

active control (physical safety assurance, environment monitoring) will be carried out at least for 100 years.

Environmental impact assessment report considers three alternative places for near surface repository for radioactive waste construction:

Apvardai site (Utena district, Visaginas municipality, Rimšės sub-district., Žibaklių village). The site is located 1.3 km to the Northwest of the Apvardai Lake. A distance from the lake and Lithuanian-Belarus borderline is 3 km, and Lithuania Latvia borderline about 15.5 km. There are no households in the site and very few small settlements in surroundings. Part of the site is used for extensive agriculture; the other part is a Public forestland. The site includes a hill limiting the possibility of near surface repository for radioactive waste construction. Development of the repository is also limited due to severe hydrologic and hydrogeologic conditions.

Galilauke site (Utena district, Ignalina region municipality, Rimšės sub-district, Galilaukes village). The distance to the lake Drukšiai is 0.6 km, to the Lithuanian-Belarus borderline is about 0.7 km, and to Lithuania Latvia borderline about 11.5 km. There is one household in Galilauke and a few settlements in surroundings. The site is used for extensive agriculture. Hydrologic and hydrogeologic conditions of the site are the most suitable. Entire hill prevails, forming the possibility to locate repository vaults.

Stabatiške site (Utena district, Visaginas municipality, Ignalina Nuclear Plant territory). The site is located about 1.5 km from Drukšiai Lake, about 4 km from Lithuanian-Belarus borderline. The distance from the Lithuanian-Latvia borderline is about 9 km. The territory is named as Public forestland of the III protected forest group status. Due to the lack of favourable weather conditions for construction the less favourable conditions (hydrologic and hydrogeologic conditions) shall be compensated by additional engineered facilities - dehumidifying systems. Due to several hills, that are present on the site, the repository shall be constructed at two of them.

Description of measures foreseen for negative environmental impact prevention, reduction, compensation or elimination of its consequences. Vault drainage system will be used while vault construction and waste loading processes. After the closure of the repository above mentioned system will be dismantled, instead the long-lasting drainage system of the cap will be formed. After repository closure, rain water will be discharged to the ditch which is located at the bottom of the slope. Permeable soil layer (sand or gravel) will be formed in order to protect the vault foundation from humidity. Corrosion-proof (ceramic) drain pipes, width ditches filled with sand, gravel or stones and providing effective drainage into the irrigational canals will be used to ensure foundation protection.

During repository operation period there is no possibility for radionuclide releases to environment.

In order to avoid radionuclides ingress into environment, the water used for the controlled area shower rooms, for sanitary cleaning, for decontamination of installations and casks will be collected in special water collection tanks. Radiation control of this water will be performed. Depending on the control results, the water will be forwarded for processing to the Ignalina Nuclear Power Plant Radioactive Waste Treatment Facilities or treated in biological purification facilities.

In order to prevent the ingress of other (nonradioactive) contaminants into water the following preventive measures are foreseen: the build-up site, all access roads and parking areas will be equipped with surface water collection systems that will be designed for contaminant collection in a case of fuel or oil spill and their further transportation or discharge to local purification facilities; sewage will be treated in biologic purification facilities. In accordance with the established procedure control of discharged into environment sewage quality will be performed.

Engineered barriers of constructed near surface repository will include vaults made of reinforced concrete surrounded by lowerpermeable clay-based material and the whole system will be covered by long-lasting and erosion resisting cap. Gases, formed during chemical and biologic processes of near surface repository section will be released through the gas-permeable reinforced concrete slab connections. In order to provide uniform gas spread, prior the clay barrier formation slabs of reinforced concrete will be covered with thin layer of sand. Surface of the cap will be landscaped with grass because plant bases strengthen slopes and protect them from soil erosion.

In order to minimize radiation dose to public and personnel the following preventive measures will be applied: repository vaults and interim storage will be equipped with protective screen

reflecting ionizing radiation; remote control equipment will be used; interim storage will be equipped with ventilation system; radioactive waste packages will be loaded to the new vault only when the previous one is loaded and closed (i.e. after the installation of protective screen); when the vaults are loaded side faces of the vault are covered with engineered barriers; special vehicles will be used for radioactive waste package transportation (transportation casks); proper routes and schedules of radioactive waste transportation on municipal roads are prepared.

Submitted Conclusions Regarding Environmental Impact Assessment:

Administration of the Head of Utena district approved the updated Environmental Impact Assessment Report by letter No. (1.32.)-6-1209 dated 2006-10-19.

Visaginas municipality administration approved the updated Environmental Impact Assessment Report by letter No. (4.17)-1-2826 dated 2006-10-06.

Ignalina region municipality board did not approve the updated Environmental Impact Assessment Report by letter No. T-827 dated 2006-10-31 and emphasized that the negative impact of proposed economic activity on social, economic environment and psychological comfort will exceed the impact assessed in the report, it will influence not only the territories around the repository, but the territories of adjacent municipalities as well

State Nuclear Power Safety Inspectorate by letter No. (12.3.17)-22.1-331 dated 2007-05-02 declared the possibility of repository construction on Galilaukes and Stabatiskes sites, yet, the Galilaukes site is more convenient for safety radioactive waste disposal due to its natural characteristics.

Radiation Protection Center approved the updated Environmental Impact Assessment Report with comments on formal revisions by letter No. 2395 dated 2006-10-18.

Utena Territorial Subdivision of the Cultural Heritage Department under the Ministry of Culture approved the updated Environmental Impact Assessment Report by letter No. 2U-(1.29)-19 dated 2007-01-18.

Ignalina fire and rescue service of the Fire and Rescue Department under the Ministry of the Interior approved the updated Environmental Impact Assessment Report by letter No. 4.549 dated 2006-09-25.

Fire and Rescue Service for the Protection of Visaginas City and Ignalina Nuclear Power Plant of the Fire and Rescue Department under the Ministry of the Interior approved the updated Environmental Impact Assessment Report by letter No. 4-768 dated 2006-10-19.

Utena Public Health Center approved the updated Environmental Impact Assessment Report by the Protocol of “Hygienic expertise of normative documents and products” No. HEP-8 dated 2006-09-29.

Meeting was called on 2007-05-18 in regard to contradictions in conclusions regarding environmental impact assessment report and activity possibility and according to the regulation of the Law on Environmental Impact Assessment of the Proposed Economic Activity when the conclusions regarding environmental impact assessment were discussed. State Nuclear Power Safety Inspectorate, Radiation Protection Center and Utena Public Health Center declared the suitability of Galilaukes site for near surface repository for radioactive waste construction, yet they did not preclude the possibility of near surface repository construction on Stabatiskes site. Ignalina fire and rescue service and fire and rescue service for the protection of Visaginas city and Ignalina nuclear power plant preferred the Stabatiske site for near surface repository construction. Other environmental assessment parties were not present during the meeting. It was decided, that there is a possibility to construct the near surface repository for radioactive waste on the Galilaukes and Stabatiskes sites, more preferable site is Stabatiske due to several conditioning factors.

Submitted assessment argued by public motivated proposals.

It was published about the started Environmental Impact Assessment of the proposed near surface repository for radioactive waste construction in the following newspapers: “Lietuvos rytas” 2004-05-14, “Ignalina” 2004-05-15, in July, 2004 was published information about the updated Environmental impact assessment program.

On 2004-10-27 the public was informed of the possibility to familiarize with the Environmental Impact Assessment Report and about its planned open presentation in the following newspapers: “Lietuvos rytas”, “Nauja vaga”, “Ignalina”. Open presentation of Environmental Impact Assessment Report took place at Ignalina region municipality on 2004-11-11. No public proposals

were received either before the open presentation or after it.

Additional presentation of updated with the consideration of third place alternative Environmental impact assessment report took place at hotel "Aukstaitija" in Visaginas city on 2006-09-07. Information about presentation was published on 2006-08-22 in "Musu Ignalina", on 2006-08-23 in the following newspapers: "Lietuvos rytas" and "Naujoji vaga", on 2006-08-24 in "Sugardas" and on 2006-08-24 on notice-boards of Ignalina region municipality, Ignalina region Rimse subdistrict, and Visaginas municipality. No public proposals regarding environmental impact assessment of near surface repository for radioactive waste construction were received. Ignalina region Rimse sub-district

International consultation.

Following the regulations of UNO Convention on Environmental Impact Assessment in a Transboundary Context (Espoo), the international Environmental Impact Assessment of near surface repository for radioactive waste construction has been carried out.

2004-12-07, Ministry of Environment informed the Republic of Latvia (Espoo Convention country) about Environmental Impact Assessment of near surface repository for radioactive waste construction by submitting information about the proposed economic activity in the written form for Ministry of Environment of the Republic of Latvia. 2005-03-31 The Ministry of Environment of the Republic of Lithuania submitted Environmental Impact Assessment Program in Lithuanian language and program summary in English and Russian languages.

2005-06-09 in Daugavpils, the Environmental Impact Assessment Report presentation to the public of the Republic of Latvia took place. 2005-07-05 the Ministry of Environment of the Republic of Latvia presented comments and proposals for Environmental Impact Assessment Report, taking into consideration the opinion of public of the country.

2006-10-18 Ministry of Environment of the Republic of Latvia was informed by the Ministry of environment about the updated process of the environmental impact assessment of the near surface repository for radioactive waste and received the updated environmental impact assessment report.

2006-12-12 in Daugavpils, the updated report approval took place. 2006-12-29 The Ministry of environment of the Republic of Latvia taking into consideration the opinion and comments of other institutions and public of the country submitted their opinion regarding the proposed economic activity and their comments on the updated environmental impact assessment report.

2007-03-16 in Vilnius, final international conference (consultations) with the Ministry of Environment of the Republic of Latvia and with the experts of other institutions was organized. During the conference, the submitted comments were discussed.

The Republic of Belarus joined the Espoo convention at the end of the year 2005 until the year 2005 all information about environmental impact assessment of the near surface repository for radioactive waste was submitted on the basis of friendly cooperation. During the meeting, organized in May 2005, in Vilnius, the Ministry of natural resources and environmental protection of the Republic of Belarus and experts of other institutions were informed about proposed economic activity.

On October 18, 2006 the Ministry of environment informed the Ministry of natural resources and environmental protection of the Republic of Belarus about the updated process of the environmental impact assessment of the near surface repository for radioactive waste and submitted updated environmental impact assessment report.

2006-12-21, in Braslav, the updated environmental impact assessment report presentation to the public of the Republic of Belarus took place. 2007-01-17, the Ministry of natural resources and environmental protection of the Republic of Belarus taking into consideration comments of science and other institutions, and public of the country submitted their comments on the updated environmental impact assessment report and their opinion regarding the proposed economic activity.

On February 5-6, 2007 in Visaginas, an open-ended working groups for nuclear energy and radioactive waste handling from Lithuania and Belarus took place, during the meeting the Stabatske site was inspected, comments for the updated environmental impact assessment report of near surface repository for radioactive waste were discussed.

2007-04-19 in Vilnius, final international conference (consultations) with the experts of the Republic of Belarus was organized, during the conference, submitted by the Ministry of natural

resources and environmental protection of the Republic of Belarus comments for the updated environmental impact assessment report and their proposals regarding the proposed economic activity were discussed.

It is mentioned, that during the mission of International Atomic Energy Agency (IAEA) which took place in Lithuania on December 12-16, 2005, the following aspects were reviewed and assessed: data on siting and characterization of the proposed near surface repository for radioactive waste, an acceptability of the repository concept in the view of conditions of the Republic of Lithuania. Representatives of Latvia and Belarus participated in a mission as observers, they had visited all territories that were under the investigation and review all investigation data. The RATA repository construction program was positively evaluated by independent experts. Results of the mission are summarized and presented in a report form: *“An international Peer Review of the Programme for Evaluating Sites for Near Surface Disposal of Radioactive waste in Lithuania”*. IAEA, Viena, 2006 (in English language). Moreover, on December 21-22, 2007 in Vilnius, the international conference took place: *“Social and economic aspects of decommissioning of Nuclear power plants and radioactive waste handling”*, during the conference important international problems related to decommissioning of nuclear power plants were discussed, representatives of Latvia and Belarus participated as well. .

Specialists of the responsible institutions, who had analyzed Environmental Impact Assessment documentation:

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V. Auglys, the Manager of the Environmental Impact Assessment Division of the Ministry of Environment, tel. (8 5) 266 3651;

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R. Jovaišienė, the Manager of Utena regional Environmental impact assessment and norms division of the Environmental protection department, tel. (8 389) 68784;

R. Kibaitė, Sen. Ecologist of animated nature division of the State service for protected areas, tel. ((8 5) 272 5802;

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I. Urbonienė, Sen, specialist of the Water division of the Environmental quality department of the Ministry of Environment, tel. (8 5) 266 3494;

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Comments, suggestions.

Near surface repository for low and intermediate short lived radioactive waste design shall be developed taking into consideration impact of the nuclear power facilities which are located nearby and are planned in the future, including the intention to maintain public irradiation as low as possible. Total annual effective radiation dose to public taking into consideration all nuclear power facilities that are located nearby and are planned shall not exceed the limit of the annual effective radiation dose to public – 0,2 mSv.

Environment monitoring measures that are foreseen during the Basic design development shall also include investigation of the necessity of environment monitoring in the neighbor countries

Design of the repository shall include an additional assessment of supervision periods.

In order to prevent negative image of the repository and related negative consequences for territory attraction, design and operation of near surface repository for radioactive waste shall provide continual public (including public of neighbor countries) notification about repository construction works, duration of works, environmental monitoring results.

For repository safety demonstration more detailed safety assessment shall be prepared.

Analysis of key processes and parameters for radionuclide spread shall be provided. In order to reach the goal, long lasting investigations of repository engineered barriers model in a field conditions shall be carried out. Investigation results shall demonstrate the eligibility of the proposed conception and materials, the durability of engineered barriers and specify important for safety parameters of the repository.

The decision.

Motivation:

After the consideration of the environmental impact assessment report, decisions provided by the subjects of the environmental impact assessment related to the possibility of the activity, comments of the Ministry of natural resources and environmental protection of the Republic of Belarus and of the Ministry of Environment of the Republic of Latvia on the Environmental impact assessment report for near surface repository for radioactive waste, and the arguments of the experts from the neighbor countries provided during the international meeting (consultations) the Ministry of Environment states:

Apvardai site is unacceptable due to social aspects (the site was disapproved by the Ignalina region municipality board) and partially due to adverse geologic and hydrogeologic conditions. Current alternative is disapproved by the activity initiator – SE Radioactive waste management agency.

Galilauke site is acceptable due to favorable environmental conditions, although it is unacceptable due to social factors – Ignalina region municipality board objects the alternative due to negative impact of repository construction on the investment attraction of the territory. Territory of the site is adverse in the international point of view, since the Republic of Belarus had rejected the alternative due to proposed economic activity nearness to the borderline and negative opinion of Belarus citizens.

Stabatiskes site is acceptable due to developed infrastructure, favorable social factors (the possibility of repository construction at the particular site was accepted by citizens and administration of Visaginas municipality), nearness to the Ignalina nuclear plant, the site acceptance of neighbor countries.

The decision

The Ministry of environment, taking into consideration mentioned arguments accepts the possibility of near surface repository for radioactive waste construction at Galilauke or Stabatiskes sites, according to the provided environmental impact assessment report the Stabatiskes site is the preferable one.

Secretary of the Ministry of Environment

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