

MINISTRY OF ENVIRONMENT OF THE REPUBLIC OF LITHUANIA

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| SE Ignalina Nuclear Power Plant | 2010-08-09 | No. (10-3)-D8-7628 |
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EIA entities according to the list

DECISION ON IGNALINA NUCLEAR POWER PLANT UNIT 2 DECOMMISSIONING AND DEFUELLING POSSIBILITIES IN TERMS OF ENVIRONMENTAL IMPACT

1. Customer of the planned economic activity – State Enterprise Ignalina Nuclear Power Plant, Drūkšiniai village, LT-31500 Visaginas, tel. (8-386) 242 66.

2. Developer of the Environmental impact Assessment documents – Lithuanian Energy institute, Breslaujos 3, LT-44403 Kaunas, tel. (8-37) 401 891.

3. Name of the planned economic activity – Decommissioning Project for Ignalina Nuclear Power Plant (hereinafter INPP) Unit 2 Final Shutdown and Defuelling Phase.

4. Place of the planned economic activity – territory of Ignalina Nuclear Power Plant at Drūkšiniai village, Visaginas Municipality.

5. Description of the planned economic activity

The planned economic activity is one of the separate INPP decommissioning projects and will include the activities in Ignalina Nuclear Power Plant Unit 2 which will start after the shutdown of Unit 2 reactor and will continue until the nuclear fuel is defueled from the Unit (planned by 2016). During the planned economic activity it is intended to defuel nuclear fuel from reactor to the spent nuclear fuel pools, perform the maintenance of the shutdown reactor and ensure its safety. While performing the planned economic activity it is intended to perform the works of Unit 2 systems isolation, modification and deactivation (including the main circulation circuit deactivation with rinsing), to handle radioactive and other waste formed during the activity.

Unit 2 defuelling process is divided into 2 defuelling stages:

- Stage 1 will begin after Unit 2 reactor final shutdown and cooling and will continue until all fuel is unloaded from the reactor. During this stage the spent nuclear fuel will be unloaded from the reactor and transferred to the nuclear fuel storage pools, operation and maintenance of the systems will be performed as well as modification and isolation of the certain systems will be carried out.

- Stage 2 will begin after finishing of stage 1 and will continue until all fuel is unloaded from Unit 2. The systems modification and isolation works which cannot be performed before spent nuclear fuel is not unloaded from the reactor will be finished. During the fuel unloading stage 2, decontamination of the main circulation circuit and fuel reloading machine will be performed and the formed radioactive waste will be handled. The spent nuclear fuel will be loaded to the dry storage containers and transported from the reactor unit for further storage.

6. Description of the measures provided to avoid, minimize, indemnify the negative environmental impact or to eliminate its consequences

INPP Unit 2 decommissioning project implementation will reduce the emission of radionuclides to the environment as well as taking of water from Drūkšiai lake used for cooling of technological equipment, formation of sewage related to the no longer operated systems maintenance works. After operation of reactor is finished, heat emission from INPP reactors units

will stop and it will have positive impact on Drūkšiai ecosystem, however, it is not expected that eutrophic condition of the lake will regenerate as it was before INPP operation.

The planned economic activity is foreseen to be performed at INPP industrial site in operation. New construction works are not planned, therefore, the impact of the planned economic activity on the soil, earth interior, biological diversity, landscape, ambient air and water is evaluated as minimal and will not raise radical changes in comparison with the current situation.

After assessing the amount of the formed radioactive waste, it is defined that operating and planned facilities will be rather effective and there will be no problems while accepting the waste formed during the decommissioning projects implementation. The report also implies that during Unit 2 decommissioning fuel unloading phase all possible and economically justifiable measures will be taken in order to decrease amount of waste and harmful impact on the human health and environment. The preference is going to be given to nonradioactive waste formation prevention, their reuse, recycling and some other handling.

Radioactive release to the environmental water and ambient air from INPP site is limited by the requirements determined in edition of Radioactive materials release to the environment. The document includes the annual limit release values for radionuclides which can be released into the environment and provides information about the planned INPP annual radioactive release. The determined annual radioactive release limit values are such that the annual effective dose conditioned by release would not exceed 0.1 mSv.

After assessment of the specific design solutions provided in the planned economic activity basic design, this edition will be updated by specifying the list of the released radionuclides and the release limit values.

The release of nonradioactive pollutants from INPP to the water is limited according to the determined conditions in the Pollution Integrated Prevention and Control Edition which is planned to be updated in 2011 according to the specific economic activity solutions provided in the basic design.

While performing the planned economic activity the new sources of nonradioactive release to the ambient air will not be created.

While performing the works existing INPP licensed equipment will be used. The works will be carried out following the procedures determined in legal acts.

While reducing the negative impact on INPP region social and economic environment, INPP decommissioning works are planned to be performed using INPP labor force and qualification to the maximum. The employees will be trained if needed. The report also provides proposals regarding how to mitigate the negative social and economic consequences in Ignalina Nuclear Power Plant region after the nuclear power plant decommissioning is completed. The programs and measures which are already performed and their results are described.

In order to ensure the proper emergency preparedness, EIA report should indicate that during NPP decommissioning the force of Fire and Rescue Department, residents warning system, residents security measures, employees evacuation areas, decontamination points and the other emergency response the actions should remain the same as during Ignalina NPP operation.

7. Submitted Conclusions of Environmental Impact Assessment Entities

The planned economic activity Environmental Impact Assessment Report was submitted to the following environmental impact assessment entities (hereinafter EIA entities):

- 1) State Nuclear Power Safety Inspectorate (hereinafter VATESI) which approved the report by letter No. (13.5.43)-22.1-630, dated 2009-09-14 and provided the conclusion that the planned economic activity is admissible in terms of nuclear safety;
- 2) Ministry of Health which provided the conclusion by letter No. 10-7516, dated 2009-12-29 that the planned economic activity is admissible in terms of radiation safety and public health safety;
- 3) Utena County Governor Administration which by letter No. (1.50.)-6-1434, dated 2009-08-11, agreed the EIA report and approved the planned economic activity;
- 4) Utena Region Environmental Protection Department which by letter No. Nr. (5.1)-s-1222, dated 2009-08-17 agreed the EIA report and approved the planned economic

- activity;
- 5) Department of Cultural Heritage under the Ministry of Culture, Utena Territorial Division which by letter No. 2U-(13.3)-404, dated 2009-07-30 agreed EIA report and approved the planned economic activity;
 - 6) Fire and Rescue Department under the Ministry of the Interior which by letter No. 9.4-1210)10.18), dated 2010-05-03 agreed the EIA report;
 - 7) Visaginas Municipality which by letter No. (4.19)-1-3404, dated 2010-07-01 did not approve the planned economic activity until the social problems caused by the planned economic activity are not solved.

Since according to the Planned Economic Activity Environmental Impact Assessment Law Regulations the conclusions of the environmental impact assessment entities contradicted one another, the discussion of environmental impact assessment of final shutdown and unloading phase of Ignalina Nuclear Power Plant Unit 2 Decommissioning Project and EIA entities conclusions regarding the report and activity possibilities took place on 12 April 2010.

During the meeting the representative of Municipality has informed that Visaginas Municipality approves the third version of EIA report amendments and does not have any comments.

During the meeting it was decided to update the EIA report and agree it with the entities that have submitted negative conclusions. Administration of Visaginas Municipality has agreed the amended and supplemented EIA report, however, it did not approve the planned economic activity, since the social and economic problems arisen due to INPP decommissioning are solved ineffectively.

8. Information of the public and its participation.

The public was informed about the planned economic activity environmental impact assessment process in order determined by the Procedure of Public Information and Participation of it in the planned economic activity environment impact assessment process (Official Gazette, 2005, Nr. 93-3472).

Information about the performed environmental impact assessment report on the planned economic activity – INPP Unit 2 final shutdown and fuel unloading – and public discussions of EIA report has been published by EIA documents in the following newspapers:

- Daily paper “Lietuvos Rytas”, 11 June 2009;
- - Visaginas newspaper “Sugardas”, 11 June 2009;
- Ignalina Region newspaper “Nauja vaga”, 13 June 2009;
- Zarasai Region newspaper “Zarasų kraštas“, 16 June 2009.

Familiarization of the public with the Environmental Impact Assessment Report was held at small hall of Visaginas Municipality on 30 June 2009 at 5 p.m.

Proposals of the public regarding environmental impact assessment of the planned economic activity were not received neither prior to the public discussion, nor after it.

EIA report includes the minutes of public familiarization with the planned economic activity environmental impact assessment report.

9. International Consultations was not carried out.

10. Conditions determined in the solution

While performing the planned economic activity it is necessary to ensure absolute labor safety according to the safety requirements in force and to take the risk of various environmental components into maximum consideration. Taking into account the specific design solutions provided in the Basic Design of the planned economic activity, the Integrated Pollution Prevention and Control Permit as well as Radioactive Materials Release into Environment Permit shall be updated in 2011.

11. The main motives which are being followed while making decision

The decision to shut down the state enterprise Ignalina Nuclear Unit 2 was made on 4 November 2009 by the Resolution of the Government of the Republic of Lithuania No. 1448 “Regarding State Enterprise Ignalina Nuclear Power Plant Unit 2 Shutdown” (Official Gazette, 2009, No. 135-5889) in order to meet the commitments of Lithuania set in the agreement related to

the entry of the Republic of Lithuania into the European Union.

EIA report and the planned economic activity were approved by all EIA entities except for Visaginas Municipality. Although it agreed that EIA documents developers in EIA report have taken all the submitted comments into account and properly corrected the EIA report, however, it did not approved the planned activity, since in their opinion social problems of the region which will arise after INPP shutdown are solved insufficiently.

This EIA Report includes the assessment of impact of Ignalina Nuclear Power Plant decommissioning works which will be performed after the final shutdown of Unit 2 reactor and after the spent nuclear fuel is removed. This is an assessment of the environmental impact of the narrow specific planned activity.

Social and economic impact in scale of the whole region (and Lithuania) after INPP decommissioning is predicted and assessed by the Government of the Republic of Lithuania. Therefore, in order to reduce and manage the impact on INPP region social and economic environment regarding INPP decommissioning after the decision on INPP decommissioning is made, the measures coordinated by state are implemented in the region. The planned economic activity does not require the review or correction of measures of INPP region social economic environment development planned by state.

In terms of nonradiologic impact on the environmental components the planned economic activity by its nature will be close to the activity which still has been performed in INPP normal operation conditions. In comparison with the current year situation at INPP no essential changes are anticipated.

During the planned economic activity it is not anticipated to perform INPP equipment dismantling works which will condition the opening of the contaminated equipment. Therefore, the other impacts such as the change (increase or decrease) of ionizing radiation fields in INPP environment due to the no longer operated systems modification and isolation, decontamination of the closed circuits by rinsing of them, are assessed as insignificant or not worsening the current situation at INPP site. The predicted annual irradiation can reach 6 μ Sv. It is much lesser dose than the residents limited annual defective dose (200 μ Sv) determined by the radiation safety requirements

12. Nature of Solution

The planned economic activity – Ignalina Nuclear Power Plant Unit 2 Final Shutdown and Fuel Unloading – according to the submitted EIA Report is admissible.

Vice-Minister of Environment

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