ANNEX 9

of the Commission Decision on the Annual Action Programme 2016 for Nuclear Safety Cooperation to be financed from the general budget of the Union

**Action Document for Emergency Measures for the Prydniprovs'kyi Chemical Plant**

| 1. Title/basic act/ CRIS number | U4.02/16 Emergency Measures for the Prydniprovs'kyi Chemical Plant  
CRIS number: 2016/038-879  
Financed under Instrument for Nuclear Safety Cooperation |
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>2. Zone benefiting from the action/location</td>
<td>Ukraine</td>
</tr>
</tbody>
</table>
| 4. Sector of concentration/thematic area | Nuclear Safety  
DEV. Aid: NO¹ |
| 5. Amounts concerned | Total estimated cost: EUR 3.5 million  
Total amount of EU budget contribution EUR 3.5 million |
| 6. Aid modality(ies) and implementation modality(ies) | Project Modality  
Indirect management with the Science and Technology Centre in Ukraine |
| 7 a) DAC code(s) | Main DAC code – 23150 |
| 7 b) Main Delivery Channel | Channel 1 4000: Multilateral Organisations |
| 8. Markers (from CRIS DAC form) | General policy objective | Not targeted | Significant objective | Main objective |
| | Participation development/good governance | ☐ | ☒ | ☐ |
| | Aid to environment | ☐ | ☐ | ☒ |
| | Gender equality (including Women) | ☒ | ☐ | ☐ |

¹ Official Development Aid is administered with the promotion of the economic development and welfare of developing countries as its main objective.
The action in line with the safe management of radioactive wastes priority of the INSC, will implement a number of urgently required safety improvement measures at the former Uranium Processing Plant Pridniprovsksiy Chemical Plant, which is located at Dneprodzerzhinsk in Ukraine. The emergency measures are required to improve the immediate safety of workers and local citizens, as well as the secure containment of a number of radiological hazards located around the site.

1 CONTEXT

1.1 Sector/Country/Regional context/Thematic area

1.1.1 The current situation

The Pridniprovsksiy Chemical Plant (PCP), during its operation from 1947 to 1992, was one of the largest enterprises of uranium production in the former Soviet Union. The plant processed uranium ores of different geochemical composition that had been mined in Ukraine, Central Asia and East European countries, such as the Czech Republic and Germany. As a result of the Uranium production at the site of the PCP, there are five tailings storage facilities, two industrial waste disposal facilities (including radioactive waste) as well as other facilities that are now considered as uranium production legacy sites. The site contains a number of significant radiological hazards, which require up-to-date detailed mapping, full characterisation, and the development of sound site safety analysis, before consideration can be given to commencement of clean up and decommissioning, which will facilitate eventual a complete site remediation.

Following the end of uranium production at the PCP during the period from 1992 to 2000, no planned or regulatory controlled decommissioning measures or clean-up of contaminated areas has been performed. However, a large amount of pipework and some equipment has been dismantled and apparently removed from the site. Some buildings and industrial facilities have been re-purposed for other industrial production as state property. Some facilities have passed to the private sector via long-term leasing or direct purchasing. Whilst it is evident that the new owners have undertaken some clean-up activities of their facilities, this work has been implemented without regulatory control, by non-radiological workers and in a non-systematic way.
Radiological surveys that have been implemented in the recent past have identified that the most contaminated facilities on the site are several buildings housing former extraction tanks of uranium concentrate, in particular buildings №103 and №104, the sites for storage of uranium ores; sedimentation settling ponds; contaminated land around pipelines where the spills of transported radiochemical solutions took place and other infrastructure. Activity concentration of radionuclides (of uranium-thorium decay series) in the areas contaminated by ore residues reach 1-5 Bq/g in contaminated soils to hundreds of Bq/g in spills and residues materials. Equivalent dose rate (EDR) levels for gamma-radiation in the territory of the site range from 0.4 to 10 µSv/hour on open territory to very high levels (from 100 to 2000 µSv/hour) in some buildings housing former uranium extraction plant, as well as on land contaminated by spills and tanks with accumulated radiochemical solutions.

Urgent action is now required to address the contaminated areas on the territory of the PCP and in the buildings of former uranium production. This action is required in order to prevent unauthorised release of radioactive contaminated material, as well as further spread of airborne radionuclides, from the decaying buildings and open areas of the site. However, in order to achieve this in an appropriate manner a decision regarding the need to establish regulatory control of the site is also needed.

At present, the territory of the PCP site (Ref. Fig 1 below) has two specific areas regarding radiological condition: northern area, which is relatively clean and the southern area, which has the most contaminated sectors.

It is clear that in the longer term, the contaminated areas and buildings of the former PCP territory will require decontamination and/or processing and removal from site for long term storage and disposal as radioactive waste. However, considering the current condition of the PCP site in regard to uncontrolled and in many cases uncontained radiological hazards, short-term requirements are needed to urgently contain the radiological hazards and to ensure appropriate control in order to ensure only authorised access to those areas and buildings.

In respect of the Tailing Storage Facilities, one (Central Yar) located to the south east of the site (Ref. Fig 1), also requires attention due to the neglected and overgrown vegetation covering the site of the Tailing, which is understood to have broken thorough the Tailing Cap.

Without implementation of these urgent measures on the PCP site territory, the safe conditions for workers and public within the immediate areas cannot be assured. Due to the extensive deterioration of some building structures, the contaminated residues and other particulate matter which has accumulated within some buildings, as well as the contaminated soils and tailings material in many area of the site are at high risk of being further dispersed by diverse weather conditions. The results of which could easily cause further exposures for workers of conventional enterprises and for the public on adjacent territories.

Furthermore, without ensuring improved security and control over access to the areas of radiological hazard, the remains a high risk that radiological contaminated materials will be removed from the site and present a much wider threat to the safety of the public.

Fig. 1; PCP Site Map
1.1.2 *Ongoing INSC Project for the establishment of a site remediation strategy*

There have been a number of projects aimed at supporting the planning for decommissioning and remediation of the PCP Site. The latest of these is the INSC Project U4.01/10G; “Development of the method (strategy, technology) for the remediation activities at the former uranium facility Pridniprovsksiy Chemical Plant”. This project was established with the objective to implement modern, effective methodologies and tools for planning remediation activities and to develop a method (a strategy, technology or technologies) for the remediation activities at the former uranium facility Pridniprovsksiy Chemical Plant, which are based on world best practice. The overall strategy for site remediation has always been based on a phased approach of establishing an approved plan for decommissioning, decontamination, processing and removal from site of specific radioactive wastes and eventual site remediation.

Following the identification of many of the above-mentioned problems by the INSC Project, it has become necessary to introduce an additional phase for the implementation of emergency measures. The preparatory work being finalised under the on-going project (INSC Project U4.01/10G) will facilitate the gathering of essential data and information relative to the implementation of the emergency measures. The preparatory work includes but is not limited to:

- Topographical survey of the site;
- Whole site radiological survey;
- Safety Analysis Report (SAR) considering possible control situations post implementation of the emergency measures;
- Public awareness for people working within the security boundary of the PCP site and those living and working in close proximity to the site.
Utilising these outputs, a final strategy for improving safety and security, through the implementation of the emergency measures, will be established and presented to the regulators (State Nuclear Regulatory Inspectorate of Ukraine (SNRIU) and Ministry of Health) for their final approval / acceptance. However, it should be noted that the conceptual approach defined within Section 2.1.3 and Section 5 of this Action Document has received a no objection from both the SNRIU and Ministry of Health Experts.

1.1.3 Four key areas for implementation of the emergency measures

The Emergency measures are required in the four key areas of:

1. Stabilisation Measures
2. System Needs
3. Equipment Supply
4. Regulatory Framework

2 Risks and Assumptions

<table>
<thead>
<tr>
<th>Risks</th>
<th>Risk level (H/M/L)</th>
<th>Mitigating measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>The number of identified radiological hazards increases as a result of the ongoing full site radiological survey, and / or the level of radiation of some hazards proves to be higher than previously believed.</td>
<td>L</td>
<td>Project U4.01/10G to take this into account when producing the PCP Safety Analysis</td>
</tr>
<tr>
<td>It is currently believed that a number of radiological hazards exist within the privatised and leased buildings as well as on privatised or leased land areas within the PCP site. The ongoing radiological survey will identify the exact number, levels and locations of these hazards. However, there is a risk that if emergency measures are required at those private sites, access will be denied by the owners.</td>
<td>M</td>
<td>Establish the amendments to Laws of Ukraine “On Protection of the Human Being from Harmful Effects of Ionizing Radiation” as the highest priority. Once adopted, this law will ensure statutory rights of access by the regulators to both private and governmentally owned buildings and to the land areas, where there are known radiological sources. In parallel the implementation of the emergency measures should</td>
</tr>
</tbody>
</table>

2 These urgent measures will be completed by a specific regulatory project as describe under section 4.2: Regulatory framework".

[5]
concentrate on the buildings currently under control of SE Barrier\(^3\), such as 103 and 104. The development of legislative amendments, rules and procedures can be implemented in parallel such that the laws are in place at the earliest opportunity.

Once all preparatory work is completed, the number of emergency measures required for implementation increases, thereby requiring a significantly larger budget than the available EUR 3.5 million in 2016.

The Commission has recently been informed that after more than one year without financial resources, the Ministry of Finance has agreed to resolve the backlog of tax debt and salary needs for SE Barrier. It is possible that this action will facilitate an organisational structure within SE Barrier and the return to work of those individuals that previously left the organisation due to lack of salary. However, given the state of the PCP site, it remains likely that the EU will be requested to consider the financing of further emergency measures under AP 2017.

On initial inspection the structural integrity of building 104 is extremely poor, which could result in a collapse of the building before it can be cleaned of its radiological hazards.

As part of the preparatory work under U4.01/10G, buildings 104 and 103 will have a structural survey in the early part of 2016. The results of this structural survey will provide the relevant information required to determine an appropriate engineering solution to stabilise the buildings as required. This work should be planned as a priority 1 emergency measure.

Assumptions

Good communication and support from all stakeholders, Ukrainian authorities, beneficiary and end-users

3 LESSONS LEARNT, COMPLEMENTARITY AND CROSS-CUTTING ISSUES

3.1 Lessons learnt

It is clear that the PCP has received little to no governmental support from the perspective of regulatory control, security, safety and even maintenance, over the past 20 years or so. SE Barrier was formally established as the licensed operator of the PCP in 2000, their licence

\(^3\) SE Barrier is the State Company in charge of the management of the site; they are subordinated to the Ministry of Energy and Coal Industry and are licensed by the State Nuclear Regulatory Inspectorate of Ukraine for their activities at the PCP site and associated tailings.
providing them with the responsibility for the management of the site in accordance with established legislation. However, this did not provide them with the ability to maintain the decaying buildings, implement any decommissioning activities, or prevent the privatisation of the buildings and land areas. Since October 2014, SE Barrier have been lacking any financial support from the National Budget of Ukraine, which has resulted in an excessive decline in staff numbers through non-payment of salaries, as well as mounting corporate tax bills that remain unpaid. Despite many meetings with the Ministry of Finance of Ukraine, the situation has remained the same until December 2015.

In December 2015, the Ministry of Finance have announced that financial support to SE Barrier will be recommenced. This includes the back payment of salaries and taxes. Under the guidance of its new and downsized Management Team, SE Barrier’s revised organisational structure has been approved by the Ministry of Energy and Coal Industry of Ukraine, and includes a workforce that covers all the required skills and expertise to maintain the site in full accordance with their current operational license. Therefore, it can be considered that whilst financial support for the implementation of these emergency measures from the INSC programme, remains essential to improving the safety and security of the PCP site, the benefits from implementing the measures will be sustainable.

3.2 Complementarity, synergy and donor coordination

Some longer-term support in the definition of an appropriate remediation strategy is supported under IAEA financing. Close coordination between the European Commission and IAEA activities is currently in place, but will need to be maintained in order to ensure no replication of activities.

3.3 Cross-cutting issues

The project tasks will contribute to the overall improvement of the living conditions of the population concerned, to the environmental sustainability and the risk mitigation of the uranium legacy sites in Ukraine. Remediation of the most urgent problems of the legacy sites at the site will benefit the citizens of the whole area, by bringing the potential for a substantial reduction of present and future exposure of the workers and the public to sources of ionising radiation.

4 DESCRIPTION OF THE ACTION

4.1 Objectives/results

The overall objective is the assistance to the governmental organisations and local stakeholders involved in the maintenance and longer-term decommissioning and remediation planning activities of the former Pridniprovskiy Chemical Plant (PCP), which is located in Dneprodzerzhinsk, Ukraine.

Whilst the Ministry of Energy and Coal Industry of Ukraine own much of the PCP site, a number of buildings and land areas on the site have passed into private hands. There are currently around sixty private organisations operating at the site. The Ministry of Energy and Coal Industry of Ukraine controls the security of the PCP site boundary, whilst SE Barrier manages the buildings and Tailings that are owned by the Ministry. The Ukrainian Nuclear Regulator SNRIU has issued a licence to SE Barrier that allows them to operate the site. However, SE Barrier only have direct access and therefore control over 13 buildings at the
site as well as all nine tailings, which are located both inside and outside the PCP Site boundary. Under the coordination of the Ministry of Health, the State Sanitary and Epidemiological Service of Ukraine, is responsible for enforcement of the Radiological legislative norms and standards at the PCP site.

Ukraine has commenced implementation of the EU Council Directive 2013/59/Euratom, which establishes the main safety standards for protection from hazards caused by ionising radiation. The Cabinet of Ministers of Ukraine has adopted a relevant Implementation plan for this Directive. It is intended within this Plan to harmonise the current legislation and develop a number of new documents for safety improvement of radiation sources production and use, safety of radioactive waste management, transportation of radioactive materials, and uranium ore processing. In particular, it is intended to develop radiation safety rules for decommissioning of uranium enterprises, main provisions on safety of uranium facilities. The deadline for the documents to be developed under Directive 2013/59/Euratom, is February 2017. Supporting the development of the legislative amendments within the emergency measures will facilitate the early adoption, by the Ukrainian Parliament, of the appropriate laws by which the PCP should be managed and controlled.

Therefore the principal objective of this project is to implement a number of appropriate measures on an urgent basis that will provide the site owners, operators, and regulators with improved and sustainable measures for the long-term safety and security of the site, until it can be decommissioned and remediated under the proper control and approval of the regulating bodies.

4.2 Main activities

The main activities to be carried out are among others:

Stabilisation Measures:
- Sealing of buildings;
- Establishment of secured areas enclosing radiological and chemical hazards;
- Assurance of the structural integrity of specific buildings;
- Safe confinement of liquid wastes (radioactive and chemical);
- Management of localised hotspots;
- Establishment of initial waste processing areas (radioactive and chemical).

System Needs:
- Licensing of newly established controlled areas;
- Establishment of a quality management system (ISO 9001 or ISO 17025);
- Capacity building;
- Training and public awareness.

Equipment Supply:
- Equipment necessary to ensure personal protection and dosimetry;
- Portable equipment necessary for day-to-day operation of the controlled areas;
- Installation of equipment necessary for safe and secure maintenance of controlled areas;
- Equipment necessary for security and maintenance of tailings.
Regulatory Framework:

- Drafting of legislative documentation, needed for urgent protection actions, envisaged to be for example:
  - Draft amendment of the Laws of Ukraine “On Protection of the Human Being from Harmful Effects of Ionizing Radiation” and supporting regulatory documents for the implementation of urgent protection actions and the remediation plan at the PCP;
  - New draft law and supporting regulatory documents on the legal status of contaminated lands and properties of the uranium legacy site “Prydniprovs'kiy Chemical Plant” (PCP);
  - Regulatory documents on protection of workers and members of the public during the implementation of urgent safety actions and remedial activities at the PCP.

NB: The priorities with respect to the Regulatory Framework are the preparation of the draft laws and key regulatory documents needed for urgent protection actions in 2016. The planned support to the Regulatory Authority of Ukraine SNRIU under the Annual Action Programme 2014 and 2015 (one contract for a total of EUR 6.5 million) to be contracted in 2016 will include the necessary complementary activities with regards to the Prydniprovs'kiy Chemical Plant. If needed, the more complete set of regulatory documents are envisaged to be programmed during 2017, depending upon budget availability.

4.3 Intervention logic

The need to act on the radiation hazard associated with the uranium mining legacy at the PCP site is well recognised by both the EU and the IAEA. Ukraine repeatedly has expressed its urgent need for assistance.

The size and diversity of the urgent measures is such that the European Commission will make use of the local expertise of the Science and Technology Centre of Ukraine (STCU) for the implementation.

5 IMPLEMENTATION

5.1 Financing agreement

In order to implement this action it is not foreseen to conclude a financing agreement with Ukraine, referred to in Budget Article 184(2)(b) of Regulation (EU, Euratom) No 966/2012.

5.2 Indicative implementation period

The indicative operational implementation period of this action, during which the activities described in sections 2.1.3 and 5 will be carried out is 80 months from the date of adoption by the Commission of this Action Document.

Extensions of the implementation period may be agreed by the Commission’s authorising officer responsible by amending this decision and the relevant contracts and agreements; such amendments to this decision constitute technical amendments in the sense of point (i) of Article 2(3)(c) of Regulation (EU) No 236/2014.
5.3 Implementation modalities

5.3.1 Indirect management with an international organisation

This action may be implemented in indirect management with the Science and Technology Centre of Ukraine (STCU) in accordance with Article 58(1)(c) of Regulation (EU, Euratom) No 966/2012. This implementation entails the call for tender to finance urgent measures at the PCP site. This implementation is justified because the STCU has the necessary competences and privileges (as e.g. tax exemptions) for the project implementation. The European Union is a member of the STCU Board.

The entrusted entity would carry out the following budget-implementation tasks: issue of the necessary contract following the funds procurement rules to fund the urgent measures in Ukraine. All contracts to implement the action will be awarded and implemented in accordance with the procedures and standard documents laid down and published by the STCU.

The entrusted international organisation has undergone the ex-ante assessment in accordance with Article 61(1) of Regulation (EU, Euratom) No 966/2012. The Commission’s authorising officer responsible deems that, based on the compliance with the ex-ante assessment based on Regulation (EU, Euratom) No 1605/2002 and long-lasting problem-free cooperation, the international organisation can be entrusted with budget-implementation tasks under indirect management.

5.4 Scope of geographical eligibility for procurement and grants

The geographical eligibility in terms of place of establishment for participating in procurement and grant award procedures and in terms of origin of supplies purchased as established in the basic act and set out in the relevant contractual documents shall apply.

The Commission’s authorising officer responsible may extend the geographical eligibility in accordance with Article 9(2)(b) of Regulation (EU) No 236/2014 on the basis of urgency or of unavailability of products and services in the markets of the countries concerned, or in other duly substantiated cases where the eligibility rules would make the realisation of this action impossible or exceedingly difficult.

5.5 Indicative budget

<table>
<thead>
<tr>
<th></th>
<th>EU contribution (amount in EUR)</th>
<th>Indicative third party contribution, in currency identified</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.3.1.2 Indirect management with STCU</td>
<td>3 500 000</td>
<td>N.A.</td>
</tr>
<tr>
<td>5.8 – Evaluation, 5.10 - Audit</td>
<td>will be covered by another Decision</td>
<td>N.A.</td>
</tr>
<tr>
<td>5.100 – Communication and visibility</td>
<td>will be covered by another Decision</td>
<td>N.A.</td>
</tr>
<tr>
<td>Totals</td>
<td>3 500 000</td>
<td>N.A.</td>
</tr>
</tbody>
</table>
5.6 Organisational set-up and responsibilities

The main stakeholders of the project are the:

- Ministry of Energy and Coal Industry of Ukraine
- Special Enterprise Barrier
- Ministry of Health
- State Services for Sanitary and Epidemiological of Ukraine
- State Nuclear Regulatory Inspectorate of Ukraine (SNRIU)
- Other organisations, which are subordinate to the above Ministries, State Agencies and organisations, as well as other key stakeholders, such as the administration of Dneprodzerzhinsk.

5.7 Performance monitoring and reporting

The day-to-day technical and financial monitoring of the implementation of this action will be a continuous process and part of the implementing partner’s responsibilities. To this aim, the implementing partner shall establish a permanent internal, technical and financial monitoring system for the action and elaborate regular progress reports (not less than annual) and final reports. Every report shall provide an accurate account of implementation of the action, difficulties encountered, changes introduced, as well as the degree of achievement of its results (outputs and direct outcomes) as measured by corresponding indicators, using as reference the logframe matrix (for project modality) or the list of result indicators (for budget support). The report shall be laid out in such a way as to allow monitoring of the means envisaged and employed and of the budget details for the action. The final report, narrative and financial, will cover the entire period of the action implementation.

The Commission may undertake additional project monitoring visits both through its own staff and through independent consultants recruited directly by the Commission for independent monitoring reviews (or recruited by the responsible agent contracted by the Commission for implementing such reviews).

5.8 Evaluation

Having regard to the nature of the action, a(n) ex-post evaluation will not be carried out for this action or its components.

In case an evaluation is not foreseen, the Commission may, during implementation, decide to undertake such an evaluation for duly justified reasons either on its own decision or on the initiative of the partner.

The evaluation reports shall be shared with the partner country and other key stakeholders. The implementing partner and the Commission shall analyse the conclusions and recommendations of the evaluations and, where appropriate, in agreement with the partner country, jointly decide on the follow-up actions to be taken and any adjustments necessary, including, if indicated, the reorientation of the project.

The financing of the evaluation shall be covered by another measure constituting a financing decision.
5.9 Audit
Without prejudice to the obligations applicable to contracts concluded for the implementation of this action, the Commission may, on the basis of a risk assessment, contract independent audits or expenditure verification assignments for one or several contracts or agreements.

The financing of the audit shall be covered by another measure constituting a financing decision.

5.10 Communication and visibility
Communication and visibility of the EU is a legal obligation for all external actions funded by the EU.

This action shall contain communication and visibility measures which shall be based on a specific Communication and Visibility Plan of the Action, to be elaborated at the start of implementation and supported with the budget indicated in section 5.5 above.

In terms of legal obligations on communication and visibility, the measures shall be implemented by the Commission, the partner country, contractors, grant beneficiaries and/or entrusted entities. Appropriate contractual obligations shall be included in, respectively, the financing agreement, procurement and grant contracts, and delegation agreements.

The Communication and Visibility Manual for European Union External Action shall be used to establish the Communication and Visibility Plan of the Action and the appropriate contractual obligations.
APPENDIX - INDICATIVE LOGFRAME MATRIX (FOR PROJECT MODALITY)

The activities, the expected outputs and all the indicators, targets and baselines included in the logframe matrix are indicative and may be updated during the implementation of the action, no amendment being required to the financing decision. When it is not possible to determine the outputs of an action at formulation stage, intermediary outcomes should be presented and the outputs defined during inception of the overall programme and its components. The indicative logframe matrix will evolve during the lifetime of the action: new lines will be added for including the activities as well as new columns for intermediary targets (milestones) for the output and outcome indicators whenever it is relevant for monitoring and reporting purposes. Note also that indicators should be disaggregated by sex whenever relevant.

<table>
<thead>
<tr>
<th>Results chain</th>
<th>Indicators</th>
<th>Baselines (incl. reference year)</th>
<th>Targets (incl. reference year)</th>
<th>Sources and means of verification</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall objective: Impact</td>
<td>Contributing to achieving the overall INSC objectives and contribute toward protection of people and the environment from the harmful effects of ionising radiation</td>
<td>See below</td>
<td>2016</td>
<td>2019</td>
<td>Project Terms of Reference</td>
</tr>
<tr>
<td>Specific objective(s): Outcome(s)</td>
<td>I1: enhancement of waste management in the beneficiary country</td>
<td>see below</td>
<td>see below</td>
<td>see below</td>
<td>see below</td>
</tr>
<tr>
<td></td>
<td>I2: Protection of the Prydnipropvskiy Chemical Plant” (PCP) against uncontrolled release of radioactivity and radioactive materials</td>
<td>see below</td>
<td>see below</td>
<td>see below</td>
<td>see below</td>
</tr>
<tr>
<td>Outputs</td>
<td>A. Drafting of key regulatory documents needed for urgent protection actions at PCP, 1. Draft amendment of the Laws of Ukraine &quot;On Protection of the Human Being from Harmful Effects of Ionizing Radiation” and supporting documents for the implementation of urgent protection actions and the remediation plan at the &quot;Prydnipropvskiy Chemical Plant&quot; (PCP)</td>
<td>I1: Number of waste management and remediation documents developed with EU support* Draft working regulations for urgent remediation and protection measures in force in 2017</td>
<td>I1: No laws and regulations in regarding remediation and security of &quot;Prydnipropvskiy Chemical Plant&quot; (PCP) in force</td>
<td>I1: working regulations for urgent remediation and protection measures in force. Laws and regulations regarding remediation and security of (PCP) are in</td>
<td>I1: Progress and final reports provided by the contractor and accepted by the Commission project manager</td>
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<td></td>
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<td></td>
<td>Sufficient resources and absorption capacity in SNRIU and BARRIER</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Good co-operation with Beneficiary, Barrier, SNRIU</td>
</tr>
</tbody>
</table>
2. Draft law and supporting regulatory documents on the legal status of contaminated lands and properties of the uranium legacy site "Prydniprovskiy Chemical Plant" (PCP)

3. Regulatory documents on protection of workers and members of the public during the implementation of urgent safety action and remedial activities at the "Prydniprovskiy Chemical Plant" (PCP)

<table>
<thead>
<tr>
<th>B. Work on buildings and tailings</th>
<th>I2: Number of buildings and tailings protected</th>
<th>I2: There are currently no controls in place: Buildings and tailings are freely accessible for workers of local enterprises There is no regulatory control over radiological contaminated areas of the former PCP site</th>
<th>I2: Contaminated areas, buildings and material adequately protected On-site inspections Progress reports Final report</th>
<th>I2: Good co-operation with Beneficiary, Barrier, local municipality, SNRIU, local enterprises</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sealing of contaminated buildings</td>
<td></td>
<td></td>
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<tr>
<td>2. Establishment of secured areas enclosing radiological and chemical hazards</td>
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<tr>
<td>3. Assurance of the structural integrity of specific contaminated buildings</td>
<td></td>
<td></td>
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<tr>
<td>4. Safe confinement of liquid wastes (radioactive and chemical)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>5. Management of localised radioactive hotspots</td>
<td></td>
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<tr>
<td>6. Establishment of initial waste processing areas (radioactive and chemical)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>C. Development of organisation and management structure, training and awareness</th>
<th>I1: New organisation and management structure in place Licence obtained New quality management system in place</th>
<th>I1: To be determined during project implementation</th>
<th>I1: Progress reports, Quality assurance manual, Training reports, distributed information,</th>
<th>I1: Good co-operation with Beneficiary, Barrier, local municipality, local</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Licensing of newly established controlled areas</td>
<td></td>
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<tr>
<td>2. Establishment of a quality</td>
<td></td>
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<tr>
<td></td>
<td>management system</td>
<td>Number of qualified personnel and trained / informed site workers</td>
<td>100% trained personnel of Barrier</td>
<td>100% adequately informed personnel of local enterprises</td>
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<tr>
<td>3.</td>
<td>Qualified personnel</td>
<td>Performed public hearings &amp; press releases</td>
<td></td>
<td>I1_C4: 3 public hearings &amp; 3 press releases</td>
</tr>
<tr>
<td>4.</td>
<td>Public awareness</td>
<td></td>
<td>100% trained personnel of Barrier</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Supply of equipment for</th>
<th>I2: Published Procurement &amp; Tender documentation in 2016</th>
<th>I2: no adequate equipment available</th>
<th>I2: Personal protection available</th>
<th>I2: Equipment delivered and in use</th>
<th>I2: Good co-operation with Beneficiary, Barrier, local municipality, local enterprises, SNRIU,</th>
</tr>
</thead>
<tbody>
<tr>
<td>D.</td>
<td>1. Personal protection and dosimetry</td>
<td>Equipment delivered in 2017</td>
<td>Uncontrolled release of radioactive material from the area possible</td>
<td>Area under fully regulatory control</td>
<td>On-site inspections</td>
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<td></td>
<td>2. Radiation measurement and monitoring</td>
<td>Equipment in operation in 2018</td>
<td></td>
<td></td>
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<td></td>
<td>3. Maintaining and secure controlled areas</td>
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<tr>
<td></td>
<td>4. Maintaining and secure tailings</td>
<td></td>
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*Indicators derived from the Multiannual Indicative Programme*