ADDENDUM TO FINANCING MEMORANDUM
PHARE 2004

Horizontal Programme for Community Support in the Field of Nuclear Safety for Romania in 2004

Within the Framework of Phare assistance to Romania, the Addendum outlined below has been made under the Horizontal Programme for Community Support in the Field of Nuclear Safety for Romania in 2004

Article 1 – Nature and Subject

The Financing Memorandum 2004/016-815.02, signed on 21 December 2004 is modified as follows:

Project 2004/016-815.02.04 "Design and safety assessment of Cernavoda surface low and intermediate level short-lived radioactive waste repository in Romania" is replaced by project "Support to ANDRAD to extend and accelerate the development of a new L/ILW disposal facility".

The deadline for contracting of the new project is extended by 12 months until 30 November 2007

The deadline for execution of contracts of the new project is extended by 12 months until 30 November 2008

Article 2 – Commitment of the Community

The Financial contribution of THE COMMUNITY remains fixed at a maximum of 1.959 Million EUR.

Article 3

All other Terms and Conditions of the original Financing Memorandum 2004/016-815.02 remain unchanged.

Article 4

This addendum to this Financing Memorandum 2004/016-815.02 is drawn up in duplicate in the English language.
Article 5 – Entry into force

This addendum to the Financing Memorandum 2004/016-815.02 shall enter into force on the date of signature by both parties.

Bucharest
Date: 30 November 2006

For the Recipient

Mr. Sebastian Vladescu
Minister
Ministry of Public Finance

Bucharest
Date: 30 November 2006

For the Community

Mr. Donato Chiarini
Head of European Commission
Delegation to Romania

Encs
1. Revised Special provisions
2. New Project Fiche
REVISED SPECIAL PROVISIONS

1. OBJECTIVES AND DESCRIPTION

1.1. Objectives

The overall objective of this programme is to contribute to improving nuclear safety in the beneficiary candidate countries.

The specific objectives of this programme are to

- enhance the factors affecting regulatory effectiveness as spelled out, for instance, in the conclusions of the CONCERT Group;¹
- improve radioactive waste management;
- heighten off-site emergency preparedness.

Details of the specific objectives and description of the projects are to be found in the project fiches prepared for each project.

Indicators of achievement

Overall indicators of achievement have, in the past, not been established for projects in the field of nuclear safety.

There are no Community common technical standards covering safety in the operation of nuclear installation, regulatory practices or radioactive waste management. Consequently, in their absence, the secondary step of deriving benchmarks from such standards is not possible. However, with regard to regulatory practices, although there is a high degree of convergence on the substance of requirements, there are a number of different regulatory approaches according to practices in Member States determined by their specific legal and technical traditions. Nuclear Safety Authorities from candidate country adapt to their local requirements best practice transferred from EU member state regulators.

1.2 Description of Projects

The revised Phare Guidelines acknowledge that pre-accession financial assistance in the field of nuclear safety demands a specific approach. The projects have been chosen for being sufficiently mature and able to contribute to a sustainable improvement to the level of nuclear safety within their specific objectives. Most projects pertain to the field of institution building, supporting either the nuclear safety authority or public bodies entrusted with specific duties regarding radioactive waste management or similar tasks.

¹ Conclusions of the 17th CONCERT Group meeting, June 29-30 2000. These factors are:
- "To be effective, a regulatory body must have a well-defined task, well-defined work and assessment processes, be independent from the energy producers, political power and pressure groups, be transparent and open, and have the adequate means, in terms of budget and competent and well motivated staff to perform its task.
- An effective regulatory body is one that ensures an acceptable level of safety, acts to prevent degradation of safety, promotes safety improvements, is timely and cost effective, ensures the confidence of operators, general public and government, and strives continuously for improved performance.
- A regulatory system is effective when the utilities consistently do all that they should to maintain or improve safety. Nevertheless, the performance of the plant operators depends also on other factors, and it is difficult to use it to assess the effectiveness of the regulatory body.
- International co-operation and international peer reviews play an important role in the development and maintenance of an effective regulatory body."
This programme allocates financial assistance to the following projects:

**Projects:**

**Bulgaria 016-815.01.**

016-815.01.01 Severe Accident Management Guidelines (SAMG). Review and assessment in compliance with international requirements

The actual set of SAMGs for Kozloduy NPP units 3-4 and 5-6 are being developed with the help of Phare project BG 01.10.01 “Phenomena investigation and development of Severe Accident Management Guideline” which should be completed within the next few months.

The aim of this proposal is to assist the Bulgarian Nuclear Regulatory Agency (NRA) in the process of the review of SAMGs for Kozloduy NPP units 3-4 and 5-6. The project will provide EU regulatory and technical expertise to improve NRA capabilities in the area of SAMG through training and other activities, including the preparation of a procedure for review and assessment of SAMG by the regulatory authority.

These are the main activities of the project:

- Review and assessment of the SAMG, including: (1) the development of the corresponding methodology; (2) actual review of SAMG for units 3-4 and 5-6 of Kozloduy NPP; and (3) review and assessment of the methodology used (applicability of computer codes used, adequacy of modelling assumptions and uncertainties analyses considered).

- Transfer of knowledge and capabilities in the area of review of SAMGs to NRA, including: (1) on-the-job training of staff from NRA an Technical Support Organisations (TSO) in the review of SAMGs; and (2) analyses of the review process, covering the effectiveness of the review methodology and validation and approval of the regulatory procedure for the review and assessment procedure based on results of the previous activity.

The beneficiary organisation of the project is NRA.

**016-815.01.02 Safety Analysis Report of Kozloduy NPP Units 5 and 6. Review and assessment in compliance with international requirements**

The aim of this proposal is to assist the Bulgarian Nuclear Regulatory Agency and its TSOs in the review of the safety analysis reports (SARs) for Kozloduy NPP units 5 and 6. The project will provide EU regulatory and technical expertise to improve the NRA capabilities in the review process of these SARs in order to ensure their quality and their fulfilment with the international requirements in format, structure, contents and quality of calculation results.

These are the main activities of the project:

- Review and assessment of the SARs of Kozloduy NPPs units 5 and 6, including: (1) the assessment of the completeness of the information provided; (2) the assessment of the adequacy of the modelling assumptions and the adequacy of computer codes used; (3) the review and assessment of the methodology applied to: design bases accidents; beyond-design basis accidents; etc.; (4) the assessment of selected and sensitive assumptions and analyses, which require engineering judgment; and (5) the review and approval of the demonstration by the SAR of the safety of the units in view of the recent implementation of the modernization programme.
• Training and validation of the methodology for review and assessment of SARs, including: (1) on-the-job training of NRA and TSOs staff in review of SARs; and (2) validation and assessment of the methodology through its application to specific safety cases concerning the SAR.

The beneficiary organisation of the project is NRA.

016-815.01.03 Assistance to the Bulgarian Nuclear Regulatory Agency in capacity building in the areas of regulatory guides, assessment capabilities, staff training and quality management

The aim of this proposal is to assist the Bulgarian Nuclear Regulatory Agency in enhancing its regulatory and technical competences dealing with regulatory requirements, assessment capabilities and practices and training and quality management systems in respect to the enforcement of the Bulgarian New Act on the Safe Use of Nuclear Energy. The project will provide EU regulatory and technical expertise in the above mentioned areas.

The Act on Safe Use of Nuclear Energy in force since July 2002 covers the state regulation of the safe use of nuclear energy and ionising radiation and the safety of radioactive waste management and the safety of spent fuel management. Bulgaria is finalising the corresponding secondary legislation, but to complete the process, the regulatory framework will require the development and adoption by NRA of a number of Regulatory Guides that will give advice to the Licensees/Applicants on the ways to meet legislative requirements.

NRA has embarked on a process of recruiting new staff. Although new employees have sufficient technical knowledge, they need training in the nuclear regulatory field. There is a need to improve NRA’s training and re-training system by establishment of well-structured and properly maintained training programmes.

An important part of the overall operation of the organisation is the clear and precise definition of the processes and documentation of practices, including the self-assessment and monitoring of company performance. Some assistance to NRA in the design of its Quality Management System has been provided through Phare Project BG 01.10.02 (“Enhancement of safety assessment capabilities available to BNRA”), but this assistance should be completed by the implementation or this new Phare project.

These are the main activities of the project:

• Development and adoption by BNRA of a number of Regulatory Safety Guides;
• Establishment within BNRA of the necessary capabilities for performing review and assessment of licensees’ safety documentation;
• Drawing up of an appropriate regulatory training programme
• Development at NRA of a modern well-documented quality management system;
• Providing EU experience and knowledge on the organisational arrangements for self-assessment, audits, indicators;

The beneficiary organisation of this project is NRA.

016-815.01.04 Improvement of the Off-site Emergency Preparedness (OSEP) in Central and Eastern Europe: Installation of the RODOS System in Bulgaria

The RODOS system, comprising hardware, specific software, communications links and software, as well as specialised training of future operators, is to be delivered and installed within this project. At the end of the project RODOS shall be in the pre-operational state, which means that the Bulgarian Nuclear Regulatory Agency (NRA) will subsequently develop their competences to use RODOS on a daily basis, including localisation of RODOS output. This phase should develop confidence in RODOS results among the various other
actors in the national Bulgarian network that ensures off-site emergency preparedness. The NRA, will ensure sustainable further development of the system, including staff participation in external RODOS seminars and training exercises. NRA staff will also be trained to meet all requirements of the system operation and maintenance.

The beneficiary organisation of the project is NRA.

016-815.01.05 Development of conceptual design of the national disposal facility for low- and intermediate-level short-lived radioactive waste

According to the Bulgarian national strategy on radioactive waste management, a disposal facility for low- and intermediate-level short-lived radioactive waste should be operational by 2010. This facility will mainly accommodate radioactive waste packages arising from the Kozloduy NPP operation and decommissioning. At present four sites are being evaluated, all are situated near Kozloduy. In 2005, a decision should be taken concerning site selection. This project fits in the sequence of activities that will lead to operation of the disposal facility. It comprises three main tasks:

- Definition of waste acceptance criteria for disposal of radioactive waste to be used in further technical design activities.
- Drawing-up of a conceptual design of the repository.
- Contribution to the preparation of technical specifications of the repository for the subsequent tender documentation.

The beneficiary of the project is the newly established state-owned company on radioactive waste management

016-815.01.06 Civil construction works for establishment of radioactive waste processing plant and storage facility for Novi Han repository

Institutional radioactive waste is currently managed by the Institute for Nuclear Research and Nuclear Energy (INRNE) which operates a long-term/storage facility at Novi Han. In 2004 the responsibility of the management of institutional radioactive waste will be handed over to the newly established state-owned company on radioactive waste management.

In order to comply with Bulgarian safety requirements and EU best practices in the field of storage/disposal of radioactive waste, the Novi Han repository must be modernised. An action plan was established which notably foresees the construction of a waste processing plant and a storage facility for various types of waste and in particular high-activity sealed radioactive sources. The preparation of the technical specifications for the facility is part of the scope of the Phare project 632.01.01 “Supply of equipment for characterisation of institutional radioactive waste and development of technical design for waste processing and storage facility” that was programmed in 2002.

The main objective of this project is to proceed with the construction of two buildings at Novi Han that will constitute the facility. The project has two main components: works and service (supervision of the construction works). Only basic equipment should be provided through this project. Delivery and installation of special equipment should be performed within a separate project.

The beneficiary organisation of the project is the newly established state-owned company on radioactive waste management

Romania 016-815.02

016-815.02.01 Assistance to Romanian Nuclear Regulatory Authority by the supply of specific mechanical analysis computer codes
This proposal builds upon results of the Phare project RO 01.10.02 (2002) which strengthens the effectiveness of the Romanian Nuclear Regulatory Authority (CNCAN) in developing its internal capabilities to perform and to assess the overpressure protection analysis for the Special Safety Systems and Reactor Primary Circuit, and stress analyses issued by the utility. CNCAN staff has been trained to use certain computer codes (in particular ADLPIPE and ANSYS/Mechanical and ANSYS/Structural) in the context of this running project. This present new project foresees CNCAN gaining access to two types of mechanical computer codes, similar with to those mentioned above. The named codes are currently used by the Romanian utility in support of submissions to the regulatory authority. The development plan of CNCAN foresees setting up within the duration of this new project an in-house TSO capability that in terms of personnel and other commitments will ensure sustainability of the results of this project.

The beneficiary organisation of the project is CNCAN.

016-815.02.02 Technical assistance for the Romanian Nuclear Regulatory Authority to deal with important aspects of future commissioning activities

The aim of this proposal is to assist the Romanian Nuclear Safety Authority (CNCAN) in dealing with future commissioning activities, as part of the licensing process. The project will provide EU regulatory and technical assistance to strengthen CNCAN’s capabilities in reviewing and assess all the commissioning stages of Cernavoda NPP Unit 2, scheduled for end of 2006. This assistance will be also very valuable for enhancing in general the licensing capabilities of CNCAN.

The CNCAN has embarked on a process of recruiting new personnel to be able to properly manage all the nuclear safety activities under its responsibility. This project will contribute, through formal and on-the-job training, to strengthening the competences of CNCAN’s new staff in the nuclear regulatory field.

These are the main activities of the project:

- Specific training course based on the EU experience in the field and know-how transfer for supporting the CNCAN staff to perform the regulatory activities related to commissioning activities. Specific training courses in the area of quality assurance management systems during commissioning and NPP operation, as well as in the area of regulatory activities related to the assessment of supporting documents for operation licence and other activities.
- EU support for the preparation of requirements covering all commissioning phases (structure and responsibilities of the organisation, content of the commissioning programme, acceptance criteria, regulatory approval, etc.), and requirements of documentation to be submitted for justification from safety point of view.

The beneficiary organisation of the project is CNCAN.

016-815.02.03 Technical assistance to the Romanian Nuclear Regulatory Authority to improve the management of high-activity sealed radioactive sources (SRS), including spent sealed radioactive sources (SSRS), and orphan sources

As part of the EU accession process, Romanian regulations in the field of management of high-activity sealed radioactive sources must comply with the new acquis as defined in the Council Directive 2003/122/EURATOM that was issued on 22 December 2003 on “the control of high-activity sealed radioactive sources and orphan sources”. This requires a number of new regulations to be laid down by the Romanian regulatory body (CNCAN) and thereby an enhanced degree of expertise of CNCAN staff in this particular area. This project primarily aims at providing CNCAN technical assistance for improving regulations on the safety of long-term storage/disposal of high activity and long-lived sealed sources, and
retrieving orphan sources. It will also consist in the organisation of training activities in a number of specific domains, e.g.

- Control and security of long-term storage/disposal of high-activity sealed sources
- Safe retrieval of orphan sources
- Funding mechanism for retrieving and managing orphan sources
- Decommissioning of facilities where orphan sources might be found
- Identification of the equipment for intervention and retrieval of orphan sources

The beneficiary organisation of the project is CNCAN.

016-815.02.04

Support to ANDRAD to extend and accelerate development of a new national L/ILW disposal facility

The National Nuclear Plan approved by the Romanian government in 2002 stipulated originally that a near surface disposal facility for short-lived radioactive waste generated during operation of the Cernavoda NPP should become operational by 2010. An update was brought by the "National strategy for the safe management of spent fuel and radioactive waste", developed in 2004 as part of the National Nuclear Plan, concerning the timeframe of the near-surface disposal facility envisaged to become operational by 2014. The Saligny site that is located near the Cernavoda NPP was selected for hoisting the repository, due to the fact that Saligny site characteristics along with a proper design, waste packages, other engineering barriers provide radiological protection in compliance with national requirements and taking into account IAEA standards and international recommendations and guidance.

The main objective of this project is to provide support to the Romanian Radioactive Waste Management Agency (ANDRAD) in completion of the documentation package (Initial Safety Analysis Report, Environmental Impact Analysis Report, etc) for the licensing of the Saligny site and to ensure the preparedness for the construction of the repository.

The beneficiary organisation of the project is ANDRAD.

1.3. Assumptions and risks

The programme assumes that the beneficiary countries will maintain their efforts to ensure a high level of nuclear safety and to implement the recommendations of the June 2001 Council Report on Nuclear Safety in the Context of Enlargement. The Peer Review Status Report, established by the Council’s Atomic Questions Group and its ad-hoc formation Working Party on Nuclear Safety on 5 June 2002, found that candidate countries are clearly committed to fulfil the recommendations set out in the Council Report, both for nuclear power plants and other types of installations. The status report also noted that all candidate countries had accepted the recommendations. In the case of Bulgaria a further peer review report on nuclear safety was produced by the Council in March 2004 on the basis of the Council Peer review mission to Bulgaria in November 2003. This programme assumes that the beneficiary countries will continue to pay sufficient attention and devote appropriate effort to the timely implementing the supported projects.

Whilst there are no identifiable risks inherent in the tasks to be fulfilled under the various projects, an overall risk to the programme is that continued nuclear safety assistance involves the danger to create dependency on the side of the beneficiary. Special regard has to be directed towards the way in which the beneficiary organisations will sustain the results of the projects. In the cases of regulatory assistance, emphasis needs to be laid on the value of transferring know-how to the recipient and avoiding the replacement of functions in the sphere of responsibility of the beneficiary organisation through activities of the contractor.
1.4. Conditionalities

The effective launching of some of the projects listed above is subject to particular conditions that are described, in more detail, in the respective project fiches. In particular, the proper implementation of the project XXX.01.06 (Bulgaria) requires timely implementation of Phare project 632.01.01/2002. In general the construction of new facilities requires the preparation, beforehand, of the corresponding preliminary safety analysis reports and environmental impact assessments.
2. Budget (€)

2.1 Budget table

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2.2. Principle of Co-Financing

In accordance with the Phare Guidelines of 1999 and Revised Guidelines of 2002, all investment projects supported by Phare must receive co-financing from national public funds.

The Community contribution may amount to up to 75% of the total eligible\(^2\) public expenditure.

\(^2\) Taxes are not an element eligible for co-financing
Co-financing for Institution Building projects is provided by the beneficiary bearing certain infrastructure and operational implementation costs, through financing the human and other resources, required for effective and efficient absorption of Phare assistance.

Provisions on joint or parallel co-financing are contained in the budgetary paragraphs of the individual project fiches. The level of co-financing per project is indicated in the proposal under Section 5 “Budget”.

3. IMPLEMENTATION AGENCIES

The Central Financing and Contracting Agencies (CFCUs) within the Ministry of Finance will be the implementation agencies responsible for tendering, contracting and financial reporting.

4. IMPLEMENTATION ARRANGEMENTS

4.1. Method of implementation

This Financing Proposal is for a horizontal programme. The projects will be implemented through the Phare national programme structures. This Financing Proposal will be split on a country-by-country basis leading to two separate Financing Memoranda, as set out in the table above.

Implementation of the programme will follow Art. 53 (1) b (second alternative) of the Financial Regulation. The Beneficiary Country will ensure that the conditions laid down in Art. 164 (1) (a) - (e) of the Financial Regulation are respected at all times. The Commission reserves the right to take the necessary measures, including suspension of funds, if it considers that these conditions are not met.

Prior to the accreditation of Implementing Agencies foreseen by Art. 12 (2) of Regulation 1266/1999, project selection, tendering and contracting by the Beneficiary Country will be subject to ex-ante approval by the Commission.

4.2. Procurement

Procurement shall follow the provisions of Part 2, Title IV of the Financial Regulation and Title 5 of its Implementing Rules, as well as the Commission Decision SEC (2003) 387/2.

The Contracting Authorities shall also use the procedural guidelines and standard templates and models provided for in the “Practical Guide to contract procedures financed from the general EC budget in the context of external actions” as published on the EuropeAid website at the date of the initiation of the procurement or grant award procedure.

In line with Art. 164 of the Financial Regulation, the Commission may decide to allow the Contracting Authorities entrusted with decentralised management responsibilities to execute procurement in accordance with procedures and guidelines transposing the European Union Public Procurement Directives.

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4 Commission Decision SEC (2003) 387/2 on the general regulations for service, supply and works contracts financed from the general budget of the European Communities in the course of co-operation with third countries, adopted on March 25, 2003
5 Current address: http://europa.eu.int/comm/europeaid/tender/gestion/index_en.htm
5. MANAGEMENT OF ASSISTANCE

5.1. Project Management

5.1.1. Responsibilities

The national Aid Co-ordinator (NAC) will have overall responsibility for programming and monitoring of Phare programmes.

The National Authorising Officer (NAO) and the NAC shall be jointly responsible for the co-ordination between Phare (including Phare CBC), ISPA and SAPARD, as well as the Structural and Cohesion Funds.

The NAO and the Project Authorising Officer (PAO) will ensure that the programmes are implemented in line with the procedures laid down in the instructions of the Commission. They will also ensure that all contracts required to implement the Financing Memorandum are awarded using the procedures and standard documents for External Actions in force at the time of implementation, and that EU state aid rules are respected.

5.1.2. Project Size

Although in general the size of projects financed under Phare are above €2 million, given the particular nature of the support needs and implementation challenges in the nuclear safety field, projects are generally of smaller size.

5.1.3. Deadline for contracting and execution of contracts, programming deadline

(1) All contracts must be concluded by no later than November 30, 2006.

(2) All contracts must be executed by no later than November 30, 2007.

(3) Under DIS, a complete tender dossier must be submitted to the Delegation for approval well ahead of the deadline for contracting and preferably by no later than 6 months after the signature of the FM. In case of non-compliance, the Beneficiary Country will inform the Joint Monitoring Committee (JMC) which may recommend reallocation of funds in accordance with Art. 5 of the Memorandum of Understanding (MoU) on the National Fund.

5.1.4. Environmental Impact Assessment and Nature Conservation

The procedures for environmental impact assessment as set down in the EIA-directive\(^8\) are fully applicable for all investment projects under Phare. If the EIA-directive has not yet been fully transposed, the procedures should be similar to the ones established in the above-mentioned directive. If a project would fall within the scope of annex 1 or annex 2 of the EIA-directive, the carrying out of the EIA-procedure must be documented\(^9\).

If a project is likely to affect sites of nature conservation importance, an appropriate assessment according to Art. 6 of the Habitats-directive must be documented\(^10\).

All investments shall be carried out in compliance with the relevant community environmental legislation. The project fiches will contain specific clauses on compliance with the relevant EU-legislation in the field of the environment according to the type of activity carried out under each investment project.

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\(^8\) DIR 85/337/EEC: OJ L 175/40; 5.7.1985, as amended

\(^9\) In Annex EIA to the corresponding investment project fiche.

\(^10\) In Annex Nature Conservation to the corresponding investment project fiche
5.2. Financial Management

5.2.1. Principles and Responsibilities

The National Fund in the Ministry of Finance headed by the NAO, will supervise the financial management of the programme, and will be responsible for reporting to the European Commission. The NAO shall have the overall responsibility for financial management of the Phare funds, and the full accountability for the Phare funds of a programme until the closure of that programme.

The NAO shall ensure that the Phare rules, regulations and procedures pertaining to reporting and financial management are respected, and that a reporting and project information system is functioning.

The Commission will make payments to the NF in accordance with the Memorandum of Understanding signed between the Commission and each of the countries concerned Bulgaria and Romania.

Payments will be made following requests from the NAO onto a separate bank account, denominated in €, which will be opened and managed by the National Fund in the central bank or in a bank agreed in advance with the Commission. In principle, all bank accounts will be interest bearing. Interest will be reinvested in the programme.

5.2.2. Payments to the National Fund

A first payment\(^\text{11}\) of up to 20% of the funds to be managed locally\(^\text{12}\), will be sent to the NF following signature of the Financing Memorandum and the Financing Agreements (FAs) between the NF and the Implementing Agencies (IAs)/Central Finance and Contracts Unit (CFCU). Furthermore, the NAO must submit to the Commission the designation of the PAOs and a description of the system put in place, highlighting the flow of information between the NF and the IA/CFCU and the manner in which the payment function between them will be carried out.

Two further payments\(^\text{13}\) of up to 30% of the funds to be managed locally\(^\text{14}\) will be made. The second payment will be triggered when 5% of the total budget in force\(^\text{15}\) has been disbursed by the IAs and the CFCU. The third payment may be requested when 35% of the total budget in force\(^\text{16}\) has been disbursed.

A final fourth payment will be made when 70% of the total budget in force\(^\text{17}\) has been disbursed and all contracts have been signed.

Exceptionally the NAO may request more than the percentage agreed where it can be demonstrated by a cash-flow projection that the cash-flow requirements in the subsequent period will exceed such percentage. In cases where the aggregate of the funds deposited in the NF, CFCU and IAs accounts exceeds 15% of the total budget in force for the programme the Commission may exceptionally authorise a payment, if the NAO provides duly substantiated evidence that contractual obligations cannot be met with the funds available.

\(^{11}\) Representing pre-financing as defined in Art. 105 (1) of the Implementing Rules to the Financial Regulation

\(^{12}\) Excluding the amount foreseen for Community Programmes

\(^{13}\) Representing pre-financing as defined in Art. 105 (1) of the Implementing Rules to the Financial Regulation

\(^{14}\) Excluding the amount for Community Programmes

\(^{15}\) Excluding the amount for Community Programmes

\(^{16}\) Excluding the amount for Community Programmes

\(^{17}\) Excluding the amount for Community Programmes
5.2.3. Payments from the National Fund to the Implementing Agency

The National Fund will make payments to IAs, including the CFCU, in accordance with Financing Agreements signed between the NF and the IAs/CFCUs. Bank accounts for sub-programmes shall be opened in the name of the relevant Implementing Agency/CFCU in charge of financial management of the sub-programme in line with Art. 13 of the MoU on the National Fund.

As long as implementation follows DIS, each individual FA must be endorsed in advance by the European Commission. In cases where the NF is itself the paying agent for the CFCU/IA, there will be no payments from the NF to the CFCU. The CFCU and the IAs must each be headed by a Programme Authorising Officer (PAO) appointed by the NAO after consultation with the NAC. The PAO will be responsible for all operations carried out by the relevant CFCU/IA.

5.2.4. Payments in Case of Contractual Retention Clauses

For those contracts with contractual retention clauses (e.g., funds retained for a warranty period), the overall total of funds related to those contracts (as calculated by the PAO and established by the Commission) will be paid to the IA before the deadline for execution of contracts. The Implementing Agency assumes full responsibility for depositing the funds until final payment is due, as well as for ensuring that the said funds will only be used to make payments related to the retention clauses.

The IA further assumes full responsibility towards the contractors for fulfilling the obligations related to the retention clauses. Funds not paid out to the contractors after final payments have been settled shall be reimbursed to the Commission.

5.2.5. Closure of Expenditure and Clearance of Accounts

No later than eight months after the end of execution of contracts, the NF will submit a final declaration of expenditure and an attestation regarding the regularity, accuracy and veracity of the accounts transmitted. The final certified expenditure should at this point equal the original value of the contracts minus any deductions and savings agreed with contractors in the course of implementation. This should also equal payments made plus any sums outstanding on account of contractual retention.

If the payments received from the Commission exceed the final certified expenditure, the NF shall return the excess to the Commission at the time of submitting the final declaration. If there are any outstanding payments (with the exception of contractual retention funds), the NF should provide an explanation and a forecast when payment will be finalised. The NF shall report on progress on contractual retention funds and outstanding payments on a quarterly basis. If they are not paid to the contractor, they shall be returned to the Commission.

After evaluation of the final declaration, the Commission will state its view on any expenditure to be excluded from Community funding, where it finds that expenditure has not been executed in compliance with Community rules.

The results of the Commission's checks and its conclusions to exclude expenditure from financing will be notified in writing to the NF, which shall be given one month to transmit its reply in writing.

If no agreement is reached within one month of receipt of the NF's written reply, the Commission shall decide and establish the amounts to be excluded, having regard in particular to the degree of non-compliance found, the nature and gravity of the infringement as well as the financial loss suffered by the Community.
Following the decision about amounts to be excluded, all ineligible expenditure will be recovered without prejudice to the treatment of irregularities and subsequent financial compensation in accordance with Community rules.

6. MONITORING AND EVALUATION

Project implementation will be monitored through the Joint Monitoring Committee (JMC). It includes the NAO, the NAC and the Commission services. The JMC will meet at least once a year to review all Phare funded programmes in order to assess their progress towards meeting the objectives set out in the Financing Memoranda and the Accession Partnership. The JMC may recommend a change of priorities and/or reallocation of Phare funds. Furthermore, the JMC will review the progress of all pre-accession EU-funded assistance programmes once a year (Phare, ISPA, SAPARD).

For the Phare programme, the JMC will be assisted by Sectorial Monitoring Sub-Committees (SMSC), which will include the NAC, the PAO of each Implementing Agency (and the CFCU where applicable) and the Commission Services. The SMSC will review in detail the progress of each programme, including its components and contracts, assembled by the JMC into suitable monitoring sectors. Each sector will be supervised by one SMSC on the basis of regular monitoring reports produced by the Implementing Agency, and interim evaluations undertaken by independent evaluators. The SMSC will put forward recommendations on aspects of management and design, ensuring that these are effective. The SMSC will report to the JMC, to which it will submit overall detailed opinions on all Phare financed programmes in its sector.

The Commission services shall ensure that an ex-post evaluation is carried out after completion of the programme.

7. AUDIT, FINANCIAL CONTROL, ANTI-FRAUD MEASURES, PREVENTIVE AND CORRECTIVE ACTIONS

7.1. Supervision and Financial Control by the Commission and the European Court of Auditors

All Financing Memoranda as well as all resulting contracts are subject to supervision and financial control by the Commission (including the European Anti-Fraud Office) and audits by the European Court of Auditors. As long as EDIS is not yet applicable to the Implementing Agencies in the Beneficiary Country, this includes measures such as ex-ante verification of tendering and contracting carried out by the Delegation in the Beneficiary Country.

In order to ensure the efficient protection of the financial interests of the Community, the Commission (including the European Anti-Fraud Office) may conduct on-the-spot checks and inspections in accordance with the procedures foreseen in Council Regulation (EC, Euratom) 2185/96.\(^{15}\)

The controls and audits described above are applicable to all contractors and subcontractors who have received Community funds.

Without prejudice to the responsibilities of the Commission and the European Court of Auditors, the accounts and operations of the National Fund and, where applicable, the CFCU and all relevant Implementing Agencies may be checked at the Commission’s discretion by the Commission itself or by an outside auditor contracted by the Commission.

\(^{19}\) As referred to in the General Conditions relating to the Financing Memorandum attached to the Framework Agreement
7.2. Obligations of the Beneficiary Country

7.2.1. Audit and Financial Control

In order to ensure sound financial management of the Phare funds, the Beneficiary Country must have a system for management and control of assistance in accordance with generally accepted principles and standards in place. This system shall fulfill the requirements set out in Art. 164 of the Financial Regulation and in particular provide adequate assurance of the correctness, regularity and eligibility of claims on Community assistance.

The Beneficiary Country’s management and control systems shall provide a sufficient audit trail, as defined in Art. 7 (2) of Commission Regulation 438/200120.

The competent national financial control authority shall carry out appropriate financial controls of all actors involved in the implementation of the programme.

Each year an audit plan and a summary of the findings and main recommendations of the audits carried out and an outline of the follow-up given to past audit recommendations shall be sent to the Commission. Audit reports shall be at the disposal of the Commission.

7.2.2. Preventive Measures

The Beneficiary Country shall take any appropriate measure to prevent and counter active and passive corruption21 practises at any stage of the procurement procedure or grant award procedure, as well as during the implementation of corresponding contracts.

7.2.3. Anti-Fraud Measures and Corrective Actions

Beneficiary Countries shall, in the first instance, bear the responsibility to ensure investigation and satisfactory treatment of suspected or actual cases of fraud and irregularities following national or Community controls.

The national authorities shall ensure the functioning of a control and reporting mechanism equivalent to the one foreseen in Commission Regulation 1681/9422.

In particular, all suspected or actual cases of fraud23 and irregularity24 as well as all measures related thereto taken by the national authority must be reported to the Commission services without delay. Should there be no suspected or actual cases of fraud or irregularity to report,

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21 Active corruption is defined as the deliberate action of whosoever promises or gives, directly or through an intermediary, an advantage of any kind whatsoever to an official for himself or for a third party for him to act or to refrain from acting in accordance with his duty or in the exercise of his functions in breach of his official duties in a way which damages or is likely to damage the European Communities' financial interests.
Passive corruption is defined as the deliberate action of an official, who, directly or through an intermediary, requests or receives advantages of any kind whatsoever, for himself or a third party, or accepts a promise of such advantage, to act or to refrain from acting in accordance with his duty or in the exercise of his functions in breach of his official duties in a way which damages or is likely to damage the European Communities' financial interests.
23 Fraud shall mean any intentional act or omission relating to: the use or presentation of false, incorrect or incomplete statements or documents, which has as its effect the misappropriation or wrongful retention of funds from the general budget of the European Communities or budgets managed by, or on behalf of, the European Communities; non-disclosure of information in violation of a specific obligation with the same effect; the misapplication of such funds for purposes other than those for which they are originally granted.
24 Irregularity shall mean any infringement of a provision of national or Community law, this Financing Memorandum or ensuing contracts, resulting from an act or omission by an economic operator, which has, or would have, the effect of prejudicing the general budget of the Communities or budgets managed by them, by an unjustified item of expenditure. The term “Community law” in this context shall be defined as the entirety of Community rules applicable between the Parties of the Financing Memorandum (e.g. the Europe Agreements, Framework Agreements, the MoU on the Establishment of the National Fund etc.)
the Beneficiary Country shall inform the Commission of this fact within two months following the end of each quarter.

In case of irregularity or fraud, the Beneficiary Country shall make the necessary financial corrections required in connection with the individual irregularity. The corrections made by the Beneficiary Country shall consist in cancelling all or part of the Community contribution. The Community funds released in this way may be re-used by the NF for the purpose of the programme, in compliance with Art. 5 of the MoU on the National Fund.

7.3. Recovery of Funds in Case of Irregularity or Fraud

Any proven irregularity\textsuperscript{25} or fraud\textsuperscript{26} discovered at any time during the implementation of the programme or as the result of an audit will lead to the recovery of funds by the Commission.

If, after completing the necessary verifications, the Commission concludes that:

(a) the Beneficiary Country has not complied with the obligations to prevent, detect, and correct irregularities or

(b) the implementation of a project appears not to justify either part or the whole of the assistance allocated or

(c) there are serious failings in the management or control systems which could lead to irregularities,

the Commission may suspend further financing of the programme in question, and, stating its reasons, request that the Beneficiary Country submit comments and, where appropriate, carry out any corrections within a specified period of time.

If no agreement is reached by the end of the period set by the Commission and if the required corrections have not been made, the Commission may – taking into account any comments made by the Beneficiary Country – decide within three months to:

(a) reduce or cancel any payment for the programme in question, or

(b) make the financial corrections required by cancelling all or part of the assistance granted to the programme concerned.

The Commission shall, when deciding on the amount of a correction, take into account the principle of proportionality, the type of irregularity and the extent and financial implications of the shortcomings found in the management and control system of the Beneficiary Country.

In the absence of a decision to do either (a) or (b), further financing of the programme shall immediately resume.

The National Authorising Officer will ensure the reimbursement of any unused funds or any sum wrongly paid within sixty calendar days of the date of the notification. If the NAO does not repay the amount due to the Community, the Beneficiary Country shall refund this amount to the Commission.

Interest on account of late payment shall be charged on sums not repaid by applying the rules specified in the Financial Regulation.

\textsuperscript{25} See definition above
\textsuperscript{26} See definition above
8. VISIBILITY AND PUBLICITY

The POA in charge will be responsible for ensuring that the necessary measures are taken to ensure appropriate publicity for all activities financed from the programme. This will be done in close liaison with the Commission. Further details are set down in the Annex on Visibility and Publicity.

9. SPECIAL CONDITIONS

In the event that agreed commitments are not met for reasons which are within the control of the Government of concerned, the Commission may review the programme with a view, at the Commission’s discretion, to cancelling all or part of it and/or to reallocate unused funds for other purposes consistent with the objectives of the Phare programme.
New Standard Project Fiche 2004

1. Basic Information:

1.1. CRIS Number: 016-815.02.04

1.2. Title: Support to ANDRAD to extend and accelerate development of a new national L/ILW disposal facility

1.3. Sector: Nuclear Safety

1.4. Location: Romania

1.5. Duration: 12 months

2. Objectives:

2.1. Overall Objective:

The overall objective of the project is to provide support to ANDRAD to extend and accelerate development of the national low and intermediate level waste disposal facility.

2.2. Project Purpose:

The project purpose is to assist ANDRAD in completion of the documentation package (Initial Safety Analysis Report, Environmental Impact Analysis Report) for licensing of Saligny site and to ensure preparedness for the construction phase of the repository.

2.3. Accession Partnership and NPAA priority

The Council Report on Nuclear Safety in the Context of Enlargement established by the Atomic Questions Group (AOG) recommends that:

"Taking what is already implemented into due account, all Candidate States should continue to develop and implement their national programmes regarding the safe management of spent fuel and radioactive waste, and for decommissioning of nuclear facilities no longer in use..."

The AOG also underlined that Candidate States should pay particular attention to the measures that are typically considered as good practice within the EU, when developing and implementing their national programmes for the safe management of spent fuel and radioactive waste. They are, among others:

- development of national strategies for the long term safe management of spent fuel and radioactive waste, including appropriate schemes for storage and disposal of all types of radioactive waste and for decommissioning of nuclear facilities no longer in use;

- assurance of adequate financial resources to support the safety of facilities for spent fuel and radioactive waste management during their operating lifetime and for decommissioning, based on "polluter (waste producer) pays" principle.

The availability of a new repository for LILW radioactive waste, as a sustainable waste management infrastructure facility, is part of the Governmental Decision No. 1259/2002 for the approval of the National Strategy for Nuclear Field Development, which should be commission in 2010.

The implementation of the measures provided by the present project proposal are in accordance with the provisions on short term (3-5 years), established by the National Strategy on Medium and Long Term for Safe Management of Spent Fuel and Radioactive Waste, Including Disposal and Decommissioning of Nuclear Facilities that was published in Official Monitor No. 818/2004.
For the time being, the two above mentioned legislative documents are in reviewing process, this process being a comprehensive one, involving discussions with all institutions with responsibilities in nuclear field. According to the amendments brought until now to these documents, a near-surface disposal facility for the low and intermediate level radioactive waste generated during operation of Cernavoda NPP operation should become operational by 2014.

2.4. Coherence with National Development Plan

The National Development Plan places a high priority on the management of the radioactive wastes and spent fuel in order to provide the protection of population and environment.

2.5. Cross border impact: NA.

3. Description

3.1. Background and justification:

Type and size of repository to be constructed

Romania has only one nuclear power plant, the Cernavoda one, which will be equipped with maximum four PHWR-CANDU 6 type reactors, each having 705 MW(e) gross capacity, in different implementation stages. Unit 1 is in commercial operation since December 2, 1996, Unit 2 is 85% constructed and should be commissioned in 2007 and for Units 3 and 4 Nuclearelectrica S.A., the owner of the Cernavoda NPP, is looking for private investors.

In addition, Romania has two research reactors:

- The 14 MWth TRIGA-type Materials Testing Reactor in operation, at the Pitesti Nuclear Research Institute (SCN);
- The 2 MWth VVRS-type Research Reactor, which is shut down for decommissioning, at Bucharest-Magurele Institute for Physics and Nuclear Engineering "Horia Hulubei" (IFIN "HH").

Institutional radioactive wastes are produced through organisations and institutions depending on Ministry and Economy and Trade, Ministry of Health, Ministry of Education and Research and Ministry of Defence.

Several waste storage facilities are being operated in different parts of the country as well as one radioactive waste repository (DNDR-Baita Bihor) for (LILW-SL) institutional radioactive waste. The storage facilities that are situated at NPP Cernavoda include a spent fuel storage pool, a defective fuel storage pool, an intermediate dry storage facility for spent fuel and an intermediate storage facility for solid radioactive waste. At present, the interim storage capacity at the Cernavoda NPP site ensures more than 30 years of operation. In addition, Romania operates two radioactive waste treatment plants, one at Institute for Nuclear Research (SCN), Pitesti and one at the Horia Hulubei Nuclear Institute of Physics and Nuclear Engineering (IFIN "HH"), Bucharest-Magurele. Presently, institutional wastes are disposed of in the Baita Bihor repository, which is operated by IFIN "HH".

Before the establishment of ANDRAD, as radioactive waste agency, the former Nuclear Power Group (now SN "Nuclearelectrica" - a state-owned Company responsible for the Cernavoda NPP and for the Nuclear Fuel Plant at Pitesti) conducted and financed a siting program for a near-surface repository located in the close vicinity of the Cernavoda NPP. The R&D program was implemented by the Nuclear Power Group's engineering subsidiary (Centre for Technology and Engineering for Nuclear Projects - CITON), by the research subsidiary (Institute for Nuclear Research Pitesti) and by field investigation company (GEOTEC). The three organisations worked together for site investigations, laboratory tests and engineering and safety studies. The new repository was considered to be designated according to the basic multibarrier concept, using as reference design the El Cabril repository in Spain and to accommodate mainly low and intermediate level waste generated in operation and decommissioning of Cernavoda NPP.

*Area survey*
Since 1992 an investigation programme has been started to select an appropriate site for near surface repository for disposal of LILW generated by Cernavoda NPP, both operational and decommissioning waste.

The siting process started with an area survey stage. The region of interest was Dobrogea, a large zone including the NPP site. It is on old historical region with a geological zoning and a semiarid climate, suitable for siting a surface repository. Almost 37 potential candidate sites in Dobrogea region were evaluated. The screening phase reduced the number of candidate sites to three: Cernavoda - Dealul Turcului (3 km from Cernavoda NPP), Saligny - Dealu Bogdaproste (1 km distance, located in the exclusion zone of the Cernavoda NPP) and Mireasa (20 km away from the Cernavoda NPP).

The three candidate sites have been studied between 1993 and 1994. Three drillings and laboratory tests, including chemical and deuterium analyses have been performed. At the end of this stage, Mireasa site, located in a green schists formation, has been rejected due to difficulties in prediction of groundwater movement and longer transportation route. Between 1995 and 1996 field investigation focused only on Cernavoda and Saligny sites. Two groups of three drillings with infiltrometric tests electrometric network (300 m), and refractions seismic have been performed. Also, laboratory geotechnical tests, radionuclide migrations tests, water circulation in unsaturated soils (using SUTRA and SWMS-2D software) and seismic response tests have been undertaken. As a result of these studies, it has been proven that both sites are more or less similar and suitable for hosting a repository. Cernavoda and Saligny sites have rather similar geologic conditions with thick, dry loessoid soils lying above a Quaternary red clay horizon and a pre-Quaternary clay horizon containing sand and limestone lenses. The overall thickness of Quaternary loessoid soils at Cernavoda reaches interval as much as 40-60 m, but only 25-40 m at Saligny. Red clay layer considered the main natural barrier is 9-15 m thick at Cernavoda but 5-10 m at Saligny site. Beneath the clay layers, the limestone platform (Barremian) decreases in depth from 80 -100 m in Saligny site to 120 -140 m in Cernavoda site. Groundwater table is about 65 m in depth at Cernavoda site and about 40 m in depth at Saligny site. At the surface the sites consists of a silty loess layer which gets a low natural bearing capacity. That is not satisfactory and the erosion potential is increased. A compaction process to improve the geotechnical performance of the loess layer was considered and on-site tests provided good results but needed further consideration. Even if Cernavoda site seemed to have better geological characteristics, the Saligny site was declared as favourite site at that time. That approach is in accordance with the IAEA’s guide: the clear aim remained to have an acceptable solution with sufficient safety reserves instead a single “best solution”. Reasons for that were social, economical (transportation) and public acceptance factors (due to its location in exclusion zone), rather then natural and technical parameters on sites.

The characterization works that have been performed for the selected site during 1995-1996 period, have been used to prepare the necessary documents for licensing of the site. Between 1996 and 1997, the IAEA expert’s missions that took place within the technical cooperation program agreed that Saligny site along with a proper design would provide radiological protection in compliance with national requirements and international standards.

In 1998, RENEL, the former operator of NPP Cernavoda, submitted to the regulatory authority an Initial Safety Analysis Report for Saligny repository to obtain the siting license. CNCAN answered with the letter No.95221/29.05.1998, asking for:

- Completion of the technical documentation with all the approvals and endorsements established by the law;
- Completion of the safety report with at least the following information:
  a) Maximum values for total activity and specific activity for all the radionuclides to be disposed of, including also the values for long-lived radionuclides;
  b) The safety analysis should specify limits for the hazardous conventional materials (e.g. PCV, heavy metals, etc.), and for the waste which could not be included in cement;
  c) Because the host rock of repository (dirty loess) is favorable of subsidence, it is necessary to demonstrate the choice of the solution of compacted loess (with additives), against red clay, like montmorillonit.
  d) Related to “Site Description”, in geological description of site:
     - Data about the dynamic of aquifers (hydrogeology, geochemistry and geomorphology).
- Data about the presence of aquifer in the D horizon of geological strata (in accordance with the presence of sandy lens from D horizon).
- Effects of the irrigation water.
- Local variation of geological strata (position, location).
- Radionuclide migration to the environment due to evaporation-perspiration process.
- Data about the migration on radionuclides to the environment, such as H-3, C-14, Cs, Nb, Pu, Sr, Zr.

More than that, the results obtained by a new safety assessment of the repository with regard to operational safety, post-closure safety and emergency situations, shall satisfy entirely the specific provisions established by the Fundamental Norms on Radiological Safety issued by CNCAN in 2000.

The restructuring of the Romanian electricity sector in 1998 impeded the former Nuclear Power Group (now SN “Nuclearelectrica”) to finalize the site licensing process with CNCAN. A significant step forward was registered by the end of 1999, when the Saligny site as well as the approach of the new repository was confirmed in good terms within the framework of a project financed by European Union through the PHARE projects, namely project - PH4.10/94 “Technical Basis and Methodological Approach for Waste Acceptance Criteria”. Within this project, preliminary waste acceptance criteria and a Initial Safety Assessment were established for this near surface repository. The PHARE project mainly recommended to upgrade the level of safety assessment and to establish a methodology in order to characterize the plant operational waste. Since 1998 the Nuclear Power Group was restructured, its research and engineering support institutes were externalized, and consequently the siting process of L/ILW repository was left with R&D organizations. After 1999, the research institutes, mainly Institute for Nuclear Research Pitesti have continued the site characterisation works according to CNCAN requirements in connection with Saligny site, aiming to increase the level of the safety analysis performance. Presently, the Initial Safety Analysis Report and the Environmental Impact Assessment Report are under preparation in order to be submitted by the end of October 2006 to CNCAN and Ministry of Environment for approval; no other review or revision of the safety assessment was issued till now.

In parallel with area survey and characterization stages, the conceptual stage of repository was developed. It mainly includes: definition of the types of waste to be disposed; projected operational and decommissioning waste volumes for disposal (radionuclide data based on Canadian plant technical literature); development of the generic facility design concept (El Cabril repository in Spain was considered the reference design); identification of the treatment and conditioning system for operational waste based on the international practices).

Current progress of the characterisation programme at Saligny

After August 2004, the moment of establishing ANDRAD, the responsibilities regarding new repositories have been changed. ANDRAD was founded as a consequence of the implementation of provisions of Ordinance of Government of Romania No.11 / 30 January 2003. ANDRAD’s activity is under co-ordination of the Ministry of Economy and Trade. According to national legislation, ANDRAD is directly responsible for siting, construction, operation and closure of the radioactive waste disposal facilities. Thus, ANDRAD will become the owner of the final repository to be constructed. The revised National Nuclear Plan and the revised National Strategy are stipulating that a near-surface disposal facility for the low and intermediate level radioactive waste generated during operation of Cernavoda NPP operation should be operational by 2014.

Based on the existing drillings, an image of the geology and stratigraphy of the unsaturated zones has been drawn up. Laboratory testing of the borehole logs gave information regarding density, porosity, granulometry, mineralogy and hydraulic conductivity of the geologic strata. Retention curves for the loessoid soils and for the clay horizons have been determined. Groundwater chemistry, moisture profiles and contaminant transport parameters (distribution and diffusion coefficients) have also been determined.

Justification

Until October 2006, the support documentations (e.g. Safety Analysis Report, Environmental Impact Report) elaborated by CITON Bucuresti and SCN Pitesti should be submitted by ANDRAD to the relevant authorities in the field (e.g. regulatory body - CNCAN, Ministry of Environment) in order to obtain the siting
licence. The regulatory body may determine whether or not the licence application is complete before starting a detailed review. Most probable, the detailed review will generate questions that will require clarifications by ANDRAD. The questions, with accompanying explanations of why they are being asked, are then submitted to ANDRAD for clarification. ANDRAD will address all original and any subsequent questions until CNCAN will be satisfied that all licensing requirements will be met by the proposed repository. The main scope of the proposed project shall be to provide technical assistance to ANDRAD in obtaining siting license and to prepare the activities for facility design and construction.

3.2. Sectoral rationale: NA.

3.3. Results

- Establishment of a data base concerning the site characteristics;
- Completion of site characterization according to CNCAN’s requirements;
- Reviewed waste acceptance criteria;
- Complete inventory concerning the L/ILW radioactive waste to be disposed of;
- Reviewed repository preliminary design;
- Reviewed Initial Safety Analysis Report;
- Reviewed Environmental Impact Analysis Report
- Readiness of QA manual concerning the activities to be deployed in this project;
- Draft of the Preliminary Safety Analysis Report

3.4. Activities:

- Design and implement of a site characteristics data base;
- Review and improvement of the site characterization in order to make the safety case more robust;
- Review and improvement of the existing waste acceptance criteria, by using safety assessment methods to determine requirements and inventory levels, both for individual packages and for the site in total;
- Review and completion of the radioactive waste inventory;
- Review and improvement of the repository preliminary design (disposal concept, detailed plans, supporting calculations, etc.);
- Review and completion of the Environmental Impact Analysis Report reviewed and improved;
- Elaboration of the QA procedures for the above mentioned activities;
- Review and completion of Initial Safety Analysis Report;
- Review and improvement of Environmental Impact Analysis Report;
- Drawing up of QA manual;
- Drafting Preliminary Safety Analysis Report (necessary for licensing the construction of the repository).

3.5. Linked activities

The project should take into consideration all documentations that will be submitted by ANDRAD to the Romanian’s relevant authority in order to get the siting licence for the low and intermediate level radioactive waste repository to be constructed near NPP Cernavoda. The results of the 2003 Phare project “Technical assistance to Romania to establishing the activity of National Agency for Radioactive Waste (ANDRAD)”, which will start in 2005 and is expected to be finalized at the end of 2006, also have to be considered.

The project should also benefit from the input of several PHARE and IAEA projects, namely:

- EC Project: “Management of Spent Sealed Radioactive Sources in Bulgaria, Latvia, Lithuania, Romania and Slovakia”;
- Project Phare 2003- 5812.06.04 “Characterisation of radioactive waste at Cernavoda NPP”;
- IAEA ROM/9/014, ‘Evaluation of candidate sites based on characteristics and suitable disposal options’, 1994;
- IAEA ROM/4/021, ‘Assistance to RENEL-CITON in the evaluation of the near surface disposal site adjacent to the Cernavoda Nuclear Power Plant’, 1994;
- IAEA ROM/9/014 ‘Site investigation and preliminary site selection’, 1995;
3.6. Lessons learned:
From the previous PHARE project PH4.10/94 “Technical Basis and Methodological Approach for Waste Acceptance Criteria”, we have learned:

- The new repository to be built on Saligny site can provide enough capacity for disposal of L/ILW generated by Cernavoda Nuclear power Plant. Other institutional wastes could be disposed in the repository if the future national body responsible for waste management decides accordingly. This extension of disposal capacity is to be proved by a detailed safety assessment of the facility, and endorsed by Regulatory Body license;
- The need to obtain improved waste inventory data is a high priority;
- The preliminary safety assessment for the Saligny repository should be further developed;
- It is very important to optimise the design and performance of the repository.

The end-of-mission report resulted from the Technical Co-operation Project ROM3004 01 “Sustainability of National Nuclear Waste Management”, task title: “Revision of the status of activities performed to develop a national surface repository for L/ILW”, as regard the current status concerning site characterization, recommends to ANDRAD:

1. The prediction of volumes and characteristics of waste to be disposed at site should be performed as soon as possible;
2. To complete and supplement the Initial Safety Assessment of Saligny site, according the CNCAN comments from 1998.

4. Institutional Framework

The general organizational structure in Romania regarding the waste management and disposal process comprises:

Policy/Legislation: Parliament - enacts laws; Government / Nuclear Agency (AN) - establishes policies in nuclear field.

Safety and regulation: National Commission for Control of Nuclear Activities (CNCAN) - establishes the necessary safety and radiological safety regulations. Ensures the control of nuclear activities. Grants licenses.

Implementation: Ministry of Economy and Trade / ANDRAD – national authority responsible for disposal of spent nuclear fuel and radioactive waste.

As part of the implementation of Governmental Ordinance No.11/2003 on Management of Spent Fuel and radioactive Waste in Romania, approved by the Law No.320/2003, ANDRAD (National Agency for Radioactive Waste) was founded. ANDRAD as legal disposer of spent nuclear fuel and radioactive waste.

The major responsibilities of ANDRAD, related to development of this project, are:

(i.) To prepare and review periodically the National Strategy on medium and long term for safe management of radioactive waste, including the decommissioning of nuclear facilities;
(ii.) To establish financial needs and to allocate them for the implementation of the National Strategy objectives;
(iii.) To ensure the establishing and the annual updating of the national database on the quantities, types of waste, including the waste resulted from decommissioning of nuclear and radiological facilities;
(iv.) To ensure the establishment of national repositories for the disposal of spent nuclear fuel and radioactive waste;
(v.) To cooperate with similar foreign institutions related to the use of the latest technologies for the disposal of the spent nuclear fuel and radioactive waste.
5. Detailed Budget (proposal)

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<th>National Co-financing</th>
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6. Implementation Arrangements

6.1. Implementing Agency

The project will be implemented in accordance with the Practical Guide to Phare/Ispa/Sapard contract procedures and the Operational Relations with regard to decentralized implementation of Phare Nuclear Safety Programmes (set-out in January 24th, 2002).

The Central Financing and Contracting Unit (CFCU) within the Ministry of Finance will be the Agency responsible for implementing the projects.

CFCU
Mrs. Carmen Rosu, Director
Mircea Voda Avenue no. 44, Entrance B, District 3, Bucharest, Romania
Tel: +4021326 87 33
Fax: +4021326 87 30

Implementing Authority:
The implementing authority is the Ministry of Economy and Trade, which retains the overall responsibility for the operational management of the project.

Contact person: Steluta Goanta, Director
Ministry of Economy and Trade
Directorate of Programmes with International Organizations
152, Calea Victoriei, sector 1, Bucharest
Fax: (4021) 202.52.71
Phone: (4021) 202.52.75

The Main Beneficiary of the project will be the National Agency for Radioactive Waste.

Contact person: Dr. Gheorghe Ionita, President
ANDRAD-National Agency for Radioactive Waste
1, Str.Campului, Mioveni, 115400, Arges, Romania
Phone: (40 248) 291200
Fax :(40 248) 291400
www.andrad.ro

6.2. Twinning

N/A.

6.3. Non-standard aspects

There are no "non-standards aspects". The "Practical Guide to Phare, Ispa and Sapard contract procedures" will be strictly followed.
6.4. Contracts

i. Service - total value of 1.10 MEuro
ii. Works – NA
iii. Supply - NA

6.5. Implementation Schedule

<table>
<thead>
<tr>
<th>Component</th>
<th>Start of Tendering</th>
<th>Start of Project</th>
<th>Project Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service</td>
<td>4Q, 2006</td>
<td>2Q, 2007</td>
<td>1Q, 2008</td>
</tr>
<tr>
<td>Works</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Supply</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

7. Equal opportunity

Equal opportunity for men and women to participate in all the component of the project will be ensured.

8. Environment

The Environmental Impact Assessment report will be submitted by ANDRAD to the Ministry of Environment for approval, until end of October 2006.

9. Rate of return

Financial rate of return: N/A.
Economic internal rate of return: N/A.

10. Investment Criteria

<table>
<thead>
<tr>
<th>11.1. Catalytic effect:</th>
<th>The Phare contribution will act as catalyst for priority Accession-driven actions in the field of nuclear safety.</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.2. Co-financing</td>
<td>Co-financing is assured for the part of the project which is dealing with investments.</td>
</tr>
<tr>
<td>11.3. Additionality</td>
<td>PHARE intervention does not displace other financiers.</td>
</tr>
<tr>
<td>11.4. Project readiness and size:</td>
<td>The beneficiary will prepare the TORs for the contracts, with the Ministry of Economy and Trade PIU assistance.</td>
</tr>
<tr>
<td>11.5. Sustainability:</td>
<td>The project is part of an overall plan of actions aiming to develop the LILW Saligny repository.</td>
</tr>
<tr>
<td>11.6. Compliance with state aids provisions:</td>
<td>The investment part of the project will respect the state aids provision of the Europe Agreement should they be applicable.</td>
</tr>
<tr>
<td>11.7. Contribution to National Development Plan:</td>
<td>The National Development Plan places a high priority on the management of the radioactive wastes and spent fuel in order to provide the protection of population and environment.</td>
</tr>
</tbody>
</table>

11. Conditionalities

The co-funding must be secured.
ANNEXES TO PROJECT FICHE

1. Logframe in standard format (compulsory) for each project - see Annex 6 of this Guide for guidance – plus (optional) sector monitoring sheet for sector programmes

2. Detailed implementation chart (compulsory for year 1, optional for future years)

3. Contracting and disbursement schedule, by quarter, for full duration of project (including disbursement period) (compulsory for year 1)

4. Reference list of relevant laws and regulations (compulsory)

Reference list of relevant strategic plans and studies (may include institution sector strategies, development plans, business development plans, etc) (compulsory)
<table>
<thead>
<tr>
<th>LOGFRAME PLANNING MATRIX</th>
<th>Programme name and number</th>
</tr>
</thead>
<tbody>
<tr>
<td>for the Project</td>
<td>Contracting period expires on 30.11.2007</td>
</tr>
<tr>
<td></td>
<td>Execution period expires On 30.11.2008</td>
</tr>
<tr>
<td></td>
<td>Total budget: 1.1 MEUR</td>
</tr>
<tr>
<td></td>
<td>Phare budget: 1.0 MEUR</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overall objective</th>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
</tr>
</thead>
<tbody>
<tr>
<td>The overall objective of the project is to provide support to ANDRAD to extend and accelerate development of the national low and intermediate level waste disposal facility.</td>
<td>Radioactive waste in Romania will be managed according to the international standards applied in EU and Romania.</td>
<td>Final reports</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project purpose</th>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>The project purpose is to assist ANDRAD in completion of the documentation package (Initial Safety Analysis Report, Environmental Impact Analysis Report) for licensing of Saligny site and to ensure preparedness for the construction phase of the repository.</td>
<td>ANDRAD operates at the same level of efficiency as its European partners.</td>
<td>Regular reports</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Results</th>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Establishment of a data base concerning the site characteristics; ✓ Completion of site characterization according to CNCAN’s requirements; ✓ Reviewed waste acceptance criteria; ✓ Complete inventory concerning the L/ILW radioactive waste to be disposed of; ✓ Reviewed repository preliminary design; ✓ Reviewed Initial Safety Analysis Report; ✓ Reviewed Environmental Impact Analysis Report ✓ Readiness of QA manual concerning the activities to be deployed in this project; ✓ Draft of the Preliminary Safety Analysis Report</td>
<td>ANDRAD will be able to resubmit all necessary documentations to the relevant authorities in order to obtain the siting licence.</td>
<td>✓ Finalization of the site characterisation programme ✓ Improved waste acceptance criteria; ✓ A report containing the complete radioactive waste inventory to be disposed of in the future L/ILW repository; ✓ Initial Safety Analysis Report; ✓ Environmental Impact Analysis Report; ✓ Repository preliminary design (containing at least the disposal concept, detailed</td>
<td></td>
</tr>
<tr>
<td>Activities</td>
<td>Means</td>
<td>Assumptions</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>------------------------------</td>
<td>----------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>➤ Design and implement of a site characteristics data base;</td>
<td>Technical support activities</td>
<td>• SITON Design Company, Institute for Nuclear Research Pitești, Geotec and</td>
<td></td>
</tr>
<tr>
<td>➤ Review and improvement of the site characterization in order to make the</td>
<td></td>
<td>Bucharest University will be involved as subcontractors in the development</td>
<td></td>
</tr>
<tr>
<td>safety case more robust;</td>
<td></td>
<td>of the project.</td>
<td></td>
</tr>
<tr>
<td>➤ Review and improvement of the existing waste acceptance criteria, by</td>
<td></td>
<td>• Adequate support from national budget</td>
<td></td>
</tr>
<tr>
<td>using safety assessment methods to determine requirements and inventory</td>
<td></td>
<td>• Collaboration with companies recognized with experience in development</td>
<td></td>
</tr>
<tr>
<td>levels, both for individual packages and for the site in total;</td>
<td></td>
<td>of near surface repositories.</td>
<td></td>
</tr>
<tr>
<td>➤ Review and completion of the radioactive waste inventory;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>➤ Review and improvement of the repository preliminary design (disposal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>concept, detailed plans, supporting calculations, etc.);</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>➤ Review and completion of the Environmental Impact Analysis Report</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>reviewed and improved;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>➤ Elaboration of the QA procedures for the above mentioned activities;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>➤ Review and completion of Initial Safety Analysis Report;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>➤ Review and improvement of Environmental Impact Analysis Report;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>➤ Drawing up of QA manual;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>➤ Drafting the Preliminary Safety Analysis Report (necessary for licensing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>the construction of the repository).</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Preconditions**
Availability of Initial Safety Analysis Report and Environmental Impact Analysis Report, prepared by Institute for Nuclear Research Pitești and SITON Magurele, until starting of the project.
# Detailed Implementation Chart for the Project

<table>
<thead>
<tr>
<th>Year</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month</td>
<td>8 9 10 11 12</td>
<td>1 2 3 4 5 6 7 8 9 10 11 12</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Works</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Design  
Tendering  
Implementation
# CUMULATIVE CONTRACTING AND DISBURSEMENT SCHEDULE

Phare Contribution – 1.0 Million EURO

<table>
<thead>
<tr>
<th></th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2006</td>
</tr>
<tr>
<td><strong>CONTRACTING</strong></td>
<td>1Q</td>
</tr>
<tr>
<td>Service</td>
<td></td>
</tr>
<tr>
<td>Works</td>
<td></td>
</tr>
<tr>
<td>Total contracting (cumulative)</td>
<td></td>
</tr>
<tr>
<td><strong>Disbursement</strong></td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td></td>
</tr>
<tr>
<td>Works</td>
<td></td>
</tr>
<tr>
<td>Total disbursement (cumulative)</td>
<td></td>
</tr>
</tbody>
</table>