

MINUTES OF THE MEETING
in the framework of Transboundary Consultations according to Convention on
environment impact assessment in a transboundary context based on the results of
Environmental Impact Assessment
of Zaporizhzhya NPP and South-Ukraine NPP of SE "NNEGC "Energoatom"

Representation of Lower Saxony
Berlin, Federal Republic of Germany
20 June 2018

LIST OF ATTENDEES: the register of participants is given in Annex 1, which is an integral part hereof.

AGENDA:

1. Introductory speech of Director General of nuclear oversight and radiation protection, Ministry of the environment, energy, building and climate protection, agenda and regulations of expert consultations.
2. Presentation of the participants.
3. Brief information of the representative of SE "NNEGC Energoatom".
4. Comments and questions from the representatives of the German Party.
5. Discussion.
6. Next Steps.
7. Other issues.

These expert consultations are conducted in accordance with Article 5 of the Espoo Convention.

1. Introductory speech of Director General of nuclear oversight and radiation protection, Ministry of the environment, energy, building and climate protection, agenda and regulations of expert consultations.

SPEAKERS HEARD:

██████████ Director General of nuclear oversight and radiation protection, who welcomed the meeting participants from Ukraine and also informed that the German Party, under the Espoo Convention, transferred the full powers of Germany's participation in the transboundary environmental impact assessment to the Ministry of Environment, Energy, Building and Climate protection of Lower Saxony. ██████████ also explained the reasons why Germany could not participate in the consultations held in November 2017.

2. Presentation of the participants (Annex 1).

3. Brief information of the representatives of SE "NNEGC "Energoatom"

SPEAKERS:

██████████ the head of ecology division, executive directorate for nuclear and radiation safety and scientific-technical support, also welcomed the meeting participants, explained the purpose and procedure for conducting transboundary consultations, the procedure for taking into account the comments and proposals of the affected parties. Reference analytical information was provided on the procedure for transboundary consultations within the framework of the implementation of the provisions of the Espoo Convention for ZNPP and SUNPP.

In 2017 (24.11.2017), three affected parties - Romania, the Republic of Moldova and Poland - took part in transboundary consultations. In early 2018, with the aim of completing a transboundary procedure, the Ministry of ecology and natural resources of Ukraine initiated negotiations on consultations with affected parties that could not participate in consultations in 2017, namely the Republic of Belarus, the Republic of Austria and the Federal Republic of Germany.

The main results of the environmental impact assessment of SUNPP and ZNPP were presented, as well as the approaches to the procedure for lifetime extension of the power units of these NPPs, the status of the implementation of the Complex (consolidated) safety upgrade program of NPPs in Ukraine, general waste management issues at nuclear power plants, ensuring the radiation and environmental safety of NPP personnel and the population living in the NPP observation zone, etc. It was noted that the EIA results may be taken into account in the lifetime extension of the power units operation, but the positive conclusions of the state examination of the materials on the periodic reassessment of the safety (PRS) are the basis for the decision by the regulatory body for nuclear and radiation safety of Ukraine about the possibility of the lifetime extension of the NPPs power unit.

██████████ head of reliability, resource and extension life service (SUNPP), noted that the rationale for long-term operation of power units in Ukraine is a priority task and briefly outlined the current situation for lifetime extension condition on SUNPP.

██████████ head of safety analysis service (SUNPP) informed the attendees of the status of implementation of activities within the framework of the periodic reassessment of the safety, about the number of safety factors under consideration, the reports issued, on the basis of which a decision is made to extend the operation of the power units.

██████████ deputy chief NPP specialist - deputy head of deterministic analysis department of safety analysis service (ZNPP) noted detail on the issues of the scope and content of reports on the periodic reassessment of the safety, their compliance with IAEA recommendations, as well as on other details of this activity.

In addition, it was noted that the EIA for this NPPs at the operational stage of the existing facilities was an initiative decision of SE "NNEGC "Energoatom". This decision is an additional positive practice in the nuclear power industry, demonstrating the Company's openness in matters of ensuring ecology, nuclear and radiation safety.

4. Comments and questions from the representatives of the German Party

SPEAKERS HEARD:

██████████ Director General of nuclear oversight and radiation protection, Ministry of the environment, energy, building and climate protection.

██████████ GRS.

The German Party prepared and voiced the questions from both state authorities and received from the German public.

4.1. Was the development of an EIA a requirement of European investors? Since the extension of the operation of the power units of German NPPs, taking into account the absence of any changes, the development of an EIA was not required.

██████████ answered the question, providing general information on the loan agreements of the Company with the EBRD/Euratom, the terms of such agreements in the field of ecology.

In addition, there was provided information of the current problems in the application of the Espoo Convention procedures to nuclear facilities, the activity of the ad hoc group under the Espoo Convention Compliance Committee, which was established to develop a guidance on the applicability of the Espoo Convention to the lifetime extension (LTE) of nuclear power plants (NPPs) based on the terms of reference as agreed by the Working Group, which are planned to be

prepared by the end of 2018 and approved at the intermediary session of the Meeting of the Parties to the Convention (Geneva, 5-7 February 2019).

It was also pointed that the Company does not link the implementation of the Espoo Convention for the ZNPP and the SUNPP with periodic reassessment of the safety of power units and their lifetime extension.

4.2 The German Party also voiced questions on the following topics:

- probabilistic safety analysis;
- assessment of the cumulative effect and mitigation of the accident consequences, as well as the conclusions obtained in the framework of the executed stress-tests;
- the current state of the lifetime extension of the power unit No. 4 of ZNPP;
- the condition of the reactor vessel and other equipment of the nuclear facility;
- the condition of the steam generators of the SUNPP, taking into account the existing problematic issues of their operation and repair;
- operation of mixed active zones (use of Westinghouse and TVEL nuclear fuel);
- the status of the implementation of measures within the Complex (consolidated) safety upgrade program of NPPs in Ukraine, the procedure of decision-making on the lifetime extension;
- the difference between a periodic reassessment of safety and the environment impact assessment;
- the most difficult issues in the proof of the power unit safety;
- what steps need to be taken to improve the process of license extending for the operation of nuclear facilities under Ukrainian law.

5. Discussion

Representatives of both Parties in a businesslike and friendly atmosphere discussed the voiced questions of the German Party, as well as the qualified answers of Ukrainian experts.

6. Next steps

Representatives of the German Party asked how the Ukraine will publish its final decision, as it is customary in Germany, and also how this decision will be formalized as the end of the procedure for the transboundary EIA of the ZNPP and SUNPP.

[REDACTED] informed that the results of the implementation of the transboundary procedure under the Espoo Convention will be published on official websites of the Ministry of ecology and natural resources of Ukraine, SE "NNEGC "Energoatom" and NPPs and also sent, if necessary, to the German Party.

7. Other

Representatives of both Parties agreed that the protocol of expert consultations within the framework of a transboundary procedure in accordance with the requirements of the Espoo Convention based on the results of the EIA of ZNPP and SUNPP will be developed by the Ukraine, translated into English and sent to the German Party.

The Annexes to the Minutes are as follows: 1. List of Participants on 1 page.

For Ministry of ecology
and natural resources of Ukraine

[REDACTED]

[REDACTED]

For SE "NNEGC "Energoatom"

[REDACTED]

[REDACTED]

LIST OF MEETING PARTICIPANTS

From Germany Party

- 1 [REDACTED] - Director General of Nuclear Oversight, Radiation Protection; Ministry for Environment, Energy, Building and Climate Protection of Lower Saxony
- 2 [REDACTED] - Nuclear Oversight, Radiation Protection; Ministry for Environment, Energy, Building and Climate Protection of Lower Saxony
- 3 [REDACTED] - (Gesellschaft für Anlagen- und Reaktorsicherheit (GRS))
- 4 [REDACTED] - Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

From Ukraine Party

- 1 [REDACTED] - chief inspector, South-Ukrainian NPP
- 2 [REDACTED] - head of radiation safety department, South-Ukrainian NPP
- 3 [REDACTED] - head of safety analysis service, South-Ukrainian NPP
- 4 [REDACTED] - head of reliability, resource and extension life service, South-Ukrainian NPP
- 5 [REDACTED] - head of environmental protection service, Zaporizhzhya NPP
- 6 [REDACTED] - deputy chief NPP specialist - deputy head of deterministic analysis department of safety analysis service, Zaporizhzhya NPP
- 7 [REDACTED] - guide-translator of the international cooperation and technical assistance department, Zaporizhzhya NPP
- 8 [REDACTED] - head of the department of ecology, the executive directorate for nuclear and radiation safety and scientific-technical support, SE "NNEGC "Energoatom"
- 9 [REDACTED] - engineer of the department of ecology, the executive directorate for nuclear and radiation safety and scientific-technical support, SE "NNEGC "Energoatom"