

### LIETUVOS RESPUBLIKOS APLINKOS MINISTERIJA THE MINISTRY OF ENVIRONMENT OF THE REPUBLIC OF LITHUANIA

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Mr. Felix Zaharia Chair of Implementation Committee Convention on Environmental Impact Assessment in a Transboundary Context **27** July 2016

No. (10-3)-D8 5819

Ms. Aphrodite Smagadi, Secretary To the Implementation Committee Convention on Environmental Impact Assessment in a Transboundary Context **Environment Division** Palais des Nations, CH - 1211 Geneva 10 Switzerland

Copy Ministry of Natural Resources and Environmental Protection of the Republic of Belarus 10 Kollektornaya Street, Minsk Republic of Belarus

#### REGARDING FOLLOW-UP ON DECISION VI/2 OF THE MEETING OF THE PARTIES

Dear Mr. Zaharia and Ms. Smagadi,

We would like to thank you for the letter of 7 April 2016 regarding the recommendation to organize Lithuanian-Belarus experts' bilateral discussion dedicated to the issues of Ostrovets nuclear power plant (NPP) project discussed at the 35th session of the Implementation Committee of the Espoo Convention.

The bilateral experts' meeting was held on 21-22 June 2016 in Vilnius (Lithuania) at the premises of the Ministry of Environment of the Republic of Lithuania. The agenda included the following topics:

- 1. Presentation on the current stage of the OstrovetsNPP project;
- 2. Application of the transboundary EIA procedures and decision making;
- 3. Assessment of locational alternatives for the NPP construction (including no-action alternative);
- 4. Evaluation of site and the NPP site selection criteria, including tectonic, geological and geophysical and seismological aspects;
- 5. Seismic safety assessment;
- 6. Assessment of seismicity and seismic hazards of the Ostrovets and alternative sites;

- 7. The IAEA's Site and External Events Design (SEED) mission and the stress-tests for the Ostrovets NPP:
- 8. Assessment of impacts in case of accidents. Preparedness and response to a nuclear or radiological emergency;
- 9. Potential contamination of the river Neris (Vilija) and groundwater resources in the capital Vilnius in case of major accidents in the Ostrovets NPP;
- 10. Design of the NPP;
- 11. Nuclear safety and radiation protection regulatory regime including development of the relevant legislation in Belarus;
- 12. Measures taken to control and ensure the highest quality of construction works and during operation of the NPP; Incidents;
- 13. Spent nuclear fuel and radioactive waste management policy and plans;
- 14. Organization of environmental monitoring.

Due to time constrains not all the agenda items were opened at the meeting. The detailed discussion was held on the agenda items 2-8 based on Lithuanian experts' questions and their argumentation, as well as presentations of Belarus experts. Discussion on item 9 was started, but interrupted and subsequent agenda items were not discussed. The discussion showed that there is a substantial difference of views between Lithuanian and Belarus delegations on the procedural and subject matter (e. g. methodological) with regard to the implementation of the Ostrovets NPP project. Moreover, presentations and verbal explanations provided by Belarus experts revealed that:

- New information, which had never been submitted to Lithuania, was presented at the meeting;
- This information contradicted information provided in the EIA report and earlier communication of Belarus:
- This information, in most cases, was of technical and scientific nature and needed careful analysis by Lithuanian authorities and scientific institutions;
- Site selection process for the construction of the NPP lacked detailed investigations and the decision to choose the Ostrovets site for the NPP construction was not supported by comprehensive factual data;
- The exact timing and scope of the International Atomic Energy Agency's Site and External Events Design Review Mission (the IAEA SEED mission) with a view to provide an independent review of the site evaluation and the design of the NPP is still under consideration by Belarus;
- The exact timing and scope of the transparent complimentary risk and safety assessment (the stress tests) as agreed with the European Commission on 23 June 2011, is still not available.

As a result, Lithuanian delegation requested Belarus to immediately:

• re-estimate population density and reassess possible radiological impact on Lithuanian public in the case of accident at Belarus NPP, taking into account population in the territory of Lithuania within the range of 100 km from Belarus NPP, which includes the most densely populated region, including the capital and the biggest city Vilnius (situated only 40 km<sup>1</sup> from the NPP);

<sup>&</sup>lt;sup>1</sup> 50 km to the city centre.

- submit the revised EIA report, which would include comprehensive information on the Ostrovets NPP, including the sites' researches, evaluation and selection issues, and would address the identified inconsistencies and shortcomings. Alternatively, the mentioned information could be added in an Annex to the EIA report for further analysis by Lithuanian experts and public consultations;
- accomplish the International Atomic Energy Agency's (IAEA) Site and External Events Design Review Service (SEED), in its full scope, with a view to provide an independent review of the site evaluation and the design of the NPP;
- undertake transparent complimentary risk and safety assessment (the stress tests) according to the agreement of 23 June 2011 with the European Commission;
- invite experts from the European Union, including Lithuania, to take part in the IAEA SEED mission and the stress-tests exercise, as only international expertise can guarantee impartial assessment;
- suspend the construction works of the Ostrovets NPP until the IAEA SEED mission and the stress tests are fully accomplished.

For your information, please, find enclosed interim report, which, in our opinion, in detail reflects the bilateral experts' discussion.

The next meeting is planned in the Republic of Belarus. Ministry of Environment of the Republic of Lithuania proposed to organize the next bilateral experts' meeting in September 2016 (either on 8-9<sup>th</sup> or the 13-14<sup>th</sup>) by its letter No. (10-3)-D8-5286 dated 5 July 2016.

Taking this opportunity, we would like to reiterate Lithuania's full support to the work done by the Implementation Committee so far in order to analyse the steps undertaken by Belarus and Lithuania after the adoption of the Committee's report on its twenty-seventh session in March 2013. Lithuania considers it very important to examine all the details of the Ostrovets NPP case and confirms its willingness to continue the close cooperation with the Implementation Committee.

ENCLOSURE. Interim report of bilateral Lithuanian-Belarus experts' meeting regarding the Ostrovets nuclear power plant project, 21-22 June, 2016, Vilnius with Annexes, 19 pages.

Yours sincerely,

Vice-Minister Algirdas Genevičius D. Growe

# Bilateral Lithuanian-Belarus experts' meeting regarding the Ostrovets nuclear power plant project, 21-22 June, 2016, Vilnius

#### INTERIM REPORT

#### Introduction

On 21-22 June in Vilnius (at the premises of the Ministry of Environment of the Republic of Lithuania (hereinafter – MoE) Lithuanian experts' delegation had a meeting with Belarus experts on the issues of Ostrovets nuclear power plant (hereinafter – NPP).

The draft agenda was elaborated considering the proposals of Belarus and the discussions at the 35<sup>th</sup> session of the Implementation Committee of the Espoo Convention<sup>1</sup> that took place in March 2016. The draft agenda was submitted to Belarus on 8 June 2016 by the letter of the MoE No. (10-3)-D8-4511 (See Annex 1). The updated agenda and list of Lithuanian delegation was submitted to Belarus on 20 June 2016 by the letter No. (10-3)-D8-4838 of the MoE (See Annex 2) containing the following list of topics to be discussed at the meeting:

- 1) Presentation on the current stage of the Ostrovets NPP project;
- 2) Application of transboundary environmental impact assessment (hereinafter EIA) procedures and decision making;
- 3) Assessment of locational alternatives for the NPP construction (including no-action alternative);
- 4) Evaluation of site and NPP site selection criteria including tectonic, geological and geophysical and seismological aspects;
- 5) Seismic safety assessment;
- 6) Assessment of seismicity and seismic hazards of the Ostrovets and alternative sites;
- 7) IAEA's Site and External Events Design (SEED) mission and stress-tests for the Ostrovets NPP;
- 8) Assessment of impacts in case of accidents. Preparedness and response to a nuclear or radiological emergency;
- 9) Potential contamination of the river Neris (Vilija) and groundwater resources in capital Vilnius in case of major accidents in the Ostrovets NPP;
- 10) Design of the NPP;
- 11) Nuclear safety and radiation protection regulatory regime including development of the relevant legislation in Belarus;
- 12) Measures taken to control and ensure the highest quality of construction works operation of the NPP; Incidents;
- 13) Spent nuclear fuel and radioactive waste management policy and plans;
- 14) Organization of environmental monitoring.

Due to time constrains not all the agenda items were opened in this meeting. The detailed discussion was held on agenda items 2-8 based on Lithuanian experts' questions and their argumentation, as well as presentations of Belarus experts. Discussion on item 9 was started, but interrupted. Subsequent agenda items were not discussed. The next meeting is planned in the Republic of Belarus.

#### I. Discussions and outcomes

<sup>&</sup>lt;sup>1</sup> UNECE Convention on Environmental Impact Assessment in a Transboundary Context.

The meeting was started with Belarus' presentation on the current stage of the Belarus NPP project. Lithuanian delegation took note of the presentation and proposed to address the questions of Lithuanian experts in the course of the discussion of the relevant agenda items.

# Application of transboundary EIA procedures and decision making:

Lithuania emphasized that the Ostrovets site was chosen and the construction works were commenced before the start of the transboundary EIA, although the Espoo Convention requires to evaluate alternative sites in the process of transboundary EIA and to choose the location as a result of it. This constitutes a serious violation of the Espoo Convention. Moreover, Belarus experts directly admitted that the Ostrovets site was the only one considered in the process of the transboundary EIA.

Lithuania recalled the decision of non-compliance, adopted in June 2014, by the Meeting of Parties of the Espoo Convention, regarding the transboundary EIA of the Ostrovets NPP, and urged Belarus to implement the given recommendations without any further delay. Besides, Lithuania encouraged Belarus to accept the proposal of the Implementation Committee of the Espoo Convention to establish an international experts' body modelled after the inquiry commission set in Appendix IV of the Espoo Convention for an in-depth analysis of the Ostrovets NPP case under the Espoo Convention<sup>2</sup>. However, Belarus strongly opposed it, claiming that the mentioned commission is a new unprecedented instrument and it requires additional financial resources.

#### Lithuania expects from Belarus the following:

- 1) To accept the proposal of the Implementation Committee of the Espoo Convention to establish an international experts' body modelled after the inquiry commission set in Appendix IV of the Espoo Convention for an in-depth analysis of the Ostrovets NPP case under the Espoo Convention;
- 2) To submit the revised EIA report, which would include comprehensive information on the Ostrovets NPP, including the sites' research, evaluation and selection issues, and would address the identified inconsistencies and shortcomings. Alternatively, the mentioned information could be added in an Annex to the EIA report for further analysis by Lithuanian experts and public consultations;
- 3) To co-arrange public hearings in the territory of Lithuania;
- 4) To organise experts' consultations in accordance with Article 5 of the Espoo Convention.

# Assessment of locational alternatives for the NPP construction (including no-action alternative) and site evaluation and selection criteria (geological, seismotectonic and hydrological conditions):

Lithuania repeatedly noted that criteria for prioritisation of the Ostrovets site were not explained – in the EIA report the major characteristics and prohibiting factors of the three sites for nuclear facilities (Kukshinovsk and Krasnopolyana and Ostrovets sites) were just stated, but not described and not motivated by data. In different documents submitted by Belarus earlier the information about geological, seismotectonic and hydrologic structure of the three alternative sites was inconsistent.

During the meeting Belarus provided big amount of new geological and tectonic information about the different geological and tectonic issues (e.g. presence of the active tectonic fault penetrating the crystalline basement and sedimentary cover and differentiated vertical movements of the Earth crust of

<sup>&</sup>lt;sup>2</sup> Letter of the Implementation Committee dated 16 December 2015, discussion at the 35<sup>th</sup> session of the Implementation Committee that took place in March 2016.

more than 10 mm per year in the Kukshinovsk site; presence of 13 inactive faults in the Ostrovets site etc.). Some of the new geological data contradicted the information presented in EIA report<sup>3</sup>, where it was stated that prohibiting factor for the NPP construction, such as "site is situated directly on tectonically active faults" and "territory with proved facts of modern differentiated movements of the Earth crust (vertical - with the speed of more than 10 mm per year") are absent in all three sites and all three sites are "without active faults" and "vertical movements: with speed of less than 10 mm per year", and, in turn, correspond to the requirements of national normative documentation (TKP-097-2007). Lithuania requested clear answers on the contradicting statements on major prohibiting factors. Belarus explained that a lot of new information about the tectonic and geological structure of the sites such as indications of the potential for suffusion-karst processes, activity of faults has been obtained as a result of the new detailed investigations of the sites, which have been carried out after the preparation of the EIA Report: e.g. fault in Kukshinovsk site was classified as inactive in 2008, but later new data showed its activity, Thus, the data were not included into the EIA documentation. This once again proved Lithuanian concerns that the site selection process lacked detailed geological investigations and the decision to choose the Ostrovets site for the NPP construction was not supported by comprehensive factual data. Lithuania requested to present the actual information, including the specific data (maps, cross-sections etc.) as a package of integrated geological data; the information, updated analysis of competing sites and its compliance with normative documentation requirements and its conclusions should be included in the EIA Report or alternatively as an Annex to it.

Lithuania reiterated that the Ostrovets site had the most unfavourable seismo-tectonic parameters in comparison to the alternative sites, as it is indicated by two instrumentally recorded earthquakes ("on 17th October 1987 there was instrumentally recorded earthquake with epicentre located 10 km to the east from Ostrovets", and "local earthquake on 27th February 1987 at 23:37:22 UTC time (magnitude 2.5, epicentre located 10 km to the east from Ostrovets with hypocentre at 10 km depth) recorded by three seismic stations) and one historical earthquake with intensity 5 to 6 (according to the MSK-64 scale) in 1908 in Gudogai in the Ostrovets region. The occurrence of historical earthquakes and records of recent local earthquake(s), even of small magnitude, indicate seismic activity potential for the Ashmyany fault zone near the Ostrovets site. Belarus presented a new concept of local seismicity that questioned the reliability of instrumentally recorded and historic data of earthquakes adjacent to Ostrovets. They also provided information about the absence of the active faults within the Ostrovets site. Lithuania noted the importance of capability of faults as defined in the IAEA documents (IAEA safety guide NS-G-3.3 "Evaluation of Seismic Hazards for Nuclear Power Plants" and safety guide SSG-9 "Seismic Hazards in Site Evaluation for Nuclear Installations") in seismic hazard assessment. These safety guides provide recommendations on how to determine the ground motion hazards for a plant at a particular site, the potential for surface faulting and capability of faults. Lithuania also noted the lack of justified information on tectonic structure, particularly, on distribution of fault system in the Ostrovets site and structural relationship of these faults with capable Ashmyany fault. Belarus did not discuss the issues of capability of faults in the understanding of the IAEA documents.

In the Krasnopolyana and the Kukshinovsk sites there is a potential possibility of activation of suffusion-karst processes that is a complicating factor, as it was stated by Belarus. The absence of suffusion-karst processes is one of geological criteria that allowed for the prioritization of the Ostrovets site in comparison with the two other sites. Lithuania repeatedly claimed that clear geological information on the absence of the risk of potential activation of the suffusion-karst processes in the Ostrovets site was not provided. Belarus did not answer several requests whether "Cimmerian and Alpine complex represented by depositions of chalk, neogene and tertiary: green terrigene-glauconite phosphorite carrying formation (Albian and Cenomanian), formation of writing chalk (Cenomanian, Turonean, Maastricht) having thickness of more than 100 m", occurred or not in the Ostrovets site, and, respectively, whether

<sup>&</sup>lt;sup>3</sup>Table 5. Analysis of competing sites correspondence to normative documentation requirements (page 49),

potentially possible activation of suffusion-karst processes could occur. Lithuanian delegation repeatedly requested to provide information whether suffusion-karst processes in the Ostrovets site had been studied with the same accuracy as for the alternative sites. Belarus presented a big amount of data about the geological structure of the sedimentary cover of the site with a view to explain the absence of geological conditions for activation of suffusion-karst processes at the Ostrovets site and the other major site selection characteristics; however, Lithuania explained that detailed analysis of the data is needed and that it was not possible to fulfil the analysis during the meeting. Belarus emphasized that detailed information on this issue was available and, in principle, this information could be presented to Lithuania. Lithuania noted that this information had been requested since 2009.

Lithuania reiterated its position that the alternative sites were not equally evaluated in terms of hydrological conditions. Even though the information provided concluded that engineering-geological and hydrogeological conditions of the Kukshinovsk site were complicated and drainage of ground and surface water was relevant only at the Krasnopolyana and the Kukshinovsk sites, the EIA report proved that such phenomenon was also relevant at the Ostrovets site. The Ostrovets site was not evaluated in terms of potential risk of technogenic flooding due to artificial water-bearing infrastructure failure, groundwater flooding and pluvial flooding (not caused by natural exceedance of rivers) and possible change of soil water regime. Due to the complicated hydrological conditions in the Ostrovets site, the safety of the facility could be affected and additional measures would be needed to avoid dangerous surface and soil water factors. Belarus informed about on engineering-geological and hydrogeological conditions of the Kukshinovsk site and on the technogenic flooding of the Ostrovets site caused by the river Neris and the foreseen corresponding measures, but did not exactly answer the question raised.

Population density is another factor that must be considered in the site selection process. Belarus experts noted that population density (=> 100 people/km²) could be a prohibiting factor when considering location for an NPP. However, Belarus acknowledged that only the population density in the territory of Belarus was assessed, while the situation in the neighbouring Lithuania situated only 20 km away from the Ostrovets NPP was not taken into account. It should be noted that Lithuanian capital and the biggest city Vilnius (542 664 residents, major business and governmental institutions) will be situated just 40 km² away from the Ostrovets NPP.

Lithuanian delegation recalled the statement of Belarus during the discussion at the 35th session of the Implementation Committee of the Espoo Convention, that information related to the site selection process was classified and therefore, Belarus declared that it will not provide such data. Lithuania raised a question whether this restriction is reasonably grounded and requested Belarus to provide to Lithuania full information on the site selection process, including the results of analysis and investigations.

# Lithuania expects from Belarus the following:

- 1) To provide the aforementioned specific data (geological and tectonic maps, cross-sections etc.) about the geological and seismo-tectonic structure of the sites as consistent package of integrated data and information by updating and amending the EIA report or adding it as an Annex to the EIA report;
- 2) To provide clear conclusions about the occurrence of active faults in all alternative sites. To provide justified information and data (e.g. geological and tectonic maps, cross-sections etc.) on fault system in the Ostrovets site and its structural relationship with capable Ashmyany fault or other data proving the absence of potential for surface faulting and capability of faults at the Ostrovets site;

<sup>&</sup>lt;sup>4</sup> 50 km to the city centre.

- 3) To present specific data about the geological structure of the Ostrovets site explaining the absence of geological conditions for activation of suffusion-karst processes and other major site selection characteristics, discussed during the meeting;
- 4) Update the analysis of the competing sites and review its compliance with the normative documentation requirements. This should be included in the EIA report or in an Annex to the EIA report;
- 5) To provide the assessment for the Ostrovets site of potential risk of flooding due to technogenic flooding (not caused by natural exceedance of the Neris river) taking into account flood mechanisms such as flooding defence or infrastructural failure and provide descriptions of the additional measures that will be needed and available to avoid adverse consequences caused by dangerous surface and ground water events;
- 6) To re-estimate population density, taking into account population density not only in also in the territory of Lithuania, which is only 20 km from the Ostrovets NPP;
- 7) To provide all information related to the site selection process by reconsidering the decision to classify this information, taking into account the common practice not to apply restrictions to such type of data.

# Seismic safety assessment and assessment of seismicity and seismic hazards of the Ostrovets and alternative sites:

Lithuania noted that probabilistic seismic hazard assessment for the Ostrovets site was carried out using "Provisional General Seismic Zoning Map OCP-97-D" (document of the Russian Federation) with an insert of the territory of the Republic of Belarus (scale 1: 10 000 000) compiled in 1997 that was included in Belarus national regulation "TKII 45-3.02-108-2008 (02250)". This probabilistic General Seismic Zoning Map was compiled before the two earthquakes in the Kaliningrad enclave (Russian Federation) with magnitudes of M=5.0 and M=5.2 occurred in 2004. These two earthquakes affected the territory of the Eastern part of Belarus and NPP site. The earthquakes were very important in assessing the seismicity of the whole East Baltic region, as they had the highest magnitudes ever recorded in this region and were located in the intracratonic stable territory, where no earthquakes have been previously recorded. Moreover, official set of maps of general seismic zoning of Russian Federation OCP-97-D does not include the territory of Belarus. In this context, Lithuania inquired:

- 1) Why seismic hazard evaluation for the NPP site with increased local seismicity (e.g. 1 historical earthquake (M=4.5; 1908) and two instrumental earthquakes (M~3.0; 1987) recorded in close vicinity of the Ostrovets site) was based on large scale (1:10 000 000) provisional general map?
- 2) Which actual data served as a basis for extrapolating the map of general seismic zoning of the Russian Federation OCP-97-D to the territory of Belarus?
- 3) Why this map has not been updated considering the two Kaliningrad earthquakes of planning the construction of the NPP?

Having heard the explanations Lithuania concluded that direct probabilistic seismic hazard including the new data about the seismicity of the region (e.g. Kaliningrad earthquakes) that line with the recommendations of the IAEA documents (Safety standards NS-R-3, NS-G-1.6 and SSG-9 (items 1.2 and 6.4.)) and would adopt these commonly accepted verified methodologies and practices, has not been carried out for the Ostrovets site.

Lithuania repeatedly asked how macroseismic intensity points of MSK-64 scale used for the deterministic and probabilistic seismic hazard assessment for the Ostrovets site were converted to peak acceleration of soil particles (Peak Ground Acceleration, PGA). In response, Belarus indicated that more than 40 explosions with magnitudes of ~ M-2.0 were carried out in and in close vicinity of the Ostrovets site, in order to establish relation between intensity points and PGA using unique methodology, developed by Ukrainian researches. Lithuania holds that this method is able to establish the relationship between magnitude of explosion and "maximum acceleration"; however, the relationship between intensity and

"maximum acceleration" remains unexplained. Lithuania requested Belarus to provide detailed information with regard to the mentioned Ukrainian methodology for analysis.

Lithuania repeatedly raised the question how the Design Earthquake and Maximum Design Earthquake characteristics, used by Belarus in seismic hazard evaluation for the Ostrovets site, corresponded to the commonly accepted seismic hazard levels – SL-1 and SL-2, as defined in the IAEA documents (e.g. SSG-9 (NS-G-3.3) and NS-G-3.6) and what were the seismic hazards assessment values (SL-1 and SL-2) in terms of peak ground acceleration (PGA) for design basis.

Lithuania referred to the IAEA Safety standard NS-G-1.6, item 2.7 and emphasised that calculated peak acceleration value obtained for the Ostrovets site is less than 0.1g and does not correspond to the requirements of the aforementioned IAEA Safety standard. Moreover, Lithuania noted that the information on this parameter in different documents submitted by Belarus is contradictory and asked to present consistent final values of SL-2 and SL-1 for the Ostrovets site, and to explain if they correspond to the requirements of the IAEA document NS-G-1.6, item 2.7. Lithuania requested Belarus to provide consistent integrated information regarding seismic hazard assessment.

Lithuania noted inconsistency of deterministic seismic hazard assessment, as different assumptions and methodologies have been adopted for deterministic assessment of seismic hazards for 3 different seismogenic zones influencing the Ostrovets site. Item 4.12 of the IAEA document SSG-9 states "<...>For sites in intraplate settings, the largest observed earthquake may not be a good estimate of  $M_{max}$ ...>". Accordingly, the parameter Mmax for intracratonic areas of low seismicity has to be assessed using commonly accepted safety margin of 0.5 and has to be calculated as  $M_{max}=M_{max}$ \_observed + 0.5. Lithuania noted that Belarus in the deterministic seismic hazard evaluation for the two closest seismogenic zones (Daugavpils and Ashmyany) to the Ostrovets site used only the assumption that  $M_{max}=M_{max}$ \_observed.

Belarus accepted that approach ( $M_{max}=_{Mmax\_observed}+0.5$ ) could be adopted for the Kaliningrad seismogenic zone, however this position has not been integrated in EIA or other project documentation. Moreover, Belarus did not agree that the same approach could be adopted to the Ashmyany and the Daugavpils seismogenic zones, located in close vicinity of the Ostrovets site.

Lithuania requested Belarus to provide the same calculations of peak ground accelerations and intensities for the Ostrovets site from the Ashmyany and the Daugavpils seismogenic zones using safety margin of 0.5. Belarus promised to carry out deterministic seismic hazard assessment for these zones using  $M_{max}=M_{max\_observed}+0.5$  assumption and to provide new data to the Lithuanian side in writing, as consistent package of integrated data and information.

## Lithuania expects from Belarus the following:

- 1) To carry out direct probabilistic seismic hazard calculations for the Ostrovets site following the recommendations of the IAEA documents (Safety standards NS-R-3, NS-G-1.6 and SSG-9 (items 1.2 and 6.4.) adopting commonly accepted and verified methodologies and to provide seismic hazards assessment (e.g. seismic hazard levels SL-1 and SL-2) in terms of obtaining ground motion values (Peak Ground Acceleration) for the NPP design basis in the Ostrovets site;
- 2) To provide consistent final value SL-2 for the Ostrovets site used for project documentation that corresponds the requirements of the IAEA document NS-G-1.6;
- 3) To make additional deterministic seismic hazard calculations of peak ground accelerations and intensities for the Ostrovets site induced by the Ashmyany and the Daugavpils seismogenic zones using safety margin of 0.5 while assessing the maximum potential magnitude Mmax;

4) To provide the aforementioned information related to seismic hazard assessment for the Ostrovets site in writing as consistent package of integrated data and information by updating and amending the EIA report or adding it as an Annex to the EIA report.

## IAEA's Site and External Events Design (SEED) mission and stress-tests for Belarus NPP:

Lithuania repeatedly called on Belarus to immediately accomplish the International Atomic Energy Agency's (IAEA) Site and External Events Design Review Service (SEED), in its full scope, with a view to provide an independent review of the site evaluation and the design of the NPP. Lithuania also urged Belarus to fulfil its commitment of June 23, 2011 to undertake comprehensive risk and safety assessments (stress tests), taking into account the agreement with the European Commission. Lithuania requested Belarus to invite experts from the European Union, including Lithuania, to take part in the IAEA SEED mission and the stress-tests exercise, as only international expertise can guarantee impartial assessment. Belarus reiterated its promise to accomplish the IAEA SEED mission and the stress tests by the end of 2016, yet did not provide any explicit information about the planned dates and scope of the mentioned international review exercises, and even demonstrated a lack of understanding how the stress tests should be performed. Besides, Belarus did not respond to the Lithuanian request regarding EU, including Lithuanian, experts' participation in the mentioned international review. In this context, Lithuania suggested Belarus to suspend the construction works in the Ostrovets site until the above mentioned international commitments are fulfilled.

#### Lithuania expects from Belarus the following:

- 1) To provide exact date and scope of the IAEA SEED mission;
- 2) To provide exact date and scope of the stress tests exercise:
- 3) To invite experts from the EU, including Lithuania, to take part in the IAEA SEED mission and the stress-tests exercise;
- 4) To suspend construction works of the Ostrovets NPP until the IAEA SEED mission and the stress tests are fully accomplished.

# Assessment of impacts in case of accidents. Preparedness and response to a nuclear or radiological emergency:

In the discussion on the site selection, Belarus experts noted that population density (=> 100 people/km²) could be a prohibiting factor when considering location for an NPP. However, Belarus acknowledged that only the population density in the territory of Belarus was assessed and situation in Lithuania was not taken into account. Furthermore, it is important to note that the Ostrovets NPP is situated only 40 km<sup>5</sup> away from Lithuanian capital Vilnius, which is the most densely inhabited and biggest Lithuanian city (542 664 residents). This information is of utmost importance, as the International Atomic Energy Agency (IAEA) requires to assess the possibility to implement emergency preparedness plans in the areas most likely to be affected before choosing the location for a NPP<sup>6</sup>. During the meeting Belarus noted that it limited the assessment to its own territory and is planning emergency preparedness only for the territory of Belarus, but not for Lithuania.

<sup>&</sup>lt;sup>5</sup> 50 km to the city centre.

<sup>&</sup>lt;sup>6</sup> The IAEA Safety Requirements NS-R-3, para 2.28 and 2.29, <a href="http://www-pub.iaea.org/MTCD/publications/PDF/Pub1709web-84170892.pdf">http://www-pub.iaea.org/MTCD/publications/PDF/Pub1709web-84170892.pdf</a>

Belarus did not evaluate population density in Lithuania, did not take into account that Vilnius was not only the most densely inhabited city, but also the capital city of Lithuania. Lithuanian experts estimate that in case of an accident at the Ostrovets NPP, one third of the Lithuanian population (within the radius of 100 km from the Ostrovets NPP) could be affected. Lithuania strongly insisted that Belarus takes into account population density and short distance from the Ostrovets NPP to the Lithuanian capital and the biggest city Vilnius (40 km<sup>7</sup>) and to reassess a possible radiological impact on Lithuanian population in line with the most recent recommendations of HERCA-WENRA<sup>8</sup>. Belarus estimates that Lithuanian population will not face any radiological threats even in case of accidents at the Ostrovets NPP. However, Lithuanian Center for Physical Sciences and Technology (former – Institute of Physics) modelled an accident at the Ostrovets NPP (level 7, INES scale<sup>9</sup>) and concluded that protective actions, such as evacuation, sheltering, iodine thyroid blocking and restrictions of consumption of food and other commodities<sup>10</sup> for Vilnius residents might be necessary, as in the first 7 days residents of Vilnius might get 100 mSv radiation dose. Belarus experts expressed their interest to receive information regarding the methodology and data applied by Lithuanian scientists.

Lithuanian experts having evaluated the emergency preparedness zones and measures to be applied in case of an accident at the Ostrovets NPP that were foreseen by Belarus, concluded that they are not in line with the international recommendations set by the IAEA, and HERCA-WENRA. The EIA report for the Ostrovets NPP states that in case of a serious beyond design-basis accident the preventive action zone should not exceed 800 m from the NPP, iodine prophylaxis should be applied up to 4 km (for pregnant women and children up to 12 km), sheltering would be required up to 6 km, evacuation might be considered only for pregnant women and children up to 4.7 km, restrictions of consumption of locally produced food – up to 30 km. This contradicts the recommendations of the IAEA and the HERCA-WENRA for the emergency preparedness and planning zones.

Table No 1. The IAEA and the HERCA-WENRA recommendations for the emergency preparedness and planning zones

The IAEA <sup>11</sup> recommendation	HERCA-WENRA <sup>12</sup> recommendation
Off-site emergency zones and distances around the NPP:	HERCA and WENRA consider that in Europe:
	• Evacuation should be prepared up to 5 km
• Precautionary action zone (PAZ). Distance: 3-5 km, actions: evacuation, sheltering, iodine	around nuclear power plants, and sheltering and iodine thyroid blocking (ITB) up to 20 km;

<sup>&</sup>lt;sup>7</sup> 50 km to the city centre.

<sup>&</sup>lt;sup>8</sup> Heads of the European Radiation Protection Authorities (HERCA) and Western European Nuclear Regulators Association (WENRA) in 2015 developed and agreed on a new approach to further improve the response and cross-border coordination for all types of possible accident scenarios including severe accidents, like the one in Fukushima. It contains overarching principles and provides an incentive for joint actions between neighbouring countries. In 2015 Belarus joined WENRA as an observer and committed to implement WENRA's recommendations.

 $<sup>^9</sup>$  INES scale - International Nuclear and Radiological Event Scale (min - 1, max - 7), is a tool for promptly and consistently communicating to the public the safety significance of events associated with sources of ionizing radiation. Accidents at the Chernobyl NPP and the Fukushima NPP were of level 7, INES scale.

<sup>&</sup>lt;sup>10</sup> These indicated protective actions are used if the projected dose exceeds 100 mSv in the first 7 days.

<sup>&</sup>lt;sup>11</sup> Actions to Protect the Public in an Emergency due to Severe Conditions at a Light Water Reactor, IAEA, 2013, <a href="http://www-pub.iaea.org/MTCD/Publications/PDF/EPR-NPP\_PPA\_web.pdf">http://www-pub.iaea.org/MTCD/Publications/PDF/EPR-NPP\_PPA\_web.pdf</a>

<sup>&</sup>lt;sup>12</sup> HERCA-WENRA Approach for a better cross-border coordination of protective actions during the early phase of a nuclear accident, Stockholm, 22 October 2014, <a href="http://www.wenra.org/media/filer\_public/2014/11/21/herca-wenra approach for better cross-">http://www.wenra.org/media/filer\_public/2014/11/21/herca-wenra approach for better cross-</a>

border coordination of protective actions during the early phase of a nuclear accident.pdf

thyroid blocking (ITB);

- Urgent protective action planning zone (UPZ). Distance: 15-31 km, actions: evacuation, sheltering, ITB, deactivation, restrictions of consumption of food;
- Extended planning distance (EPD). Distance: 100 km, actions: ITB, sheltering; and
- Ingestion and commodities planning distance (ICPD). Distance: 300 km, actions: restriction of consumption food and other commodities.
- A general strategy should be defined in order to be able to extend evacuation up to 20 km, and sheltering and ITB up to 100 km.

Belarus has not assessed the consequences of a heavy aircraft crash against the Ostrovets NPP, which in a worst case scenario could result in high releases of radionuclides into the atmosphere. Lithuania requested Belarus to perform the assessment and introduce necessary improvements to the NPP design AES-2006 (chosen by Belarus), in line with the WENRA recommendations of 2013, and taking into account the AES-2006 design assessment performed by Finland<sup>13</sup>. The Finnish nuclear safety regulator has concluded that nuclear reactor containment building of the AES-2006 cannot resist a heavy aircraft crash and the design must be significantly modified: the outer containment to withstand such a crash and physical separation of safety systems to protect the safety functions are necessary. Rosatom agreed to implement these requirements. It should be pointed out, that in the absence of more extensive structural protection, it is difficult to demonstrate the adequate retention of the safety functions in the event of an aircraft crash. So far, Belarus has performed assessment only for a light airplane (~5 tones) and refuses to assess consequences of a heavy aircraft crash due to low probability of the event. WENRA holds a position that a crash of a heavy airplane should be considered in the design of all new reactors regardless of the estimated probability of accidental crash. The measures such as correction of air corridors may be only supplementary measures against accidental crash of airplane.

## Lithuania expects from Belarus the following:

- 1) To carry out assessment of the NPP resistance to a heavy aircraft crash, as recommended by WENRA, and to introduce necessary improvements to the NPP design AES-2006. The results of the assessment should be included in the EIA report for the Ostrovets NPP or its Annex;
- 2) To reassess possible radiological impact on Lithuanian population, taking into account population density not only in Belarus, but also in the territory of Lithuania, including Lithuanian capital and biggest city Vilnius. The estimations should be based on the recommendations of the IAEA and the HERCA-WENRA.

#### Belarus expects from Lithuania the following:

1) To provide additional information regarding the methodology and data that Lithuanian Centre for Physical Sciences and Technology (former Institute of Physics) and Lithuanian Geology Survey used to assess the impact on Lithuanian public and potable water in Vilnius region in case of accidents.

Potential contamination of the river Neris (Vilija) and groundwater resources in capital Vilnius in case of major accidents in Ostrovets NPP (the question was opened but not discussed)

Lithuania repeatedly provided information about the potential contamination of the groundwater resources in the capital Vilnius in case of major accidents in the Ostrovets NPP, as it was estimated by

<sup>&</sup>lt;sup>13</sup> Russian state atomic energy corporation Rosatom develops NPP design AES-2006 project in Finland (Hanhikivi 1).

3D numerical modelling of Lithuanian scientists in 2014 (*Gregorauskas et al., 2014*). The river Neris flows through the Lithuanian capital Vilnius and belongs to the Nemunas river basin, which covers 72 percent of Lithuanian territory. In case of a major accident at the Ostrovets NPP, water of the river Neris, contaminated with radioactive substances, would reach Northern Vilnius wellfields, located on the riverbanks only in 30 km from NPP within 12 hours. Potable water supply of Vilnius is based totally on groundwater from riverbank wellfields. 11 wellfields that are located in the Neris river valley contain 73% of total potable water supply of Vilnius. It was estimated that 57-89% of exploitable groundwater resources could be lost in the wellfields of the biggest city Vilnius (542 664 residents), the second biggest city Kaunas (297 846 residents) and Jonava city (28 568 residents) in case of a major accident at the Ostrovets NPP. Lithuania asked if this information was considered and assessed. In case of a major accident it is crucial to know radioactive status of water in the river Neris (Vilija) in real time, thus, monitoring program in case of accidents and the access to real time data to Lithuanian side must be assured. The special plan for potable water supply in case of the major accident should be prepared for Vilnius, Kaunas and Jonava cities.

# Lithuania expects from Belarus the following:

- 1) To reassess possible radiological impact on Lithuanian population, taking into account population density not only in Belarus, but also in the territory of Lithuania, which is only 20 km from the Ostrovets NPP, including Lithuanian capital and the biggest city Vilnius only 40 km<sup>14</sup> from the NPP. The estimations should be based on the recommendations of the IAEA and the HERCA-WENRA;
- 2) To present an updated surface and groundwater monitoring program that would include assessment of impacts in case of major accidents at the NPP and would ensure Lithuanian access to real time data.

Belarus expects from Lithuania the following:

1) To provide additional information about the methodology and data of the assessment of potential contamination of the groundwater resources in capital Vilnius in case of major accidents in the Ostrovets NPP (Gregorauskas et al., 2014).

## Topics not discussed due to the time constraints

Part of the agenda items were not discussed due to the lack of time:

- 1) Potential contamination of the river Neris (Vilija) and groundwater resources in capital Vilnius in case of major accidents in the Ostrovets NPP (the question was opened but not discussed);
- 2) Design of the NPP;
- 3) Nuclear safety and radiation protection regulatory regime including development of the relevant legislation in Belarus;
- 4) Measures taken to control and ensure the highest quality of construction works and during operation of the NPP; Incidents;
- 5) Spent nuclear fuel and radioactive waste management policy and plans;
- 6) Organization of environmental monitoring.

#### II. Conclusions

<sup>&</sup>lt;sup>14</sup> 50 km to the city centre

- 1) During the meeting Lithuanian and Belarus experts demonstrated fundamentally different approaches towards methodology and implementation of the international standards, including the principles of openness, transparency and good faith;
- 2) Presentations and verbal explanations provided by Belarus experts revealed that:
  - a) new information, which had never been submitted to Lithuania, was presented at the meeting;
  - b) the new information contradicted the data provided in the EIA report and previous communication of Belarus;
  - c) the new information, in most cases, was of technical and scientific nature and needed careful analysis by Lithuanian authorities and scientific institutions;
- 3) During the meeting it was finally clarified that Ostrovets was chosen as the only site for the construction of the NPP well before the notification and commencement of transboundary EIA;
- 4) Population density factor used for site selection for the construction of the NPP and assessment of radiological impact on the public took into account only population density in Belarus. Therefore, it is necessary to re-estimate population density and reassess possible radiological impact on Lithuanian public in the case of accident at Belarus NPP, taking into account population in the territory of Lithuania within the range of 100 km from Belarus NPP, which includes the most densely populated region, including the capital and the biggest city Vilnius (situated only 40 km<sup>15</sup> from the NPP);
- 5) Site selection process for the construction of NPP lacked detailed investigations and the decision to choose Ostrovets site for the NPP construction was not supported by comprehensive factual data. Lithuanian delegation requested Belarus to present actual information in the form of a revised EIA report, which would address the identified inconsistencies and shortcomings, or, alternatively, as an Annex to the EIA report for further analysis by Lithuanian experts and public consultations. Belarus delegation refused to update the EIA report or to add an Annex to it;
- 6) Belarus did not provide any information regarding:
  - a) the concrete timing and scope of the IAEA SEED mission for an impartial evaluation of NPP project implementation in relation to site selection and design features against external events:
  - b) the timing and scope of the complimentary risk and safety assessment (the stress tests);
  - c) possible involvement of the EU and Lithuanian experts in the international reviews;

Therefore, in order to ensure proper implementation of the results and recommendations of the international review exercises prior to the start of the operation of the Ostrovets NPP, Lithuanian delegation requested to suspend the construction works of the Ostrovets NPP until the full accomplishment of the IAEA SEED mission and the stress tests.

#### ANNEXES:

- 1) Letter of Lithuanian MoE dated 8 June 2016 No. (10-3)-D8-4511, 2 pages;
- 2) Letter of Lithuanian MoE dated 20 June 2016 No. (10-3)-D8-4838, 6 pages.

<sup>&</sup>lt;sup>15</sup> 50 km to the city centre.



### LIETUVOS RESPUBLIKOS APLINKOS MINISTERIJA THE MINISTRY OF ENVIRONMENT OF THE REPUBLIC OF LITHUANIA

A. Jakšto St 4, LT-01105 Vilnius, tel: (+370 5) 266 35 39, fax: (+370 5) 266 36 63, e-mail: info@am.lt http://www.am.lt

Ministry of Natural Resources and Environmental 8 June 2016 No. (10-3)-D8-4511 Protection of the Republic of Belarus 10 Kollektornaya Street, Minsk Republic of Belarus

Copy:

Implementation Committee Convention on Environmental Impact Assessment in a Transboundary Context

Dear Ms Iya Malkina,

The Ministry of Environment of the Republic of Lithuania presents its compliments to the Ministry of Natural Resources and Environmental Protection of the Republic of Belarus and acknowledges the receipt of the letter of 26 May 2016 No. 13-11/1021.

We would like to confirm that the bilateral experts' meeting dedicated to the issues of Belarus NPP will be held in the meeting room No. 506 in the Ministry of Environment of the Republic of Lithuania (address: A. Jakšto st. 4/9, Vilnius) on 21-22 June 2016. Time schedule for both days of the meeting will be from 9.00 am to 5.00 pm.

Considering Belarus proposals, also discussion at the 35th session of the Implementation Committee of the Espoo Convention, that took place in March 2016, Lithuania presents the following list of issues to be discussed at the meeting:

- Presentation on the current stage of the Belarus NPP project;
- Application of transboundary EIA procedures and decision making:
- Assessment of locational alternatives (including no-action alternative);
- Site evaluation and selection criteria:
- Seismic safety assessment;
- Assessment of seismicity and seismic hazards of Ostrovets and alternative sites;
- IAEA's Site and External Events Design (SEED) mission and stress-tests for Belarus NPP;
- · Assessment of impacts in case of accidents. Preparedness and response to a nuclear or radiological emergency;
- Potential contamination of the river Neris (Vilija) and groundwater resources in capital Vilnius in case of major accidents in Ostrovets NPP;
- Design of NPP;
- Nuclear safety and radiation protection regulatory regime including development of relevant legislation in Belarus:
- · Measures taken to control and ensure highest quality of construction works and during operation of NPP. Incidents;
- Spent nuclear fuel and radioactive waste management policy and plans;
- Monitoring measures.

It would be most welcome if Belarus delegation at the beginning of the meeting made a presentation about the NPP project and its current stage.

Taking into account your request, simultaneous Lithuanian-Russian interpretation will be provided by Lithuanian side during the meeting.

Lithuania has continually stressed the need for an independent review of the suitability of construction site as well as the quality of the NPP, including EIA, documentation. We are convinced that participation in the bilateral meetings of the international experts' commission, proposed by the Implementation Committee of the Espoo Convention, would be a very useful instrument to address the mentioned issues. Therefore, taking the opportunity, we once again invite Belarus to reconsider its position regarding the establishment of the special expert body following the model of an Inquiry Commission set in Appendix IV of the Espoo Convention.

In order to arrange logistical details for the experts' meeting we would appreciate to receive the information on the composition of Belarus delegation at your earliest convenience. Belarus delegation members who need to apply for a Schengen visa are kindly asked to contact the Consular section of the Embassy of the Republic of Lithuania in Minsk (contact phone numbers: +375 17 285 24 48; +375 17 285 24 49).

Sincerely yours,

Vice-Minister Algirdas Genevičius Agmus-



# LIETUVOS RESPUBLIKOS APLINKOS MINISTERIJA THE MINISTRY OF ENVIRONMENT OF THE REPUBLIC OF LITHUANIA

A. Jakšto St 4, LT-01105 Vilnius, tel: (+370 5) 266 35 39, fax: (+370 5) 266 36 63, e-mail: info@am.lt\_http://www.am.lt

Ministry of Natural Resources and Environmental & June 2016
Protection of the Republic of Belarus
10 Kollektornaya Street, Minsk
Republic of Belarus

No. (10-3)-D8-4838

Copy:

Implementation Committee
Convention on Environmental Impact Assessment
in a Transboundary Context

Dear Ms Iya Malkina,

The Ministry of Environment of the Republic of Lithuania presents its compliments to the Ministry of Natural Resources and Environmental Protection of the Republic of Belarus and acknowledges the receipt of the letters of 15 June 2016 No. 13-11/1196 and 17 June 2016 No. 13-11/1491-BH.

We would like to inform that the Ministry of Foreign Affairs of the Republic of Lithuania on 16 June 2016 notified Lithuanian Embassy in the Republic of Belarus about the Schengen visa applications for Belarus delegation members. For your information please find enclosed copy of the letter.

Following your request regarding the elaboration and submission of the final agenda of the bilateral Lithuanian-Belarus experts' meeting regarding Belarus nuclear power plant project, we would like to point out that all the issues for the bilateral meeting presented by the Ministry of Environment of the Republic of Lithuania in its letter of 8 June 2016 No. (10-3)-D8-4511 fall under the scope of discussion at the 35th session of the Implementation Committee of the Espoo Convention and the decision VI/2 on the Review of compliance with the Espoo convention adopted by the Meeting of Parties to the Convention on its sixth session on 2-5 June 2014 and require proper attention. Please find the enclosed agenda as well as the composition of Lithuanian delegation.

Looking forward to an open and fruitful discussion.

#### Enclosure:

1. Copy of the letter to the Lithuanian Embassy in the Republic of Belarus, 2 pages;

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- 2. Agenda of bilateral experts meeting, 1 page.
- 3. List of Lithuanian delegation, 1 page.

Sincerely yours,

Vice-Minister

Algirdas Genevičius



# LIETUVOS RESPUBLIKOS UŽSIENIO REIKALŲ MINISTERIJOS EKONOMINIO SAUGUMO POLITIKOS DEPARTAMENTAS

Biudžetinė įstaiga, J.Tumo-Vaižganto g. 2, LT-01511 Vilnius, tel.: (8 5) 236 2444, (8 5) 236 2400, faks. (8 5) 231 3090, el. p. urm@urm.lt, http://www.urm.lt

Duomenys kaupiami ir saugomi Juridinių asmenų registre, kodas 188613242

Lietuvos ambasadai Baltarusijoje

2016-06-16 Nr. (23.2.14)3-3140

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# DĖL ŠENGENO VIZŲ

Informuojame, kad 2016 m. birželio 21-22 d. Lietuvos aplinkos ministerijos kvietimu Vilniuje vyks Lietuvos ir Baltarusijos ekspertų susitikimas Astravo atominės elektrinės projekto klausimais.

Remiantis Baltarusijos pusės pateikta informacija, žemiau išvardinti delegacijos nariai kreipsis dėl Šengeno vizų išdavimo į Lietuvos ambasadą Baltarusijoje:

- Parfenov Alexander Baltarusijos respublikinės unitarinės įmonės "Baltarusijos AE" vyr. inžinieriaus pavaduotojas saugos ir patikimumo klausimais. Rusijos Federacijos pasas 51Nr.5883558, išduotas 2014-02-27;
- Grusha Nikolai Baltarusijos respublikinės unitarinės įmonės "Baltarusijos AE" Bendradarbiavimo su valstybės institucijomis ir organizacijomis grupės vadovas. Paso Nr. MP3832171, išduotas 2016-06-02:
- Turelskyi Viktor Baltarusijos respublikinės unitarinės imonės "Baltarusijos AE"
  Operatyvinio-gamybinio departamento vadovas. Ukrainos pasas Nr. EI798315,
  išduotas 2012-03-19;
- Zubov Serhii Baltarusijos respublikinės unitarinės įmonės "Baltarusijos AE" Radiacinės saugos departamento vadovo pavaduotojas. Ukrainos pasas Nr. EX300088, išduotas 2013-07-30;
- Beliashou Aliaksandr Baltarusijos respublikinės unitarinės imonės "SPC geologija" filialo "Geofizinė ekspedicija" vyr. geofizikas. Paso Nr. MP2432003, išduotas 2008-06-03;
- Serahlazau Rustiam Baltarusijos nacionalinės mokslų akademijos Geofizinio monitoringo centro vadovo pavaduotojas. Paso Nr. MP2899384, išduotas 2011-05-16;
- 7. Aronau Arkadzi Baltarusijos nacionalinės mokslų akademijos Geofizinio monitoringo centro vadovas. Paso Nr. MP2462706, išduotas 2008-07-28;
- Kliaus Viktoryia Baltarusijos respublikinio mokslinio-praktinio higienos centro Radiacinės saugos laboratorijos vyr. mokslininkė. Paso Nr. MC2585805, išduotas 2014-02-14;

- 9. **Kosenkov Oleksii -** Baltarusijos respublikinės unitarinės įmonės "Baltarusijos AE" Radioaktyvių atliekų valdymo departamento vadovas. Ukrainos pasas Nr. ET762575, išduotas 2012-03-05;
- 10. Lazhevich Aleh Baltarusijos unitarinės įmonės "Geoservis" direktorius. Paso Nr. MP3359457, išduotas 2013-08-22;
- 11. **Zaika Yury -** Baltarusijos unitarinės įmonės "Geoservis" vyr. geologas. Paso Nr. MC 1690125, išduotas 2006-05-25;
- 12. **Dziadul Leanid** Baltarusijos nacionalinės avarijų rizikos mažinimo platformos koordinatorius. Paso Nr. MC2434929, išduotas 2012-12-17;
- 13. Markov Vladimir Baltarusijos gamtinių išteklių ir aplinkos apsaugos ministerijos Analitinio darbo valdymo, viešosios politikos ir reguliavimo aplinkos apsaugos srityje departamento konsultantas. Paso Nr. MP2833042, išduotas 2010-12-21.

Maloniai prašome išduoti minėtiems Baltarusijos delegacijos nariams vienkartines Šengeno vizas, galiojančias nuo 2016-06-20.

PRIDEDAMA. Baltarusijos gamtinių išteklių ir aplinkos apsaugos ministerijos 2016-06-15 raštas Nr. 13-11/1196, 4 lapai.

G. migaityte-

Direktore

Gitana Grigaitytė

# Bilateral Lithuanian-Belarus experts' meeting regarding Belarus nuclear power plant project

Vilnius, 21-22 June 2016 (9:00 a.m. – 5:00 p.m.) Ministry of Environment of the Republic of Lithuania (A. Jaksto St. 4/9, Meeting room 506)

## Agenda

### Welcome and practicalities

## Discussion on the following topics:

- Presentation on the current stage of the Belarus NPP project;
- Application of transboundary EIA procedures and decision making;
- Assessment of locational alternatives for the NPP construction (including no-action alternative);
- Evaluation of site and NPP site selection criteria including tectonic, geological and geophysical and seismological aspects;
- Seismic safety assessment;
- Assessment of seismicity and seismic hazards of Ostrovets and alternative sites;
- IAEA's Site and External Events Design (SEED) mission and stress-tests for Belarus NPP;
- Assessment of impacts in case of accidents. Preparedness and response to a nuclear or radiological emergency;
- Potential contamination of the river Nerls (Vilija) and groundwater resources in capital Vilnius in case of major accidents in Ostrovets NPP;
- Design of NPP;
- Nuclear safety and radiation protection regulatory regime including development of relevant legislation in Belarus;
- Measures taken to control and ensure highest quality of construction works and during operation of NPP; Incidents;
- Spent nuclear fuel and radioactive waste management policy and plans;
- Organization of environmental monitoring.

#### **AOB**

#### Conclusion and closing

## **Practical arrangements**

21-22 June 2016

Arrival and registration 8.40 am - 9.00 am

Meeting 9:00 am - 12:15 pm (coffee break 10:30 am (20 min))

Lunch 12:30 pm –14:00 pm (21 June, restaurant "Neringa" (Gedimino av. 23, Vilnius); 22 June restaurant "Esse" (Gedimino av. 50/2))

Continuation of the meeting 14:15 pm - 17:00 pm (coffee break 15:30 pm (20 min))

# Bilateral Lithuanian-Belarus experts' meeting regarding Belarus nuclear power plant project

21-22 June 2016

Meeting room 506, Ministry of Environment of the Republic of Lithuania (A. Jaksto st.4/9, Vilnius)

# List of Lithuanian delegation

No.	Name	Organisation
1.	Vitalijus Auglys	Ministry of Environment, Director of Pollution Prevention Department; Head of Lithuanian delegation
2.	Miglė Masaitytė	Ministry of Environment, Head of Environmental Impact Assessment Division, Pollution Prevention Department
3.	Gitana Grigaitytė	Ministry of Foreign Affairs, Director of Economic Security Policy Department
4,	Jonas Mažeika	Ministry of Foreign Affairs, Head of Energy Security Policy Division, Economic Security Policy Department
5.	Jūratė Usevičiūtė	Ministry of Foreign Affairs, Second Secretary of Energy Security Policy Division, Economic Security Policy Department
6.	Gediminas Karalius	Ministry of Energy, Adviser, Electricity Sector Division
7.	Vidas Paulikas	State Nuclear Power Safety Inspectorate (VATESI), Deputy Head for Radiation Safety
8.	Kristina Tumosienė	VATESI, Head of Division of Transportation and Radiation Safety
9.	Evaldas Kimtys	VATESI, Head of Division of Safety Analysis
10.	Dainius Brandišauskas	VATESI, Head of Division of Operation Experience Analysis
11.	Nerijus Bucevičius	VATESI, Chief Inspector, Division of Safety Analysis
12.	Gintautas Balčytis	Radiation Protection Centre, Head of Division of Licensing and State Register
13.	Ramunė Marija Stasiunaitienė	Radiation Protection Centre, Deputy Director
14.	Stasys Motiejūnas	State Enterprise Radioactive Waste Management Agency (RATA), Head of Conditioned Waste Verification and Disposal Facilities
15.	Beata Šilobritienė	Environmental Protection Agency (EPA), Head of Radiology Division, Environment Research Department
16.	Mindaugas Gudas	Environmental Protection Agency (EPA), Head of Hydrography Division
17.	Jurga Lazauskienė	Lithuanian Geological Survey, Head of Division of Bedrock Geology
18.	Andrius Pačėsa	Lithuanian Geological Survey, Chief Seismologist, Subdivision of Regional Geology and Tectonic, Division of Bedrock Geology
19.	Laurynas Juodis	Centre for Physical Sciences and Technology, Senior Researcher, Experimental Nuclear Physics Laboratory, Department of Nuclear Research