S U M M A R Y

According to the Law of the Republic of Lithuania regarding Environmental Impact Assessment for the Planned Economic Activity in Peat Deposits, covering an area of more than 150 hectares, a comprehensive environmental impact assessment is being carried out / 1 /. For this purpose the program of environmental impact assessment at Juodymas peat deposit was ordered by “Legra Ltd.” and has been prepared. Juodymas peat deposit is located in territories of both, the Republic of Lithuania and the Republic of Latvia, but the major part of it is located in Lithuanian territory. Economic activity - peat extraction - is planned only in the territory of the Republic of Lithuania; the boundary will be set by no less than 50 m away from the state border.

The proposed economic activity is peat extraction at Juodymas peat deposit. The planned to use Juodymas peat deposit is located in north-western part of Rokiškis district, 23 km (straight line) to the north-west of Rokiškis Church, 5.3 km (straight line) to north-northwest of Čedasai Church and 6.5 km (straight line) to east-southeast of Suvainiškis Church, in Juodymas forest, in the area of Rokiškis rural eldership and Pandėlys eldership, at a very Lithuanian and Latvian border (1 figure, 1 graphic appendix). There are no public buildings in the deposit’s territory, or close to it. The closest abandoned farmstead is in the territory of Latvia, in southwestern outskirts of the Viesītes municipality, to north north-east direction, with a distance of 0,96 km from the territory of the planned economic activity. The closest inhabited farmhouse in Lithuanian territory is 1.0 km to the southeast of the planned economic activity, in Ribickis village (1 graphic appendix). In quite a short distance to the west of the planned area there is a homestead (1 graphic appendix), with an uninhabited, far ramshackle house. A simple field road and further enhanced forest road with access cover leads up to the western part of the assessed parcel, (1 graphic appendix). Moving from the intended deposit along the road to west and south directions, it is able to access regional roads network. By latter Suvainiškis - Pandėlys road is easily accessible. The edge of the northern part of the deposit (Lithuanian territory) and its approaches have a preserved and functioning peat layer drainage system (1 graphic appendix). A ditch lies along the Lithuanian and Latvian state border. Excess runoff from the peat deposit is drained to western and southern directions towards Nereta River with a help of the moat and a functioning drainage system (1 graphic appendix). There are not other elements of infrastructure in the peat deposit, nor in the nearest surroundings; it is not urbanized area. The center coordinates according to LKS-94 coordinate system of the intended area are as follows: X - 6,225,082.64 m and Y - 586363.51 m.

The planned location of economic activity falls outside the protected natural areas (http://stk.vstt.lt/stk/). The planned area of exploitation falls outside the areas of immovable cultural values, cultural heritage and their protection zones (http://kvr.kpd.lt/heritage/). There are no protected areas in the territory of the Republic of Latvia near the intended deposit, as well.

“Legra Ltd.” is planning to carry out the peat extraction work in an explored in detail Juodymas peat deposit, (210 ha, 1 figure, 1 graphic appendix) in a part of a parcel of forestry

purposes (parcel unique no. 4400-1790-8557; 2 appendix, 1 graphic appendix). The area planned to use falls into a parcel (Annex 2), which is managed under the trust law by Rokiškis State Forest Enterprise.

According to the Approved General Plan of Rokiškis District Municipality, (June 27, 2008, Rokiškis District Municipality Council Decision No. TS-6.109), the intended area is in the territory of mineral resources extraction (www.rokiskis.lt).

The surface of the peat deposit planned to use is a peatbog with partly drained surface, overgrown with small pines and bushes (1 and 4 graphic appendixes). A detailed estimation of forest stand composition shall be reported in the report on the basis of Forest Cadastre data / 19 /.

When there is no possibility to operate mineral deposits in non-forested lands, the Forest Law (Article 11) does not prohibit to carry out mineral extraction in a forest land; For this purpose there are procedures and compensatory mechanisms established by the Government of the Republic of Lithuania, which are expected to follow in the planned economic activity and they will be specified in the EIA report.

Juodymas peat deposit has already been explored three times before - in 1935 it was examined by the Department of Forest. In 1962 Board of Peat Fund carried out additional research, and in 1975 the deposit was explored in detail by Institute of Engineering Research. The geological data of these researches is recorded in Lithuanian Peatbog Cadastre / 20 /. Based on previous studies, the area of Juodymas peat deposit within zero limits is 317 ha, industrial area - 272 hectares. Lithuanian Peatbog Cadastre indicates that the amount of geological peat resources in this peat deposit is 9264 thousand m^3, 3430 thousand of which are low-decomposed peat. The largest peat layer thickness - 6.5 m, average - 3.4 m. Peat resources have not been consolidated, general mass-balance resources of the deposit is amounted to 1,365 thousand tones. Selected peat samples during examination in laboratory show technical properties of peat - fragmentation, moisture and ash content. It is stated that low-decomposed (fragmentation degree <20%) peat is spread in the area of 191 hectares, volume of low-decomposed peat has been calculated (3430 thousand m^3, average thickness of the layer is 1.79 m) and values of their technical characteristics have been established. It is mentioned, that internal dry layers at the area of 1.4 ha are present in the peatbog. Also sapropel has been found under peat with a layer thickness of up to 1.3 m. The deposit is of irregular shape, bottom sediments under the peat are sandy loam, sand / 20 /. Drainage conditions are not mentioned.

The material of detailed research in previous years is not preserved. Recently, “J. Jonynas Ecofirma” Ltd. performs additional exploration of the deposit (i.e. research identification in The Statute of Underground Register No. 4698-2015) – as the result of the research exact quantity of peat resources in the intended area of use will be calculated, peat layer occurrence conditions estimated and drainage possibilities found, as well as quality of peat layer determined. The

assessment of deposit use in the environmental impact assessment report will be conducted with the data of real facts collected during an additional exploration.

Source and technology alternatives are not examined in the report. Peat extraction is an economic activity, related to a specific location, which has the accumulated peat layer. In our case, it is also explored in detail (only the deposit which is explored in detail can be operated). In addition, the peat deposit is not in a protected natural area, outside the cultural heritage sites and their protection zones. All mechanisms for peat extraction, loading and transportation used in the intended area of deposit will be mobile – to be considered as vehicles. Any exceptional equipment for peat extraction in the area of planned economic activity are unnecessary - mining equipment will be similar to currently existing and used in peat deposits - tractors and excavators with a widened chassis and the assembled hanging equipment (buckets, trailers, cutters, turners, vacuum and mechanical peat collectors, digging "boxes", stump pullers, etc.). The technological sequence of the process, equipment used in each preparation, extraction and production work and assessment of the impact of planned economic activity on health of workers and local population will be specified in the report. Peat extraction will be carried out in mechanized way, by gravitational means gradually draining peat layer into an existing drainage system (graphical appendix 1), avoiding substantial changes in latter. The natural groundwater level in the intended area has changed - the water level is influenced by the drainage system along the perimeter of the planned area (in Lithuanian territory) and equipped next to it (graphical annex 1). Entire peat extraction and peat digging depth in Juodymas deposit will depend on technical possibilities of artificial water drainage system, oriented to west and south directions towards Nereta river (bottom slope of already existing drainage ditches). This information will be available as a result of additional exploration work carried out at the moment in the planned area. The influence on change of hydrological and hydrogeological conditions of draining the planned area of peat deposit and its nearest surroundings will be examined and targeted ground water balance calculations according to this will be carried out, a safe distance to the neighboring country's territory as well as other facilities will be determined (now leaving 50 m distance). The report will be illustrated with plans and geological cross-sections, and preventive measures for avoiding potential pollution of groundwater and surface water from working mechanisms at peat extraction site will be analyzed and provided.

Natural useful raw material is to be used for production of lump and milled peat. Specific peat extraction works shall be carried out during the warm season (extraction terminated from 1st November to 1st April). Production is planned to carry out 5 days a week, during daytime, at an active time (between 6 and 22 o’clock - working in 2 shifts, or between 6 and 14 o’clock - working in 1 shift), in one - two (at favorable meteorological conditions) shifts 7 months a year. Realization is scheduled to be operated throughout the year. It is planned annual production volume of 100 thousand m^3. At a preliminary assessment of peat deposit exploitation it is scheduled to perform extraction works from 50 to 60 years. After receiving the data from ongoing deposit exploration, it will be clarified the duration of planned economic activity, sequence of mining and re-cultivation in a renaturalization manner of areas used - the report will provide a detailed sequence of the peat

deposit uptake, solutions for operating activity will be graphically shown in the plan. At the western edge of the extraction area, behind mining plot limits, it is planned to rent from 1.5 to 2.0 hectares of land, for installation of a temporary mining equipment storage area at the time of closing hours and temporary production storage area. It is planned to transport and build a temporary container type wagon for administrative - domestic use near the sites. It is planned to build it at the western edge of the mining plot, in the territory of ruined homestead. The installation place, possibilities and alternatives of such site will be specifically clarified in the report.

Rehabilitation of excavated peat in renaturalization manner will consist of a combination of measures, which will make it possible eventually to recover the ecosystem damaged during mining. The places of extraction fields will be isolated from drainage systems and water level will be increased, thus allowing the recovering of damaged marshy ecosystem. A sequence of rehabilitation in renaturalization manner and measures to be applied will be presented in the report.

The amount of usable energy sources (diesel fuel) required for peat mining, peat redeployment on extraction site and transportation of raw materials to a road of general use will be presented in the report and calculated according to expected quantity of raw material extraction, duration of mining. Calculations will be based on technical specifications of mining equipment and data about the performance, mechanisms and scope of work necessary for them to perform. Other substances or chemical preparations, with the exception of diesel fuel, are not used in peat extraction, so it will not be considered in this report. In parallel to calculations of consumption of diesel fuel, emission levels of pollutants emitted into the air by mobile equipment, activity caused dust and dispersion of pollutants at the exit road and in the planned peat extraction area will be calculated. On the basis of above mentioned indicators, the impact of equipment operating in fields and extracting, as well as production transporting equipment, will be assessed. The textual part of the report will be illustrated with the situation plan of economic activity object and maps of dispersion of polluting substances concentrations emitted.

There will be no specific extraction waste formed during peat mining - ready peat production is exported from the extraction place for marketing and stumps in the peat layer are to be collected and transferred to companies supplying heat and hot water to residents. About 20 employees will constantly work at the peat extraction site (the exact number of employees will be adjusted in the report). To meet the needs of drinking water it will be supplied for persons working in the peat extraction site daily. There will be no biological pollution on the peat extraction site – there will be toilets and household waste container set in the territory approaches. Household waste will be periodically taken to Panevėžys regional landfill. All remaining production waste (dishcloths, unusable tires, etc.) will be transmitted to the companies that are engaged in the activity of waste management and recycling in Rokiškis District Municipality. Diesel fuel and oils will not be stored on PEA site – they will be shipped when needed. The sequence of waste processing and a description of its formation will be submitted in the report.

Engineering networks are not required at the time of peat mining. Buildings for planned economic activities will not be built in the territory. Therefore, no any means or ways of building construction or laying of engineering networks will be considered in the report.

The data of botanical and zoological studies carried out in the planned area and its nearest surroundings (including the territory of the Republic of Latvia), as well as, assessment of biodiversity carried out at Juodymas peat extraction deposit, measures for reduction of negative impact on biodiversity during extraction time, and a plan of measures for damage compensation and balancing of biodiversity and marsh ecosystems after peat extraction will be presented in the report.

All kinds of planning activity effects to all environmental components such as water, air, top soil, subsoil, biodiversity, landscape, social - economic situation and human health status will be analyzed in detail in EIA report, as well as the estimated impact of traffic stream for transporting ready products on neighboring residential areas. Preventive measures of the potential impact on various environmental components will be presented and based in the report. On the basis of the data mentioned above, the ability of peat extraction will be evaluated.