

**Project Fiche No. 4**

**Part 2 of project for conditioning and secure storage of disused sealed radioactive sources and any other radioactive waste and nuclear materials located in Serbia**

**1. Basic information**

- 1.1 CRIS Number:** 2010/022-503  
**1.2 Title:** **Part 2 of project for conditioning and secure storage of disused sealed radioactive sources and any other radioactive waste and nuclear materials located in Serbia**  
**1.3 ELARG Statistical code:** 03.64 - Nuclear safety  
**1.4 Location:** PC Nuclear Facilities of Serbia, Vinča/Belgrade, Serbia

**Implementing arrangements:**

**1.5 Contracting Authority:**

The European Union represented by the European Commission for and on behalf of Serbia in joint management with the International Atomic Energy Agency (IAEA).

**1.6 Implementing Agency:**

The International Atomic Energy Agency (IAEA), Technical Co-operation Department.

**1.7 Beneficiary:**

The Republic of Serbia  
PC Nuclear Facilities of Serbia  
Vinča, Belgrade, Serbia  
Radojica Pešić, Director General

**Financing:**

- 1.8 Overall cost (VAT excluded)<sup>1</sup>:** EUR 880 000  
**1.9 EU contribution:** EUR 800 000  
**1.10 Final date for contracting:** 2 years following the date of conclusion of the financing agreement  
**1.11 Final date for execution of contracts:** 2 years following the end date for contracting  
**1.12 Final date for disbursements:** 1 year following the end date for execution of contracts

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<sup>1</sup> The total cost of the project should be net of VAT and/or other taxes. Should this not be the case, the amount of VAT and the reasons why it should be considered eligible should be clearly indicated

## 2. Overall Objective and Project Purpose

### 2.1 Overall Objective:

To improve radioactive waste management at the Vinča site in line with best EU practices.

### 2.2 Project purpose:

To contribute to the implementation of the VIND Programme (Vinča Institute Nuclear Decommissioning – in accordance with the Law on radiation protection and nuclear safety managed by Public Company Nuclear Facilities of Serbia) that is coordinated and partly supported by the IAEA through the conditioning and storage of the remaining part of sealed radioactive sources of category 3 and 4 in store at Vinča.

### 2.3 Link with AP/NPAA/EP/SAA

Article 110 of the SAA with the Republic of Serbia explicitly mentions nuclear safety as one of the cooperation topics.

As short term priority for Serbia mentioned in Annex 2 of European Partnership with Serbia, continuation of dismantling of the Vinca research reactor is stated.

The Serbia 2009 progress report mentions that "Serbia has made good progress in the areas of **nuclear safety and radiation protection**. The Law on Ionising Radiation Protection and Nuclear Safety Waste was adopted in May 2009. The provisions of the Law stipulate the next establishment of a nuclear regulatory agency. This agency is expected to be fully operational during the first half of 2010. Decommissioning of the Vinča RA research reactor, preparation for the repatriation of spent nuclear fuel to the Russian Federation, and management of radioactive waste on-site are progressing well. All the decommissioning activities at Vinča are now being performed under a new Public Company for Nuclear Facilities of Serbia.

Serbia has not ratified the Convention on Nuclear Safety and the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management. Nevertheless, significant progress has been achieved.

However, considerable efforts still need to be made in order to align nuclear safety and radiation protection with the *acquis* and best EU practices".

### 2.4 Link with MIPD

The IPA Multi-beneficiary Multi-annual indicative Planning Document (MIPD) 2009-2011<sup>2</sup>, *section 2.3.3.11 - Nuclear Safety and Radiation Protection*, mentions that "in Serbia [...], the operation, refurbishment and dismantling of nuclear research reactors constitute additional sources of radiation risks that would require investment, in particular for the management of spent nuclear fuel and radioactive waste".

### 2.5 Link with National/Sectoral Investment Plan

- Decision of the Serbian government to decommission the RA research reactor located at the Vinča Institute and approval of the VIND programme (2002 and 2004)

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<sup>2</sup> C(2009)4518, 16.06.2009

- Serbian Law on ionising radiation protection and on nuclear safety (2009)
- Activity framework in the field of nuclear safety and radiation protection for the period 2008-2010 decided by the government of Serbia.

### **3. Description of project**

#### **3.1 Background and justification:**

The Vinča site was the central collection and storage location for disused sealed radioactive sources (DSRS) for all the former Yugoslavia. These sources were used in the past for a large variety of medical, industrial and domestic applications (e.g. lightning rods). All DSRS nowadays generated in Serbia are also stored at the Vinča site. The estimated source inventory is as follows:

- Several tens of DSRS of category 1&2 (IAEA categorisation);
- Approximately 4000 DSRS of category 3 & 4
- About 2000 DSRS of category 4&5
- 40,000 smoke detectors of category 5
- A planned orphan source recovery project is expected to return additional 1000-2000 sources, mostly in categories 4&5.

All these sources are stored in light buildings in very poor condition. Safety and security of this kind of storage cannot be guaranteed. A new secure storage facility has been constructed to accommodate conditioned DSRS and other high activity wastes and sensitive radioactive materials.

Within the framework of the VIND programme the IAEA is supporting conditioning, packaging and storage of each of these DSRS categories. Packaging and secured storage of sources of category 1&2 should be performed via US and IAEA funding. Conditioning and storage of DSRS of category 3-4 is only very partly funded by the IAEA with the support of the Serbian Ministry of Science and Technological Development. Under a 2008 IPA project, 2000 of the stored category 3-4 DSRS will be conditioned and placed in the new secure storage facility. This additional IPA project will provide funding for conditioning the remaining 2000 DSRS of the stored category 3&4.

Sources of category 5 including smoke detectors will be funded by Serbia.

It is important to note that sealed radioactive sources of category 3 "if not safely managed or securely protected, could cause permanent injury to a person who handled it, or was otherwise in contact with it, for some hours"<sup>3</sup>. Category 1&2 sources could cause permanent injury in a significantly shorter period of time.

In addition, through the 2010 IPA project that is entitled "Registry of nuclear materials, radioactive sources, waste and exposures", it is expected that a number of additional nuclear materials and radioactive waste will be localised and identified throughout the territory of Serbia. Therefore, the above-mentioned project also aims at retrieving, transporting and storing at Vinča all these objects with the exception of radioactive lightning rods which are subject to another action.

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<sup>3</sup> IAEA-TECDOC-1344 "Categorisation of radioactive sources", July 2003

This action is part and parcel of the VIND programme that was established in 2002 based on a decision of the Serbian government to decommission the Vinča RA research reactor. The VIND programme comprises a number of successive phases of implementation that are covering the period 2006-2013 (see hereafter).

- Phase 1: Removal, characterisation and repackaging of spent nuclear fuel in store at the Vinča Institute (IAEA and other donors funding; IPA funding);
- Phase 2: Preparations for and transport of Russian-origin spent nuclear fuel from the Vinča Institute to the Russian Federation (IPA funding);
- Phase 3: Reprocessing and disposal of the Russian-origin spent nuclear fuel in the Russian Federation (IAEA and other donors funding);
- Phase 4: Design and construction of a waste processing and storage facility at the Vinča Institute for all types of radioactive waste to be generated during decommissioning operations of the RA nuclear research reactor (IAEA and other donors funding);
- Phase 5: Provisions of equipment for a waste processing facility at the Vinča Institute (IPA funding);
- Phase 6: Conditioning, packaging and storage of disused sealed radioactive sources (IAEA and other donors funding, IPA funding);
- Phase 7: Conditioning and processing of improperly stored and unconditioned radioactive waste (IAEA and other donors funding, IPA funding);
- Phase 8: Decommissioning of the old storage facilities for sources and radioactive waste (IAEA and other donors funding, IPA funding);
- Phase 9: Dismantling of the old piping system and tanks containing radioactive liquid waste (IPA funding);
- Phase 10: Radioactivity survey of the Vinča site (IPA funding);
- Phase 11: Implementation of recommendations and priorities from Phase 10, site-wide radiation survey (IPA funding);
- Phase 12: Stabilization of spent nuclear fuel storage pool and decontamination of storage spent fuel room;
- Phase 13: Registry of radioactive sources, wastes and exposures;
- Phase 14: Part 2 of conditioning, packaging and storage of disused sealed radioactive sources;
- Phase 15: Decontamination and decommissioning of the RA research reactor hot cells;
- Phase 16: Other incremental decommissioning projects.

Therefore the aim of this project is to contribute to the VIND programme via the support to Phase 13 "Registry of radioactive sources, wastes and exposures" and Phase 14: "Part 2 of conditioning, packaging and storage of disused sealed radioactive sources" with the focus on sealed radioactive sources of category 3 & 4.

### **3.2 Assessment of project impact, catalytic effect, sustainability and cross border impact**

The project will reduce the radiological risks related to the unsafe and unsecured storage of sealed radioactive sources. It will also contribute to reduce the risks of explosion of the so-called "dirty bombs" (radioactive dispersal device, RDD) somewhere in the European Union if some of these sources are stolen with malicious purposes.

It has a catalytic effect in the sense that providing funding to phase 14 of the VIND programme will enable the whole sequence of operations leading to a safer and more secure Vinča nuclear site to become effective.

The sustainability can be ensured by the recent governmental decision to establish a Public Company for Nuclear Facilities in Serbia (PCNFS) that will be in charge of managing all radiological issues at Vinča. This company disposes of approximately 120 persons and received annual allocations from the national budget.

### **3.3 Results and measurable indicators:**

- All remaining DSRS of category 3-4 (at least 2000) conditioned and securely stored in accordance with defined production schedule.
- All sources placed in appropriate shielding containers, with additional containers purchased as required.
- Comprehensive inventory established for all DSRS including sealed and unsealed sources and conditioned sources.
- Additional orphan sources in category 3-4 recovered and stored in secured conditions.
- All nuclear materials and radioactive waste localised and identified within Phase 13 with the exception of radioactive lightning rods which are subject to a specific action, recovered and stored in secured conditions.

### **3.4 Activities:**

- Identification of, and establishment of a production schedule for the additional sources which will ensure that the objective and performance indicators are achieved in a timely manner; subsequent implementation of the production schedule and source conditioning.
- Continuing support for the formal inventory of all discrete radioactive sources; including sealed and unsealed, in use at PCNFS, Vinca and elsewhere in Serbia; and including location, characterisation (physical, chemical and radiological characteristics), category, usage status (in use, excess, conditioned for secure storage, disposed, repatriated, etc.), responsible person (by position), security status, estimated recovery date (as applicable), eligibility for repatriation to a specified county of origin, and other important information; with all applicable information provided to the IAEA databases for sources. Providing appropriate shielding containers for conditioned sources, with additional containers purchased as required.
- Continuation of national Orphan Source Search and Secure Programme by recovery, conditioning and secure storage of additional category 3&4 sources, with defined performance indicators and appropriate planning to ensure comprehensive coverage.
- Retrieval, transport and storage in a secure facility of all types of nuclear materials and radioactive waste localised and identified within phase 13 of the VIND programme, with the exception of radioactive lightning rods which are subject to specific actions.
- Provide additional experts as needed for progress assessment, on site assistance, problem resolution, verification of achievement of performance indicators.

### **3.5 Conditionality and sequencing:**

Fully operational Agency for Ionizing Radiation Protection and Nuclear Safety (AIRPNSS), able to license activity, is in place.

### 3.6 Linked activities:

All the other phases of the VIND programme.

This project is complementary to both the 2008 IPA-funded project "Conditioning and secure storage of disused sealed radioactive sources" and the 2010 IPA-funded project "Registry of nuclear materials, radioactive sources, wastes and exposures".

### 3.7 Lessons learned

Since 2004 the implementation of the VIND programme under the coordination of the IAEA is proceeding according to the time schedule. However, the latest developments of this programme showed that supplementary technical expertise would be required for the monitoring taking into account the increasing number of projects being implemented and their high technical complexity.

The lessons learned from past projects at the Vinča Nuclear Institute have demonstrated the need to urgently address the issue of the conditioning of sealed radioactive sources and then to store them in a new facility entirely devoted to this specific radioactive waste type. Postponing this activity in the longer term may become complicated considering that there are very few Serbian operators in the nuclear field who are capable to perform this task.

## 4. Indicative Budget (amounts in EUR)

			TOTAL EXP.RE	SOURCES OF FUNDING								
				IPA EU CONTRIBUTION		NATIONAL CONTRIBUTION				PRIVATE CONTRIBUTION		
ACTIVITIES	IB (1)	INV (1)	EUR (a)=(b)+(c)+(d)	EUR (b)	%(2)	Total EUR (c)=(x)+(y)+(z)	%(2)	Central EUR (x)	Regional/Local EUR (y)	IFIs EUR (z)	EUR (d)	%(2)
Activity 1	x		880 000	800 000	91	80 000	9					-
Contribution Agreement with IAEA	x		880 000	800 000	91	80 000	9					-
TOTAL IB			880 000	800 000	91	80 000	9					
TOTAL INV												
<b>TOTAL PROJECT</b>			<b>880 000</b>	<b>800 000</b>	<b>91</b>	<b>80 000</b>	<b>9</b>					

Amounts net of VAT

- (1) In the Activity row use "X" to identify whether IB or INV  
(2) Expressed in % of the **Total** Expenditure (column (a))

### Additional Funding from Government, IAEA and Other Contributors

As discussed in preceding paragraphs, this project is intended to support the Vinča Institute Nuclear Decommissioning (VIND) programme, which is Serbia's priority nuclear safety and radiation protection support programme. For more than 50 years, Serbia was the central collection centre for all disused sealed sources and radioactive waste from the former Yugoslavia, including countries which are now EU Member States. These sealed sources and wastes are found in rooms and degraded storage facilities located all over Vinča. Only a few of the thousands of disused sealed sources and the thousands of waste containers have ever been conditioned, and the conditioning methods for those few items does not meet current international standards. Construction of proper waste processing facilities, secure storage

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facilities, and source conditioning facility, as well as conditioning and storage of the resultant wastes and sources, is estimated to cost more than EUR 8 million.

VIND is also intended to repatriate more than 8000 highly enriched and low enriched spent fuel elements to Russia from the RA Research Reactor. The total cost of the repackaging, transport, spent fuel reprocessing, and disposition of the resultant waste will exceed EUR 28 million.

Finally, decommissioning of the RA Research Reactor and degraded support facilities, including site-wide radiological characterization, remediation or resolution of identified sources of radiation and contamination, and upgrading the capabilities of the radiation protection programme, is estimated to cost an additional EUR 25 million or more.

The VIND programme has been in progress since 2004 and has received more than EUR 19 million in contributions through 2009 from sources other than the EU; this includes nearly EUR 14 million in support from the Serbian Ministry of Science and Technological Development. An additional EUR 24 million is currently approved for 2010-13, including EUR 5 million from the Serbian Ministry of Science and Technological Development.

The EU is currently funding the repatriation of spent nuclear fuel to the Russian Federation (EUR 4.5 Million already contracted plus EUR 3.3 Million to be contracted soon under the 2009 IPA programme), radioactive waste management activities at Vinca (EUR 5.5 Million to be contracted under the 2008 and 2009 IPA programmes).

A summary of the VIND funding approvals is included in the following table. It should be noted that funding for decommissioning activities, sealed sources, and waste management decline sharply in 2009-11, as the government, IAEA, and other contributors are shifting their financial resources toward spent fuel repatriation. However, it is still anticipated that the Ministry of Science and Technological Development will contribute more than EUR 1 million annually to waste management and decommissioning activities, mostly in terms of security and local labour resources.

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**Existing VIND Funding Approvals**

<b>Spent Fuel Repatriation Project (EUR)/ Phases 1 to 4 of the programme</b>			
	2004-09 Funding	2010-11 Funding	<b>Total</b>
European Commission	4 100 000	3 630 000	<b>7 730 000<sup>4</sup></b>
IAEA	715 000	2 682 411	<b>3 367 411</b>
Nuclear Threat Initiative (NGO)	360 000	76 074	<b>436 074</b>
USA	894 815	5 185 185	<b>6 080 000</b>
Czech Republic	-	732 593	<b>732 593</b>
Russia	-	2 222 222	<b>2 222 222</b>
Serbia	-	8 148 148	<b>8 148 148</b>
<b>Total</b>	<b>6 069 815</b>	<b>22 676 633</b>	<b>28 716 448</b>

<b>Sealed Sources and Waste Management (including Nuclear Security) (EUR)/ Phases 5 to 7 of the programme</b>			
	2004-09 Funding	2010-13 Funding	<b>Total</b>
European Commission	1 197 833	5 502 630	<b>6 700 462<sup>5</sup></b>
IAEA	1 247 205	32 148	<b>1 279 354</b>
Nuclear Threat Initiative (NGO)	438 471	32 127	<b>470 597</b>
USA	890 007	-	<b>890 007</b>
UK	101 481	-	<b>101 481</b>
Slovenia	75 333	44 444	<b>119 778</b>
<b>Total</b>	<b>3 950 330</b>	<b>5 611 349</b>	<b>9 561 679</b>

<b>Decommissioning (EUR)/ Phases 8 to 11 of the programme</b>			
	2004-09 Funding	<b>Total<sup>6</sup></b>	
European Commission	-	-	
Nuclear Threat Initiative (NGO)	135 079	135 079	
IAEA	225 544	225 544	
USA	18 519	18 519	
<b>Total</b>	<b>379 142</b>	<b>379 142</b>	

<b>Serbia Funding from Ministry of Science and Technological Development ( EUR)</b>	
	2004-10 Funding
2004	500 000
2005	800 000
2006	1 100 000
2007	2 500 000
2008	4 000 000
2009	5 200 000
2010	5 200 000
<b>Total</b>	<b>19 300 000</b>

<sup>4</sup> Under the IPA2007-09 horizontal programmes on nuclear safety and radiation protection

<sup>5</sup> Idem

<sup>6</sup> Beginning in 2010, decommissioning projects were combined with waste projects in IAEA programmes



## 5. Indicative Implementation Schedule (periods broken down per quarter)

<b>Contracts</b>	<b>Start of Tendering</b>	<b>Signature of contract</b>	<b>Project Completion</b>
Contribution Agreement with IAEA	Not applicable	Q3 2011	Q2 2013

## 6. Cross cutting issues

### 6.1 Equal Opportunity:

The project will benefit both women and men through improvements in environmental protection and safety. On all activities, both men and women will have equal opportunities to compete for contracts and to work on any related activities.

### 6.2 Environment:

This project will improve radiological conditions within the Vinča site and the surrounding environments by reducing the potential for release of radioactivity via groundwater, airborne activity, or malicious intent. All radioactive materials, sources, etc. will be removed from areas of little control and placed in proper storage, including extensive radiological characterization and conditioning; this will ensure graded levels of security and radiological controls so as to reduce the impact on the environment, workers and the general public.

### 6.3 Minorities:

On all activities, minorities will have equal opportunities to compete for contracts and to work on any related activities.

**ANNEXES**

- I- Log frame in Standard Format
- II- Amounts (in EUR) contracted and disbursed per quarter over the full duration of the project (EU funded)
- III- Description of Institutional Framework
- IV- Related laws, regulations and strategic documents
- V- Details per EU funded contract

## ANNEX 1: Logical framework matrix in standard format

LOGFRAME PLANNING MATRIX FOR Project Fiche	Programme name and number – IPA 2010 Horizontal programme on nuclear safety and radiation protection – 2010/022-503	
Part 2 of project for conditioning and secure storage of disused sealed radioactive sources in Serbia	Contracting period expires – 2 years following the date of the conclusion of the financing agreement.	Disbursement period expires – 1 year following the end date for execution of contracts
	Total budget: EUR 880 000	IPA budget: EUR 800 000

Overall objective	Objectively verifiable indicators	Sources of Verification	Assumptions
To improve radioactive waste management at the Vinča site in line with best EU practices.			A comprehensive program has been established to condition and store safely and securely disused sealed sources, including implementation of a nation-wide orphan source search and secure program and source inventory database.
Project purpose	Objectively verifiable indicators	Sources of Verification	Assumptions
To contribute to the implementation of the Vinča Nuclear Institute Decommissioning project (VIND) through support given to phases 13 and 14 of the programme.			
Results	Objectively verifiable indicators	Sources of Verification	Assumptions
<ul style="list-style-type: none"> <li>All remaining category 3-4 sources conditioned and securely stored in accordance with defined production schedule;</li> <li>All sources placed in appropriate shielding containers, with additional containers purchased as required;</li> <li>Comprehensive inventory established for all DSRS including sealed and unsealed sources and conditioned sources;</li> <li>Recovery and secure storage of additional orphan sources in category 3-4.</li> <li>Recovery, transport and storage of nuclear materials and radioactive waste localised and identified within the framework of Phase 13 of the VIND programme</li> </ul>	<ul style="list-style-type: none"> <li>Number of drums of conditioned/ repackaged sealed radioactive sources, radioactive waste and nuclear materials in store</li> </ul>	<ul style="list-style-type: none"> <li>Source inventory database that is available in the Agency for Ionizing Radiation Protection and Nuclear Safety of Serbia</li> <li>Report on the recovery of orphan sources</li> <li>Visit of the Vinca facility</li> <li>Visit of the facility</li> <li>Progress reports</li> </ul>	<p>The 2010 IPA-funded project on "Registry of nuclear materials, radioactive sources, wastes and exposures" is successfully implemented.</p> <p>Hot cell facility for source conditioning operational and licensed.</p>

		on implementation of Parts 1 and 2 of the Project.	
<b>Activities</b>	<b>Means</b>	<b>Costs</b>	<b>Assumptions</b>
All the following activities should be contracted through a Contribution Agreement with the IAEA.	CA with IAEA	EUR 800 000	
<ol style="list-style-type: none"> <li>1. Identification of and establishment of a production schedule for the additional sources which will ensure that the objective and performance indicators are achieved in a timely manner; subsequent implementation of the production schedule and source conditioning;</li> <li>2. Continuing support for the formal inventory of all discrete radioactive sources; including sealed and unsealed, in use at PCNFS, Vinca and elsewhere in Serbia; and including location, characterisation (physical, chemical and radiological characteristics), category, usage status (in use, excess, conditioned for secure storage, disposed, repatriated, etc.), responsible person (by position), security status, estimated recovery date (as applicable), eligibility for repatriation to a specified county of origin, and other important information; with all applicable information provided to the IAEA databases for sources;</li> <li>3. Providing appropriate shielding containers for conditioned sources, with additional containers purchased as required;</li> <li>4. Continuation of national Orphan Source Search and Secure Programme by recovery, conditioning and secure storage of additional category 3&amp;4 sources, with defined performance indicators and appropriate planning to ensure comprehensive coverage.</li> <li>5. Retrieval, transport and storage in a secure facility of all types of nuclear materials and radioactive waste localised and identified within phase 13 of the VIND programme, with the exception of radioactive lightning rods which are subject to specific actions;</li> <li>6. Provide additional experts as needed for progress assessment, on site assistance, problem resolution, verification of achievement of performance indicators.</li> </ol>	<ul style="list-style-type: none"> <li>• Contract for local labour; funded in 2011 under SRB3003.</li> <li>• Support storage containers and storage shields</li> </ul>	<p>Total cost project</p> <p>EUR 580 000</p> <p>EUR 300 000</p>	<p>The Serbian nuclear operators and notably at Vinca are available.</p>

**ANNEX II: amounts (in €) Contracted and disbursed by quarter for the project (EU funded)**

<b>Contracted</b>	Q3 2011	Q4 2011	Q1 2012	Q2 2012	Q3 2012	Q4 2012	Q1 2013	Q2 2013	Q3 2013
Contribution Agreement	800 000								
<b>Cumulated</b>	<b>800 000</b>								
<b>Disbursed</b>	Q3 2011	Q4 2011	Q1 2012	Q2 2012	Q3 2012	Q4 2012	Q1 2013	Q2 2013	Q3 2013
Contribution Agreement	200 000		200 000		200 000			200 000	
<b>Cumulated</b>	<b>200 000</b>		<b>400 000</b>		<b>600 000</b>			<b>800 000</b>	

### **ANNEX III: Description of Institutional Framework**

The responsibilities for the fields related to the peaceful use of nuclear energy (health, the environment, science and technology, nuclear safety and radiation protection, agriculture, transport, etc) rests with Ministry of Science and Technological Development, Ministry of Environment and Spatial Planning, and independent regulatory body, Agency for Ionizing Radiation Protection and Nuclear Safety of Serbia.

The Ministry of Science and Technological Development (MSTD) is responsible for R&D in the nuclear sector, as well as for the inspection in the field of nuclear safety. The Ministry of Environment and Spatial Planning is responsible for the inspection in the field of radiation protection. Licensing of the radiation or nuclear activities lies with the new Agency.

In force is the Law on Ionizing Radiation Protection and on Nuclear Safety was enacted in 2009 (36/09). It establishes measures for the protection against ionising radiation, as well as nuclear safety measures, liability for nuclear damages, supervision and authorization, penalties. Based on the former Law on Protection against Ionizing Radiation (46/96), there are 11 regulations related to protection against ionizing radiation and for the safety of radiation sources and 5 regulation related on nuclear safety and security. All the regulations are still applicable.

Independent regulatory body, Agency for Ionizing Radiation Protection and Nuclear Safety of Serbia, was established in accordance with the Law on Ionizing Radiation Protection and on Nuclear Safety. It is expected that it will be fully operational in mid 2010.

### **ANNEX IV: Related Laws, Regulations and Strategic Documents**

#### Project-Specific Documents

- Decision of the Serbian government to decommission the RA research reactor located at the Vinča Institute and approval of the VIND programme (2002 and 2004)
- Law on ionising radiation protection and on nuclear safety (2009)
- Article 110 of the draft SAA
- Nuclear Safety and Radiation Protection action of the Multi-beneficiary MIPD 2009-2011

#### International Conventions and Treaties

Serbia is a party to the following instruments under the IAEA's auspices

- Agreement on the Privileges and Immunities of the IAEA
- Vienna Convention on Civil Liability for Nuclear Damage
- Convention on Physical Protection of Nuclear Material
- Convention on Early Notification of a Nuclear Accident
- Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency

Serbia has signed but has not yet ratified the Optional Protocol Concerning the Compulsory Settlement of Disputes to the Vienna Convention on Civil Liability for Nuclear Damage.

As a party to the Treaty on the Non-Proliferation of Nuclear Weapons, Serbia has Comprehensive Safeguards Agreements with the IAEA for the Application of Safeguards in

connection with the Treaty on Non-Proliferation of Nuclear Weapons. It should be also noted that Serbia has signed but has not yet ratified the Additional Protocol to the Treaty.

#### **ANNEX V: Details per EU funded contract**

This project together with the projects:

- Project No 3: "Registry of nuclear materials, radioactive sources, wastes and exposures" – Serbia.
- Project No 5: "Stabilisation of spent nuclear fuel storage pool at the Vinča site in Serbia".

which are all part of the VIND programme, will be supported through a Contribution agreement with the IAEA to be concluded in the third quarter of 2011.

The Contribution agreement will be concluded in accordance with the terms of the Financial and Administrative Framework Agreement (FAFA) between the European Union and the United Nations, signed on 29 April 2003, to which the IAEA has adhered on 17 September 2004.