

NOTIFICATION TO AN AFFECTED PARTY OF THE PROPOSED ACTIVITY, UNDER ARTICLE 3 OF THE CONVENTION

1. INFORMATION ON THE PROPOSED ACTIVITY

<p>i) Information on the nature of the proposed activity</p>	
<p>Type of the activity proposed</p>	<p>Design and construction of interim storage repository for vitrified high-level waste (vit-HLW), which will be returned from the Russian Federation after the reprocessing of spent nuclear fuel of Ukrainian nuclear power plants.</p>
<p>Is the proposed activity listed in Appendix I to the Convention?</p>	<p>No (the repository is not designed for the production or enrichment of nuclear fuel, reprocessing of the spent nuclear fuel or the storage, disposal and processing of radioactive waste). vit-HLW repository is intended for interim storage of vitrified HLW, for up to 100 years.</p>
<p>Scope of the proposed activity (e.g. main activities and any/all peripheral activities requiring assessment</p>	<p>According to the Law of Ukraine dated 17.09.2008 №516-VI On National Ecological Program of Radioactive Waste Management the further design and construction of Stage II facilities of the industrial complex "Vector" is planned, including the design and construction of interim storage facility for vitrified high-level waste (vit-HLW), which are to be returned from Russian Federation after the reprocessing of spent nuclear fuel of Ukrainian nuclear power plants. At the end of repository operation the vit-HLW should be transferred for disposal in the repository, which is equipped in stable geological formations.</p>
<p>Scale of proposed activity (e.g. size, production capacity, and etc.)</p>	<p>The repository is designed for storage of 1,008 cases, which are arranged in 8 sections. 126 cases in each and shall ensure 550,0 m³ of vit-HLW to be stored. In addition, FS provides for reserve space that allows exceeding additionally up to 160,0 m³ of vit-HLW. Return to be vitrified HLW (vit-HLW) and part of the HLW from 20-40%. Vit-HLW are placed into cans. The cans with vit-HLW are placed into specially made steel canisters with a diameter of 630 mm. The height of the canister depending on the design can be 2300mm (a case for two cans) or 3400 mm (case for three cans). The cans are hermetically sealed. In fact is that the heat generation of vit-HLW form VVER-440 reactors at the time of their return to Ukraine is less than 2 kW/m³. The containers for storage and transportation of vit-HLW from VVER-440 reactors are suitable for such heat generation and are cooling by natural air flow. The volume of the vit-HLW is 550 m³. The matrix material - glass melt (a mixture of oxide elements), density: - (2,650 ± 50) kg / m³. The maximum temperature of the glass melt in the center of the can, seasoned during 20 years, is not more than 60°C.</p>
<p>Description of proposed activity (e.g. technology used)</p>	<p>Vit-HLW repository – is the near-surface type construction, designed to ensure the safe storage of vitrified high level radioactive waste for the entire storage period, with appropriate protective engineering barriers, power supply systems, water supply and sanitation, ventilation, video surveillance, cleaning of contaminated air and radiation monitoring. For vit-HLW repository the frame construction of cells is selected where the walls and bottom of the module are made of reinforced concrete, with stainless steel frame inside the cells and overlapping of structures by monolithic slab with holes above the cells, which are closed with "plugs". Technology of vit-HLW repository provides for:</p> <ul style="list-style-type: none"> • receipt of vitrified HLW from supplying enterprise of the Russian Federation; • incoming inspection of incoming packages of vitrified HLW (UK); • transfer and transportation of cases with vit-HLW for storage; • control and accounting of packages; • interim storage of long-lived vit-HLW (up to 100 years); • environmental monitoring; • radiation monitoring at all stages of vit-HLW management; • automatic control, technological process and equipment control.
<p>Description of a purpose of the proposed activity</p>	<p>Repository for vitrified high-level waste is intended to provide interim storage (up to 100 years), until the stable geological formations are constructed.</p>
<p>Rationale for the proposed activities (e.g. social-economic, physical geographic basis</p>	<p>In accordance with the provisions of the "Concept of ChEZ in Ukraine" the functioning of the designed storage for vit-HLW will be carried out within the area of "Vector" Industrial Complex. This decision has a number of advantages:</p> <ul style="list-style-type: none"> • the railway line Chernihiv-Ovruch passes near where Slavuty ch, SSE "Chernobyl", Semihody station, Yanov station and Buryakivka are located; • the district has a well developed network of roads of regional and district significance; • availability of labor in Slavuty ch, Ivankiv, Kyiv and etc., having a sufficiently well-developed system of municipal services, education and culture; <p>Using the existing infrastructure of IC "Vector" I stage, engineering networks and communications systems, RM systems, telecommunications will allow to commission the vit-HLW storage facility more quickly.</p>

Additional information/comments	<p>HLW returned from RF after the reprocessing of spent nuclear fuel from Ukrainian nuclear power plants volume "Environmental impact analysis report"</p>																																
ii) Information on the spatial and temporal boundaries of the proposed activity	<p>Location: The construction site of storage facility for vit-HLW is located at a distance of 11 km to the west of the Chernobyl nuclear power plant (industrial complex "Vector"), in 10-km exclusion zone, of the intensified radiological control</p> <p>Description of the location (e.g. physical-geographic, socio-economical characteristics) The construction site is located in the north of the Kiev region within Kiev Polesie, in the northeastern part of the Kiev moraine outwash plains, which is part of the Polesie lowlands, directly between the rivers Pripyat and even at a distance of 10 km from the Pripyat River and 8-9 km from the Uzh river.</p> <p>In geological structure to a depth of 73,50 m upper Eocene Paleogene soils are participate (Sands buhaks-kanev suite and loamy clay of Kiev suite), which are overlain by sediments of Quaternary system. Quaternary sediments are represented by lower-mid-Quaternary alluvial, mid-Quaternary glacioluvial and moraine sediments. In respect of lithology these sands are mainly small and medium granularity with lenses and layers of loamy sands and pulverescent sands.</p> <p>According to DBN A.2.1-1-2008 (Supplement Ж) the land survey refers to Category II on the complexity of engineering-geological conditions.</p> <p>The construction area is located in the building and climate zone II. (DSTU-NB V.1.1-27:2010). The climate of the area - is moderate continental, formed under the influence of the western sea and the eastern continental climatic factors, has the following characteristics: - The weight of the snow cover - 1800 Pa. - Wind pressure - 450 Pa. - Maximum depth of seasonal soil freezing 120,0 cm.</p> <p>In seismic conditions the site is in zone of 6-point activity at 1% probability. Soil for seismic properties belongs to category II (DBN V. Table 1.1.-12-2006, 1.1 Annex A, B)</p> <p>Distances from vit-HLW repository to the nearest border with neighboring states is:</p> <table border="1" data-bbox="713 176 948 1448"> <thead> <tr> <th>Neighbouring country</th> <th>Direction to the nearest border</th> <th>The nearest border settlement</th> <th>Distance from ZPYAT to the nearest border</th> </tr> </thead> <tbody> <tr> <td>Belarus</td> <td>N</td> <td>Khoimiki</td> <td>50 km</td> </tr> <tr> <td>Poland</td> <td>W</td> <td>Vlodava</td> <td>450 km</td> </tr> <tr> <td>Slovakia</td> <td>SW</td> <td>Snina</td> <td>620 km</td> </tr> <tr> <td>Hungary</td> <td>SW</td> <td>Kisvarda</td> <td>870 km</td> </tr> <tr> <td>Romania</td> <td>SW</td> <td>Radauti</td> <td>480 km</td> </tr> <tr> <td>Moldova</td> <td>SW</td> <td>Soroki</td> <td>380 km</td> </tr> <tr> <td>Russia</td> <td>NE</td> <td>Klimovo</td> <td>190 km</td> </tr> </tbody> </table>	Neighbouring country	Direction to the nearest border	The nearest border settlement	Distance from ZPYAT to the nearest border	Belarus	N	Khoimiki	50 km	Poland	W	Vlodava	450 km	Slovakia	SW	Snina	620 km	Hungary	SW	Kisvarda	870 km	Romania	SW	Radauti	480 km	Moldova	SW	Soroki	380 km	Russia	NE	Klimovo	190 km
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Rationale for location of the proposed activity (e.g. socio-economic, physical-geographic basis)	<p>Chernobyl exclusion zone for the construction of storage facilities for safe interim storage of vitrified high-level radioactive waste (vit-HLW) is chosen based on the following factors:</p> <ul style="list-style-type: none"> - Site of the Industrial Complex "Vector" is located on the border of the watershed of the rivers Pripyat and Uzh do have a deep shallow of groundwater; - Chernobyl exclusion zone (western part) has in its geological basis necessary rocks, in particular long granitoids Kirovograd-Zhitomir complex, which lies at a depth of 200,0-400,0 m and can be used in the case of the corresponding decision, to create a single repository in deep geological formations (deep geological repository) and disposal of vit-HLW it in the without processing; - The population of the exclusion zone was resettled; - The railway Chernihiv-Ovruch passes nearby, there are "Sembodiy station", "Yanov station", passing track "Buryakivka", which are essential in ensuring the operation of the Industrial complex "Vector", "Closely spaced objects are SSE "ChNPP" 																																

	and Slavutyeh: — The construction site has an extensive network of roads, which are largely updated. — There are quite qualified workers and sufficient human resources in the towns Slavutich, Chernihiv, Ivankiv, Kyiv, and etc.
Time-frame for the proposed activity (e.g. start and duration construction and operation)	Design of Storage facility for vit-HLW is to be carried out in three stages (2014-2015). Proposed construction and commissioning (2016-2017). The duration of operation of the storage facility for vit-HLW - up to 100 years.
Maps and other pictorial documents connected with the information on the proposed activity	Maps and other graphic documents in the annex to the EIA.
Additional information/comments	
iii) Information on expected environmental impacts and proposed mitigation measures	
Scope of assessment (e.g. consideration of: cumulative impacts, evaluation of alternatives, sustainable development issues, impacts of peripheral activities, and etc.)	As part of the FS to the construction the preliminary assessment of the impact on the staff, population and environment was completed. The estimates showed compliance with the requirements of applicable law. In accordance with the applicable legislation the comprehensive state examination of FS materials for storage facilities for interim storage of HLW was carried out, which includes in particular, the state sanitary and epidemiological expertise, site nuclear and radiation safety and environmental impact assessment.
Expected environmental impact of the proposed activity (e.g. types, locations, magnitudes)	Radiation impact during the construction of the repository (radioactive dust) is not significant, the construction is carried out on the deactivated territory. During operation the storage facility for vit-HLW the release of harmful substances into the environment is not provided. Hydrosphere condition is controlled by monitoring the waste and groundwater. Planned work does not provide the release of radioactive substances into the environment. To monitor the status of the air basin the continuous monitoring of emissions from the ventilation system of the repository is planned. Residual impact on the environment during the construction and operation of the storage facility for vit-HLW is not provided. In the construction process no harm the natural environment is provided, so special remedial measures for the normalization of the components of the environment and of the compensatory measures for the improvement of equivalent natural and social environments in FS are not provided. All the examinations confirmed that the basic design decisions provide security during the construction and operation of the repository.
Inputs (e.g. raw materials, power sources, and etc.)	Return to be vitrified HLW (vit-HLW) and part of the HLW from 20-40%. Vit-HLW are placed into cans. The cans with vit-HLW are placed into specially made steel canisters with a diameter of 630 mm. The height of the canister depending on the design can be 2300mm (a case for two cans) or 3400 mm (case for three cans). The cases are hermetically sealed. In fact is that the heat generation of vit-HLW form VVER-440 reactors at the time of their return to Ukraine is less than 2 kW/m ³ . The matrix material - glass melt (a mixture of oxide elements), density, - (2650 ± 50) kg / m ³ .
Outputs/effects (e.g. amounts and types of: emission into the atmosphere, discharges into the water system, solid waste)	The calculated ground-level concentrations of pollutants in ambient air on the border of housing development (at a distance of 20 km from the IC "Veetor") do not exceed 0,00001 shares of MPC when transferring the steel canisters of HLW in a case made of stainless steel and welded to cover him in the "hot" cell. In normal mode at all stages of the process of treatment of vit-HLW the direct contact staff with radioactive substances, as well as harmful effects on the environment, is virtually eliminated.
Transboundary impact (e.g. types, locations and magnitudes)	The risk of non-carcinogenic effects is extremely small and it is $4,5 \cdot 10^{-7}$. Carcinogenic risk of the combined action amounts to $7 \cdot 10^{-12}$, which is classified as an acceptable level of carcinogenic risk. Social risk of proposed works for a group of people who live on the border of the 30-km zone, amounts to $5 \cdot 10^{-8}$ and is classified as an acceptable level of social risk. The analysis of the possibility of occurrence and prognosis of emergencies during the operation shows that the planned activities could not have a significant impact on the environment.
Proposed mitigation measures (e.g. if known, any mitigation measures to prevent, eliminate, minimize and compensate for ecological effects)	To protect the environment during the placing of vit-HLW to the temporary storage facility, there are the following basic activities: - The organization of the process with the use of special technical devices for transferring and placing of vit-HLW for storage; - A system of engineered barriers during the storage; - Ventilation system with constant control of emissions; - Radiation monitoring of the situation in the vit-HLW repository facilities and the environment outside the store.

Additional information/comments	No
iv) Proponent/Developer	
Title, address, phone/fax numbers	Designer - State Enterprise "Scientific and Technical Centre for Decontamination and Complex Management of Radioactive Waste, Material, Radiation Sources" SE "STC KORO" Petrovskogo str. 57, Zhovti Vody, Dnipropetrovsk region., Ukraine 052204. Tel. (05652) 2-68-24. E-mail: koro@stc-koro.dp.ua
v) EIA documentation	The operating organization of the designed storage facility for vit-HLW - SC "Ukrainian State Association"Radon" State Specialized Enterprise "Central Enterprise for the Management of Radioactive Waste" Kirova str. 52, Chernobyl, Ukraine 07270. Tel. (04593) 5-17-08. E-mail: cemrv@ukr.net
Is the EIA documentation (e.g. EIA report or EIS) included in the notification?	The notification will include the EIA documentation
If no/partial, description of additional documentation to be forwarded and (approximate) date(s) when this documentation will be available	As part of the FEASIBILITY STUDY for construction investment of the storage facility for interim storage of HLW to be returned from RF after the reprocessing of spent nuclear fuel from Ukrainian NPPs the Volume 3 of EIA is developed. "Environmental Impact Analysis 22 / 2011-1268 EIA"
Additional information/comments	No
2. POINTS OF CONTACT	
i) Points of contact for the potentially affected Party or Parties	
Authority responsible for coordinating the EIA-related activities (refer to decision 1/9, Annex) - name, address, phone and fax numbers	
List of Affected Parties to which the notification is being sent	The Republic of Belarus, the Republic of Poland, the Republic of Moldova, Romania, the Slovak Republic, the Republic of Hungary.
ii) Points of Contact for the Party of origin	
Authority responsible for coordinating the EIA-related activities (refer to decision 1/9, annex) - name, address, phone and fax numbers	SC "Ukrainian State Association"Radon" State Specialized Enterprise "Central Enterprise for the Management of Radioactive Waste" Kirova str. 52, Chernobyl, Ukraine 07270. Tel. (04593) 5-17-08 Tenny Roman, Deputy director on technical issues. Tel.(04593) 5-11-15 E-mail: rtenmy@ukr.net
Decision-making authority, if different from the one responsible for coordinating the EIA-related activities - name, address, numbers of phones and faxes	Ministry of Ecology and Natural Resources of Ukraine, Mytropolyta Vasylia Lypkovskogo str. 35, Kyiv, 03035. tel.:(044) 206-31-00, (044)206-31-64; fax (044) 206-31-07;
3. INFORMATION ON EIA PROCESS IN THE COUNTRY WHERE THE PROPOSED ACTIVITY IS LOCATED	Ukraine
1) Information on the CIA process that will be applied for the proposed activity	
Time schedule	
Opportunities for the affected Party or Parties to be involved in the EIA process	

Opportunities for the affected Party or Parties to review and comment on the notification and the EIA documentation	Yes, these opportunities are available.
Nature and timing of the possible decision	
Process for approval of the proposed activity	Feasibility Study "Investment of the construction of storage facility for interim storage of high level waste (HLW), which will be returned from RF after the reprocessing of spent nuclear fuel from Ukrainian NPPs" received a positive conclusion from the SE "Ukrderzhbudelspertiza", № 00-1426-13 / PB (00-0771-12 / PB) and now it is in the process of approval by the Cabinet of Ministers of Ukraine.
Additional information/comments	No
4. INFORMATION ON THE PUBLIC PARTICIPATION PROCESS IN THE COUNTRY OF ORIGIN	
Public participation procedures	The public is informed by the publication in the newspaper
Expected start and duration of public consultation	
Additional Information/comments	No
5. DEADLINE FOR RESPONSE	
Date	30 days from the date of notification receipt