Project Fiche No. 6

Project Management Unit for EU supported projects

1. Basic information

1.1 CRIS Number: 2010/022-503
1.2 Title: Project Management Unit for EU supported projects
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)[1]: EUR 400 000

1.9 EU contribution: EUR 400 000

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

[1] 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

2.1 Overall Objective:

To provide direct project management and oversight for EU-funded projects at the Vinča Institute during the project implementation period 2011-2013.

2.2 Project purpose:

To contribute to the implementation of the VIND Programme (**V**inča **I**nstitute **N**uclear **D**ecommissioning – 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 provision of dedicated project management support to oversee implementation and manage the schedule for the EU-funded projects programmed under IPA in 2007, 2008, 2009 and 2010.

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[2], *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] C(2009)4518, 16.06.2009

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)
- 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:

Operation of the RA nuclear research reactor at Vinča until 1983 has generated spent nuclear fuel and many types of radioactive waste that need to be properly managed. This is the main aim 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.

In addition, there is a horizontal project partly funded by IPA which aims at strengthening radiation safety capabilities and infrastructure at Vinča. In total over the period 2007 to 2009 the IPA programme is therefore fully supporting or contributing to support eleven projects at Vinča. The budgetary allocation for this support would amount to approximately EUR 13 million.

It is therefore important to make sure that all these projects will be timely implemented in compliance with the milestones of the whole VIND programme and that the main achievements of the projects are in line with the objectives of the programme.

So far the IAEA plays a central role in the implementation of the VIND programme in collecting funds from various donors, funding a number of activities with their own funds, and providing technical expertise while coordinating the whole programme.

However, the IAEA cannot carry out a day per day follow up of all these projects and need assistance through the establishment of a Project Management Unit (PMU) operating on the spot at Vinča.

This PMU will also perform the monitoring of the IPA-funded projects for the Commission services (DG Enlargement and the European Union Delegation to Serbia) so that these services can have a clear understanding of the progress of work at any moment upon their request.

The establishment of a PMU at Vinča has already been planned within the framework of the 2008 IPA horizontal programme on nuclear safety and radiation programme, and 2009 IPA, for which EUR 0.4 million and EUR 0.4 million, respectively, have already been allocated. Therefore this project is a continuation of the foregoing project, enabling the funding of the PMU up to the end of 2013.

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

The proper monitoring of all the IPA-funded projects at Vinča will contribute to their successful implementation and thereby will reduce the radiological risks related to past nuclear activities performed at Vinča.

It has a catalytic effect in the sense that providing assistance in the timely implementation of several key-phases 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.

Any accident, e.g. fire in the old storage facilities for radioactive waste, may heavily contaminate the environment and thereby can generate a radiological impact to the members of the public in neighbouring countries.

3.3 Results and measurable indicators:

The final result of the project is the timely implementation of each managed project and activity, with associated quality end products that meet the objectives and performance indicators. This shall include the following individual performance indicators:

a) Each project has been fully planned, and project schedules have been established and implemented for each project and activity;

b) The preparation of the repatriation of spent nuclear fuel elements to the Russian Federation has progressed according to schedule, the spent nuclear fuel was shipped to, and received by, the Russian Federation fuel reprocessing facility.

c) Spent nuclear fuel pool, after the repatriation, is stabilized.

d) All the backlog of radioactive waste currently in store in "hangars" and underground tanks has been properly managed according to best EU practices.

e) A selection of contaminated sites and facilities at Vinča fully remediated.

3.4 Activities:

a. Assistance in planning each project and activity;

b. Assistance in developing and maintaining project schedules for each project, including the scheduling of each activity and input so as to ensure timely completion and successful achievement of the objectives and performance objectives;

c. Management and oversight of the projects dealing with spent nuclear fuel pool stabilization;

d. Management and oversight of the projects dealing with radioactive waste management as described in the relevant project-fiches of the 2008 to 2010 IPA horizontal programmes on nuclear safety and radiation protection in Serbia

e. Management and oversight of the project to implement the recommendations of the radioactivity survey of the Vinča site.

3.5 Conditionality and sequencing:

Not applicable.

3.6 Linked activities:

All the other phases of the VIND programme, and in particular the 2009 IPA-funded project that allocated EUR 0.4 million for the same purpose.

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 projets being implemented and their high technical complexity.

An important lesson to be drawn from past IPA-funded projects at Vinča is that without a permanent monitoring, the implementation of projects may suffer from important delays that could jeopardise the whole VIND programme. This monitoring is now being exerted by the Project Management Unit (funded by IPA).

4. Indicative Budget (amounts in EUR)

				SOURCES OF FUNDING								
			TOTAL EXP.RE	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		400 000	400 000	*100*							-
Contribution Agreement with IAEA	x		400 000	400 000	*100*							–
TOTAL IB			400 000	400 000	*100*							
TOTAL INV												
TOTAL PROJECT			**400 000**	**400 000**	**100**							

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 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.

Existing VIND Funding Approvals

Spent Fuel Repatriation Project (EUR)/ Phases 1 to 4 of the programme			
	2004-09 Funding	2010-11 Funding	**Total**
European Commission	4 100 000	3 630 000	**7 730 000**[3]
IAEA	715 000	2 682 411	**3 367 411**
Nuclear Threat Initiative (NGO)	360 000	76 074	**436 074**
USA	894 815	5 185 185	**6 080 000**
Czech Republic	-	732 593	**732 593**
Russia	-	2 222 222	**2 222 222**
Serbia	-	8 148 148	**8 148 148**
Total	**6 069 815**	**22 676 633**	**28 746 448**

Sealed Sources and Waste Management (including Nuclear Security) (EUR)/ Phases 5 to 7 of the programme			
	2004-09 Funding	2010-13 Funding	**Total**
European Commission	1 197 833	5 502630	**6 700 462**[4]
IAEA	1 247 205	32 148	**1 279 354**
Nuclear Threat Initiative (NGO)	438 471	32 127	**470 597**
USA	890 007	-	**890 007**
UK	101 481	-	**101 481**
Slovenia	75 333	44 444	**119 778**
Total	**3 950 330**	**5 611 349**	**9 561 679**

Decommissioning (EUR)/ Phases 8 to 11 of the programme		
	2004-09 Funding	**Total**[5]
European Commission	-	**-**
Nuclear Threat Initiative (NGO)	135 079	135 079
IAEA	225 544	225 544
USA	18 519	18 519
Total	**379 142**	**379 142**

Serbia Funding from Ministry of Science and Technological Development **(EUR)**	
	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
Total	**19 300 000**

[3] Under the IPA2007-09 horizontal programmes on nuclear safety and radiation protection
[4] Idem
[5] Beginning in 2010, decommissioning projects were combined with waste projects in IAEA programmes

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

Contracts	Start of Tendering	Signature of contract	Project Completion
Contribution agreement with IAEA	Not applicable	Q2 2012	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

III- Description of Institutional Framework

IV- Related laws, regulations and strategic documents

V- Details per EU funded contract

ANNEX I: Logical framework matrix in standard format

LOGFRAME PLANNING MATRIX FOR Project Fiche	Programme name and number – 2010 IPA horizontal programme on nuclear safety and radiation protection – 2010/022-503	
Programme Management Unit for EU Supported Projects	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 400 000	IPA budget: EUR 400 000

Overall objective	**Objectively verifiable indicators**	**Sources of Verification**	
To provide direct project management and oversight for EU-funded projects at the Vinča Institute during the project implementation period 2011-2013.			
Project purpose	**Objectively verifiable indicators**	**Sources of Verification**	**Assumptions**
To contribute to the implementation of the Vinča Nuclear Institute Nuclear Decommissioning programme (VIND) that is coordinated and partly supported by the IAEA through the provision of dedicated project management support to oversee implementation and manage the schedule for the EU funded projects programmed under IPA in 2008, 2009, 2010 and 2011.			

Results	Objectively verifiable indicators	Sources of Verification	Assumptions
Timely implementation of each managed project and activity, with associated quality end products that meet the objectives.		Project-specific reports and final management oversight and achievements report.	Sufficient Vinča labour resources available to work alongside contractors for training and support.
Activities	**Means**	**Costs**	**Assumptions**
All the following activities should be contracted through a Contribution Agreement with the IAEA.	CA with IAEA	EUR 400 000	
1. Assistance in planning each project and activity; 2. Assistance in developing and maintaining project schedules for each project, including the scheduling of each activity and input so as to ensure timely completion and successful achievement of the objectives and performance objectives; 3. Management and oversight of the project on spent nuclear fuel pool, after the repatriation, is stabilized 4. Management and oversight of the project for removal or stabilization of the underground liquid waste tanks; and 5. Management and oversight of the project to implement the recommendations of the radioactivity survey of the Vinča site	Contract for direct project management and oversight.		

ANNEX II: Amounts (EUR) contracted and disbursed per quarter over the full duration of the project

Contracted	**Q3 2011**	**Q4 2011**	**Q1 2012**	**Q2 2012**	**Q3 2012**	**Q4 2012**	**Q1 2013**	**Q2 2013**
Contribution Agreement				400 000				
Cumulated				**400 000**				
Disbursed	**Q3 2011**	**Q4 2011**	**Q1 2012**	**Q2 2012**	**Q3 2012**	**Q4 2012**	**Q1 2013**	**Q2 2013**
Contribution Agreement				160 000		80 000	80 000	80 000
Cumulated				**160 000**		**240 000**	**320 000**	**400 000**

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 which is part of the VIND programme will be supported through a Contribution agreement with the IAEA to be concluded in the second quarter of 2012 (via an amendment to the existing Contribution agreement).

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.