of the radiation conditions around facilities, which discharge radioactivity, is under the national environmental monitoring program. The requirements for radiation monitoring under environmental monitoring program were introduced also to fulfil Article 35 of the Euratom Treaty.

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<sup>7</sup> The Cabinet Regulations on practices involving radioactive waste and related materials, No.129 (19.03.2002)

Environmental monitoring includes:

- routine measurement of radioactivity in air, water, soil and biota;
- provisions in case of radiological emergencies (alarms and data collection).

### 2.3. Environmental monitoring

In 2006 Latvia had EC mission “Verifications under the Terms of Article 35 of the Euratom Treaty, Latvian National Monitoring Network for Environmental Radioactivity”. This mission controlled the implementation in practice through verifications of the environmental monitoring facilities. The main activities of the mission were related to:

- structure of the national environmental monitoring and sampling programme;
- analytical laboratories of the Radiation Safety Centre and the National Diagnostic Centre;
- on-line automatic monitoring systems;
- environmental monitoring programmes at the Salaspils Research Reactor and at the radioactive waste repository Radons at Baldone.

The information provided and the verification findings led to the following observations:

1. The verification activities that were performed demonstrated that the facilities necessary to carry out continuous monitoring of levels of radioactivity in the air, water and soil with regard to the surveillance of the Latvian territory are adequate. The Commission could verify the operation and efficiency of these facilities.
2. However, a few recommendations are formulated, mainly in relation to general quality assurance and control. These recommendations aim at improving some aspects of the environmental surveillance. These recommendations do not detract from the general conclusion that the Latvian national monitoring system is in conformity with the provisions laid down under Article 35 of the Euratom Treaty.

The main findings with respect to:

#### 1. Data centre of the Radiation Safety Centre:

- Confirmed the existence and functionality of the on-line dose rate monitoring system, covering the Latvian territory as defined in the regulatory obligations.
- Confirmed the existence and functionality of the data centre for the on-line radiation monitoring in general accordance with regulatory obligations. However, *It is recommended that the RDC considers the possible need to increase the number of trained staff for the handling and maintenance of the on-line monitoring system central database during emergency situations;*

#### 2. Analytical laboratory of the Radiation Safety Centre:

- Established that the laboratory is satisfactorily equipped and staffed with adequately trained personnel. The laboratory is in process of seeking ISO 17025 accreditation. However:

- *It is suggested that the RDC makes sure there is enough trained staff to operate the vehicle on a continuous basis during emergency situations.*
- *The verification team points out that an adequate number of qualified staff is crucial to laboratory operation and wishes to encourage the RDC to make every effort to increase the number of trained personnel at the laboratory;*

- Established that quality assurance and control is implemented through a compilation of written procedures and working instructions. However, *It is recommended, as a matter of good laboratory practise, that the RDC considers storage of environmental samples in a systematic and formalised manner;*

#### 3. National Diagnostic Centre (NDC) of the Food and Veterinary Service in Riga:

- Confirmed the existence of a national monitoring plan for the measurement of radioactivity in foodstuffs.
  - Established that the laboratory is satisfactorily equipped and staffed with adequately trained personnel for the collection, preparation and measurement of food samples. The laboratory is in process of seeking ISO 17025 accreditation. However, *It is recommended that the NDC ensures adequate staffing and trained replacement staff for the main functions of the radiological analysis unit,*
  - Established that quality assurance and control is implemented through a compilation of written procedures and working instructions. However:
    - *It is recommended that, in order to detect possible detector degradation as early as possible, the NDC controls and documents also the peak width (FWHM) on a regular basis.*
    - *It is suggested to use modern gamma spectroscopy analysis software and a centralised data system, which would avoid multiple manual inputting of data from the measurement systems.*
4. **Salaspils Research Reactor (SRR) site:**
- Confirmed the existence and functionality of monitoring and sampling facilities as defined in the regulatory obligations. However: *It is recommended that the RDC considers more frequent monitoring of the sewage tank. Should the SSR facility operation be continued beyond the current plans, the verification team recommends the RDC to consider automatic sewage sampling or installing a continuous liquid discharge monitoring system at the SRR;*
  - Established that the site laboratory is satisfactorily equipped and staffed with adequately trained personnel for the collection, preparation and measurement of environmental samples. However – *It is recommended, in order to maintain laboratory measurement capability, that the new equipment and analysis software be made operational as soon as possible and the obsolete equipment removed from the laboratory;*
  - Established that quality assurance and control is implemented through a compilation of written procedures and working instructions. However:
    - *It is recommended to implement a data back-up procedure for the measurement data,*
    - *It is suggested, as a matter of good laboratory practise, that a systematic data back-up system for all sampling and measurement data is implemented*
    - *It is recommended to maintain systematic records of detector calibrations in order to have long term data on detector stability;*
5. **Environmental radiation monitoring provisions at the Radons site in Baldone:**
- Confirmed the existence and functionality of monitoring and sampling facilities as defined in the regulatory obligations. However – *It is recommended to improve the data transmission reliability of the PMS station in Baldone;*
  - Established that quality assurance and control is implemented through a compilation of written procedures and working instructions;
6. **National environmental radiation monitoring network in Latvia:**
- Confirmed the existence and functionality of monitoring and sampling facilities as defined in the regulatory obligations.
  - Confirmed that the levels of radioactivity in the environment are monitored and sampled in accordance with regulatory obligations. However – *The verification team supports the current efforts to implement the relevant provisions of the monitoring programme in order to provide sampling and analysis of drinking water.*

- Established that the monitoring and sampling facilities are in general adequate and that the programmes of sampling are satisfactory. However:
  - *It is recommended to provide all PMS stations with sufficient back-up systems for electrical power,*
  - *The verification team points out that although network maintenance has been outsourced it is important to maintain an adequate level of technical knowledge of the measurement network also within the RDC permanent staff*
  - *The verification team points out that a local dose rate display on each station is important in the event of a failure of the communication lines between the station and the RDC*
  - *With regard to the aerosol measurement programme, it is recommended that the RDC defines a long-term solution that guarantees continuous surveillance. This is in particular valid for regions close to nuclear power plants;*
- Established that quality assurance and control is implemented through a compilation of written procedures and working instructions.

## ***Article 16: Emergency preparedness***

### ***1. General provisions***

For any new nuclear and radiation facility, such plans shall be prepared and tested before it commences operation agreed by the regulatory body. The plans shall be agreed also with local municipalities and Fire and Rescue Services. These are preconditions for applicants and the relevant documents are assessed by the licensing commission before RDC grants the license.

National BSS prescribes main duties for job supervisors regarding emergency preparedness.

For management of accidents the national Emergency Preparedness Plan is established and relevant regulations<sup>8</sup> were adopted. The Plan has requirements for regular testing (including theoretical exercises, table top exercises and practical exercises) and updating of the Plan. Last national exercise aimed to test in real time communication systems and decision-making process was done in 2003.

Representatives from the State authorities participate also in similar events in neighbouring countries and RDC participates in different international exercises.

The National Emergency Plan provides basic principles for emergency preparedness according to radiation and nuclear safety legislation.

Based on Civil Defence Law the Cabinet of Ministers issued two regulations, which prescribe requirements for emergency plans for any facility and introduced specific requirements for preparedness for radiation emergencies, based on groups of radiation facilities (grouping is done based on potential risks associated with the level of total radioactivity and form (sealed/non sealed sources) of radioactive materials).

Description on Emergency preparedness at facility level is a pre-requisite for licensing and verification of the compliance with these provisions are made during the inspections.

### ***2. Implementation measures***

#### **2.1. Bilateral agreements and arrangements**

Latvia has some bilateral agreements for early warning and assistance in case of radiological or nuclear accidents (with Lithuania and Ukraine on governmental level, with Estonia and

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<sup>8</sup> The Cabinet Regulations on preparedness and response in cases of radiation accidents, No.152 (08.11.2003)

Lithuania on level of regulatory authorities) and also agreements for cooperation in case of natural and man-made accidents (including radiological) with several countries (Belarus, Estonia, Hungary, Lithuania and Sweden).

## **2.2. National emergency preparedness plan**

The provisions on emergency preparedness are introduced in national plan and in regulations concerning radiological accidents<sup>9</sup>. These two groups of population are provided with information leaflets and population in vicinity of Ignalina NPP is provided with KI pellets together with instructions why and when they should be used.

As stated in introduction of the Report, Latvia's major concern is the Ignalina NPP in the vicinity. According to the Law on Civil Protection System, the main institution responsible for planning and implementation of these functions is Fire Rescue Service.

## **2.3. Information activities**

Latvia also introduced requirements according the Council Directive 89/618/Euratom, which deals with informing the general public about health protection measures to be applied and steps to be taken in the event of a radiological emergency. The Directive specifies two types of information that has to be given to the members of the public:

- preventive information to be given to the population groups for which Member States have drawn up intervention plans in the event of a radiological emergency;
- information in the event of a radiological emergency to be given to the population groups actually affected in the event of a radiological emergency and for which specific protection measures are taken.

The first activity – prior information is joint responsibility for RDC and Fire and Rescue Service:

- Initially RDC (under the regional activities supported by Swedish radiation protection authority SSI) as also Estonia and Lithuania issued EU teaching materials (translated into national languages) to ensure that minimal level of understanding of radiation, emergency etc. has been included in school programs.
- Several EU recommendations (in Latvian) from the publication series Radiation Protection (namely publication No 76 and 87) to provide background information for potential emergency workers (first or other type of responders).
- The next activities were devoted to preparation of relevant teaching and training modules for border guards and customs officers, which may be subject to incidental exposures due to their job responsibilities; these activities were in relation also to the illicit trafficking combat;
- The new leaflet was issued in 2004 for medical doctors to provide them with the guidance regarding recognition of radiation effects to the human beings.
- Next activities were in relation to the directive 2003/122/EURATOM “on the control of high-activity sealed radioactive sources and orphan sources” – Latvia introduced amendments in two regulations about marking and for training (in practice majority of provisions for training were introduced earlier, see above).

## **2.4. Early Warning**

Since 2001 RDC participates in *EURDEP (European Radiological Data Exchange Platform)*, which is both a standard data format and a network for the exchange of environmental radiation monitoring data between European countries in real-time. Participation of the Latvia is based on the Recommendation 2000/473/Euratom. RDC made available the national radiological monitoring data for JRC Ispra and has access to the data of all other participating

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<sup>9</sup> The Cabinet Regulations on preparedness and response in cases of radiation accidents, No.152 (08.11.2003)

countries. The system is continuously operating with a daily data exchange routine and there is a general consensus that participating in the system automatically means that the data transmissions will continue during an emergency in an elevated frequency.

Moreover, under the system established by the Baltic Sea Council (Agreement on the Exchange of Radiation Monitoring Data), RDC provides data also in two other formats (as called NORDIC and PMS), which provides expansion of data exchange in users-friendly formats among countries, which operate similar type of monitoring stations. The existing communication arrangements are based on FTP protocol.

In parallel with EURDEP RDC participates in ECURIE program, which (similarly as system under Early Warning Convention – ENAC) is a 24h emergency notification and information exchange system. ECURIE system notifies the competent authorities of the participating States and the Commission in case of a major nuclear accident or a radiological emergency. During an emergency the system provides an information exchange platform for the participating States in order to inform about the current and foreseeable status of the accident, meteorological conditions, national countermeasures taken, etc. The legal basis for participation in ECURIE by the EU Member States is the EU Council Decision 87/600/Euratom. The Commission is responsible for ECURIE management and development. The Commission maintains a 24h preparedness service in order to activate the system in the event of a nuclear or radiological emergency.

## **Chapter 2 (d) of the Convention – Safety of Installations**

### ***Article 17: Siting***

Currently, there is no specific legislation applicable for the siting of nuclear installations in place. In general, this part is not directly applicable to Latvia, but with respect to research reactor and radioactive waste disposal, some brief information is provided below:

- Law on Environmental Impact Assessment covers these activities.
- Other safety assessment requirements are partly elaborated in Licensing regulations and new Regulations on building of radiation facilities.

The Law on Environmental Impact Assessment and Regulations on building of radiation facilities governs these activities. The Government decided on composition of dedicated Commission, which is led by the Ministry of Environment. The Commission has to make opinion about proposal for special building activities and RDC on the safety considerations.

The Law on Environmental Impact Assessment prescribes requirements for assessment of impact of proposed nuclear facilities on the environment.

The Radiation Safety Board (advisory body for the Government and for regulatory authority) has to make preliminary assessment of the proposal and additional evaluation after the EIA is finished.

The mechanism of public hearing is established by licensing regulations. Based on opinions from the EIA, and Radiation Safety Board, the RDC can decide on subject and issues the license.

According to National BSS the supervision of radiation and nuclear facilities is a continuous process; therefore inspectors together with operators shall re-evaluate safety related information during the inspections of facilities.

Unfortunately, the Ignalina NPP has been built up and operated without prior negotiations with Latvia. With respect to modifications at INPP, the Lithuania used method of prior consultations (e.g. in year 2005-2007 about modifications in waste management technologies, environmental assessment program about the plans for the NPP by Lithuania – 2007).

All national plans on emergency preparedness in both countries (Latvia and Lithuania) had been jointly tested and further developed. Both countries collaborate also in other activities related to safety assessments.

Based on Law on Environmental Impact Assessment, any facility with potential impact to other countries shall be jointly assessed and relevant information shall be provided. But as stated in Introduction, there are no plans for building of NPP in Latvia, therefore these provisions had not been realised in practice for such facilities. Some more details on the processes for EIA are also described in the Agreement between Latvia and Lithuania on cooperation in field of Environmental protection.

#### ***Article 18: Design and construction***

The Law on Radiation Safety and Nuclear Safety set up the responsibility for safety (strict liability of operator) and requirements regarding emergency preparedness. These requirements are more detailed elaborated by National BSS and some provisions in regulations concerning physical protection.

The main requirements for such installations are:

- The design and construction of a nuclear installation (and also any radiation facility) shall provide several reliable levels and methods of protection (defence in depth) against the release of radioactive materials.
- Any proposal for new facility shall to prevent the occurrence of accidents and to mitigating their consequences should they occur.

Prevention of errors is set up by National BSS (example requirements for defence in depth, quality assurance programmes etc.).

Provisions for construction are only partly incorporated in national nuclear legislation because new nuclear facility is not planned. Up to now the basic requirements regarding certification and testing of any equipment relevant to the radiation safety are used. These requirements are introduced for any facility and system is based on initial assessments (in licensing process), regular tests (by license holder, part of QA/QC) information is provided to RDC annually and by inspections with random measurements of some technical parameters.

The prevention of human errors on legal level is set up in National BSS (requirements for defence in depth, calibration of equipment, quality assurance programmes etc.). In general legislation these implementation procedures are described in Law and Cabinet Regulations on Conformity Assessment.

#### ***Article 19: Operation***

These provisions are only partly incorporated in national nuclear legislation because new nuclear facility is not planned. The operational limits and conditions in general are the part of licensing conditions, which are under considerations during the licensing. New conditions and

working limits can be introduced on *ad-hoc* base if operator request so or based on findings from inspections. The regular updates of these conditions are introduced during the re-licensing process.

The Law on Radiation safety and Nuclear Safety sets up the requirements for licensing of facilities of State Significance and more detailed elaborated by Licensing Regulations. In 2004 the new supplementary regulations in this field had been elaborated under the law on Building activities.

The Licensing Regulations requests the job supervisor to provide all safety related information together with application for a license. Based on this information and other decisions with respect to building activities and outcomes from environmental impact assessments, the RDC has to decide about licensing and conditions of licence.

Owners and operators (job supervisor) are responsible to ensure engineering and technical support according to the National BSS. Applicants for license shall describe how auxiliary services will be ensured (usually applicant provides information about relevant service contracts). As mentioned early, the license usually is granted for 3 years and thus re-assessment is done periodically and additional requirements can be added. Verification of the situation is done by inspections.

Testing of installations shall be managed according the requirements for calibration and testing activities based on legal acts for them and in more details elaborated in QA manuals for any entity dealing with tests and measurements.

Law on Radiation Safety and Nuclear Safety, National BSS, Regulations on preparedness and response in case of radiation accident, Regulations on physical protection and Regulations on State Accounting and Control of Nuclear Materials set up requirements on immediate reporting about accidents and incidents.

Only part of provisions with respect to information exchange among users of similar equipment and methodologies, practices exist in national BSS. To facilitate such processes (in realisation of task prescribed by the Law on Radiation Safety and Nuclear Safety) RDC organises discussions with representatives from professional associations and main operators dedicated to separate issues few times per year (working group meetings, seminars etc.).

RDC maintains relevant databases, which include inspection findings and also files for each operator, which contains all relevant information and also results from tests and calibrations.

With respect to international exchange of information, the RDC coordinates participation of experts from Latvia in relevant international forums and strives to publish technical documents and recommendations (in form of books and some quotes also on Internet home page).

Any operator, which could generate radioactive waste, provides annual reports and plans, which are analysed by RDC. During the licensing process requirements for radioactive waste management are prepared and, if needed, included in the license conditions. Verification of compliance with these waste management requirements are made during the inspections.

## **SECTION III ACTIVITIES AIMING AT IMPROVING SAFETY**

### **1. Activities related to the radiation safety**

Since last peer review conference Latvia initiated several activities within one technical cooperation project (LAT/9/007) with IAEA with the aim to strengthen knowledge management in selected institutions (mainly in RDC) in the area of radiation protection, radioactive waste management, and nuclear regulatory activities. This project is fully financed by the Latvia as governmental cost-sharing project. The main activities are related to:

- Manpower development (participation of staff from RDC in different events related to radiation safety, nuclear safety, emergency preparedness etc.);
- Technical capabilities for control at users premises (GammaCam system, which provides opportunities to use visualisation system for radiation measurements, thus will significantly enhance capabilities for control of D&D, radiation shielding at high dose rate facilities, fast searches of orphaned sources etc.);
- Some equipment and software to ensure data security and data management (including software for audits of the system);
- Development of the software to increase integration of different database systems (RAIS, database on occupational exposures, databases for clients of TLD services etc.), thus after full implementation of the system RDC will be capable to use its limited resources more efficiently.

Other activities are related to the introduction of management system in work practices of RDC. Under the two Phare projects many quality management guides were developed. RDC is continuing activities with the aim in future to accreditation under ISO-17025 and ISO 9001.

RDC continues upgrades and updates for RAIS to ensure better data management about all operators, all sources and all practices.

Since 2006 RDC participates as observer at WENRA meetings, which provides opportunities to use recommendations from countries with large and better-developed infrastructure for radiation and nuclear safety. We are going to use self assessment methodologies developed by WENRA for assessment of efficiency (draft performance indicators) and by doing that we will be able better prepare plans for necessary corrective activities.

### **2. Activities related to the nuclear safety**

As research reactor is in early D&D stage, there are technical cooperation activities with IAEA – a project with the aim “Upgrade of the Biological Shield Cutting System”. Within this project BAPA becomes more familiar with working practices, safety requirements etc., which will be necessary in nearest future, when actual dismantling of the reactor will start.

Under financial support from EU (within “transition facilities” – support similarly as PHARE for “new MS”) BAPA together with experts from ENRESA updated D&D plans, made more comprehensive categorisation at all premises to collect necessary data for dismantling, assessment of waste streams and improve prognoses about waste arising.

Other activities are related to preparations for implementation of the recommendations, which had been received by BAPA during the environmental impact assessment of D&D and expansion of radioactive waste repository. The main items are related to improvements of waste management, monitoring and public information. These issues are included into updated plans for decisions of the Government on relevant activities (including assessment of resources needed for the investments).

### **3. Activities related to the emergency preparedness**

Activities related to the emergency preparedness could be divided into several groups:

- Development and updating of working procedures (information and data exchange, activities for emergency group, cooperation with other state institutions);
- Knowledge management and education of relevant staff;
- Enhancement of technical capabilities for response teams (mobile laboratory, measurement equipment, protective equipment).

Management procedures for emergency preparedness had been developed in early stages of the RDC, then procedures were updated and several more subordinated working procedures and manuals were developed within Phare projects in 2004 and 2005.

Under the Phare 2002 and Phare 2003 were introduced several measures to enhance emergency preparedness. The main activities were devoted to:

- Supply of protective and decontamination equipment for regulatory authority and first responders from BAPA,
- Supply of measurement equipment (for on-site and off-site (in laboratory) measurements);
- Development and/or updating standardised working procedures and cooperation manuals;
- Practical training activities related to the combat of illicit trafficking.

The next envisaged activities are also under the technical cooperation projects – within year 2007 RDC should received a new mobile laboratory (TC project LAT/9/007). To enhance emergency preparedness Latvia started a new TC project for establishment a biodosimetry laboratory, which could serve also for other neighbouring countries.

## **SECTION IV**

### **IMPLEMENTATION OF THE RECOMMENDATIONS FROM PREVIOUS REVIEW MEETINGS**

#### **1. Recommendations from the 1<sup>st</sup> Review conference**

There were two main recommendations – about enhancement of emergency preparedness and to speed up enforcement of bilateral agreements with the neighbouring countries.

Recommendations related to the emergency preparedness are implemented – several practical and also table-top exercises were organised in Latvia.

Recommendations concerning bilateral agreement(s) (during peer review conference the main issue was agreement with Lithuania) are implemented – agreement on governmental level was signed on 31<sup>st</sup> May 2001.

#### **2. Recommendations from the 2<sup>nd</sup> Review conference**

The main recommendation for Latvia was the same as in the first conference – bilateral agreements with the neighbouring countries. As mentioned above – the agreement was signed in 2001 (some weeks after the 2<sup>nd</sup> Review conference).

Other recommendations concerned to updating of legal framework – during the 2001 and 2002 main regulations (on preparedness and response to radiation accidents and relevant provisions in civil defense plan) were approved by the Government.

### **3. Recommendations from the 3<sup>rd</sup> Review conference**

There were two groups of recommendations – first related to enhancement of regulatory authority (staffing and capabilities), second – modifications of some regulations to introduce more prescriptive requirements for periodic safety reviews and to improve coordination among authorities in case of accidents.

Issues related to the capabilities for regulatory authority is still in progress – several achievements are concerning technical capabilities, but knowledge management, staffing, funds are still the issues.

Updates of regulations related to the PSR should be introduced in future, currently the main approach is short term licensing.

Coordination issues had been analysed mainly for combat of illicit trafficking (new cooperation manual has been elaborated and tested in practice). Coordination and cooperation for preparedness had been tested in real case (joint efforts for many state authorities related NATO summit in Riga. Some outcomes from experiences from that event are used as background for further development of legal documents and also for preparations of more detailed cooperation arrangements between authorities.