

Republic of Macedonia
Ministry of Environment
and Physical Planning

Archival no. UPP-9/2017
Date: 10.07.2017

To: Municipality of Valandovo

Subject: Request

REPUBLIC OF MACEDONIA
MUNICIPALITY OF VALANDOVO

Received on 25.07.2017			
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09	612/1		

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Dear Sirs and Madams,

The Ministry of Environment and Physical Planning received Petition no. UPP-09 on 03.07.2017, submitted by the citizens of Kazandol in the Municipality of Valandovo, regarding the Environmental Impact Assessment Study for the project: Mining Complex for Cathode Copper Production Kazandol, Municipality of Valandovo. Attached to this letter we forward a copy of the reply to the request made in the petition to your institution, since the petition does not include any address or telephone number, and in such circumstance, we ask of you, if possible, to notify any of the specified persons in the initiative of our reply.

Sincerely,

Upon authorization of the Minister
State Legal Affairs Advisor
Todor Gjorgovski
/personal signature/

Republic of Macedonia
Ministry of Environment
and Physical Planning

Archival no. UPP-9/2017
Date: 17.07.2017

To: Department of General Affairs
-HERE-

Subject: Opinion

Dear Sirs and Madams,

With regard to your Request for an opinion regarding Petition no. UPP-9/2017 of 05.07.2017 submitted by the citizens of Kazandol in the Municipality of Valandovo, regarding the Environmental Impact Assessment Study for the project: Mining Complex for Cathode Copper Production Kazandol, Municipality of Valandovo, the Environmental Administration Office within the Ministry of Environment and Physical Planning hereby informs you that:

At the request of the Investor, Sardich MC DOOEL from Skopje, MoEPP started the procedure for assessing the environmental impact for the project Mining Complex for Cathode Copper Production Kazandol, Municipality of Valandovo, and pursuant to the Decree specifying projects and criteria for determining the need to carry out a procedure for environmental impact assessment (Official Gazette of the Republic of Macedonia No. 74/2005, 109/2009, 164/2012, and 202/2016), the submitted Notice of intent to implement the project (Archival no. 11-11264/1 of 10.11.2014), and the Decision on determining the need for an environmental impact assessment (Archival no. 11-354/1 of 13.01.2015), submitted the Environmental Impact Assessment Study (Archival no. 11-866/1 of 27.01.2015).

The EIA Study analyses the potential impacts during the construction phase and the operational phase, such as: topography, geology, hydrogeology, surface and groundwater, air, water, soil, erosion, noise, waste, flora and fauna, landscape, and visual effects, environmental social elements, archeological and cultural historical heritage, and cumulative impacts, and considers potential alternative locations for implementation of the project.

Pursuant to Article 91 of the Law on Environment (Official Gazette of the Republic of Macedonia No. 53/2005, 81/2005,

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24/2007, 159/2008, 83/2009, 48/2010, 124/2010, 51/2011, 123/2012, 93/2013, 42/14, and 44/15) a public debate was held regarding the Environmental Impact Assessment Study for the project: Mining Complex for Cathode Copper Production Kazandol, Municipality of Valandovo on 30.03.2015 (Monday) in Dom na Kulturata, Municipality of Valandovo, at 12:30 pm. The public was notified of the public debate regarding the EIA Study via TRD Radio Valandovo from 24.03.2015 until 30.03.2015, the daily newspaper Dnevnik (announcement made on 23.03.2015) and on the web-page of MoEPP. The public debate was attended by NGOs, representatives from institutions, locals, and other concerned parties. Minutes of the public debate were also prepared.

During the consultations and opinions process, a request for opinions was made to several institutions, and several work meetings were organized.

Furthermore, pursuant to the Law on Environment, a Report on the compliance of the Environmental Impact Assessment Study was prepared. The Decision to give consent to the implementation of the project was issued based on the EIA Study, the public debate, the received opinions and the Compliance Report.

The entire EIA procedure was available to the public via the daily newspapers and on MoEPP's website.

Below we give replies/explanations of the comments/concerns made in the relevant Initiative. The grounds for these replies/explanations is contained in the Environmental Impact Assessment Study for the proposed Mining Complex Kazandol which, pursuant to the above, was subject to an administrative procedure.

- *"Medical specialist examinations"*

The proposal for conducting free-of-charge medical examinations as part of the so-called Plan for protection of the public health of residents of Kazandol is a usual strategic effort in accordance with the best international practices and the modern standards of the so-called International Financial Institutions IFI (e.g. the European Bank for Reconstruction and Development (EBRD), the World Bank (WB), etc.) when dealing with large industrial facilities such as the Mining Complex Kazandol. This plan actually constitutes an expansion of Investor's obligations to prepare and implement strategies and plans for ensuring proper occupational health and safety measures for the staff and workers in accordance with the applicable Macedonian laws and the international standards relating to such industrial facilities.

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In accordance with the document titled Environmental, Health, and Safety Guidelines for Mining of the International Finance Corporation as part of the World Bank Group, during the operation of the mining complex, the Investor shall, *inter alia*, provide an appropriate system for protection of public health and the level of public safety regarding the following activities/plants:

- Safety of mine pit and dumps used for various types of raw materials
- Safety of water management structures (dams, treatment ponds, etc.)
- Occurrence of diseases due to activities relating to the mining complex.

In accordance with the above Guidelines, the system for protection of the public health and the level of public safety in the context of the Mining Complex Kazandol should, *inter alia*, include: development and implementation of effective short- and long-term monitoring and evaluation programs for the public health of the local population in the area surrounding the mining complex; measures preventing illnesses among the staff and the local population in the area surrounding the mining complex; undertaking public health awareness and education initiatives; providing health protection measures in the local health care facilities, etc.

In this context, and in accordance with the Social Impact Assessment Study – Mining Complex Kazandol, Valandovo, developed for the purposes and according to the requirements of the above IFIs, the Investor proposes, in accordance with its commitments and the principles of social responsibility, regular monitoring and assessment of the public health of the people residing in the closest populated area (Kazandol), with a dual purpose:

- to assess the current health state of the residents of the village of Kazandol prior to the commencement of operation of the Mining Complex Kazandol. This initiative will provide information that could be used to monitor any health-related changes in the community during the operation of the Mining Complex and the potential reasons for such changes. This approach confirms Investor's belief that the proposed environmental and health protection measures will be implemented in accordance with the plan, and will deliver the expected results.

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In addition, it confirms that the Investor intends, according to the best modern practices, to demonstrate its own social responsibility and transparency, with no intention of hiding any information from the concerned public on Kazandol and from the relevant institutions.

- to prevent any release of unverified and incorrect information about new illnesses discovered in the local community of the village of Kazandol during the operation of the mining complex that could be abused or used to misinform the public or the relevant institutions regarding the impact of the mining complex on public health.

Namely, the proposed medical examinations can be taken voluntarily, i.e. the residents of Kazandol are not required to undergo such examinations against their will.

- Distance from the village of Kazandol to the location for the planned activities in the Mining Complex Kazandol (open pit mining of minerals (metallic copper ore) and the processing complex for cathode copper production)

The EIA Study includes a map showing the distance from the closest populated areas including the village of Kazandol, to the location for the planned activities in the Mining Complex Kazandol ((1) open pit mining of minerals (metallic copper ore), and (2) the processing complex for cathode copper production), which are the main potential sources of impact on the residents of the village. Taking into account these distances and the intensity of the identified emissions in the environment, and with the aim of fully implementing the measures to avoid and reduce environmental impacts proposed in the Environmental Impact Assessment Study – the Study claims that no significant impacts on the local community in the village of Kazandol and in the other areas surrounding the mining complex are expected.

- Using cyanide in the production process.

As per the type of mineral (metallic copper ore) that will be mined and processed in the scope of the Mining Complex Kazandol, NO cyanide/cyanide substances will be used in the technological process for obtaining cathode copper.

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- Topographical (landscape) alteration

The mineral mining process will result in an alteration of the landscape within the open pit site and on the location of the leaching heaps. These alterations are only physical and pose no risk to the quality of the environment and human health.

The EIA Study envisages so-called land rehabilitation measures during the operation of the Mining Complex Kazandol and after its closure, which will result in complete rearrangement of the affected area with physical and biological restoration measures.

- "Kazandol will be left with no pastures for its livestock".

According to the Environmental Impact Assessment Study (EIA), a thorough analysis has been conducted of two potential sites for the mining complex, resulting in the selection of the site where there are no pastures and there are no livestock activities performed. The summary of this analysis is included in the EIA Study.

Furthermore, in the context of potential impacts on existing pastures and, in a wider context, on agricultural activities, the EIA Study specifies (1) a system of measures to eliminate/minimize/control emissions in the environmental media (air, water and soil), and (2) establishment of a modern system for waste management, which will be put into practice by the Investor during the construction and operation of the Mining Complex Kazandol. These systems/measures will result in avoidance of potential impacts on agricultural land/activities in the area of the village of Kazandol and the surrounding region. A summary of the measures for avoiding impacts on agricultural land/activities including the pastures in the area surrounding the village of Kazandol is included in the EIA Study.

- Tailings from mineral mining

According to the type of mined mineral (metallic copper ore) and the technological process for copper production – there will be no so-called flotation tailings (industrial waste) enriched with heavy metals and chemicals generated in the Mining Complex Kazandol, that will pose an environmental risk.

The mineral mining process will generate so-called spoil material (overburden) which cannot be used for extraction of copper, and will remain in its same natural state it is in currently

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on the location of the future open pit mine, and poses no risks to the environment and human health. The waste rock material will be disposed of on a specially prepared dump site within the area of the mining complex, in accordance with the technical project developed by a professional organization specializing in preparation of technical mining documentation, pursuant with the Law on Minerals of the Republic of Macedonia which specifies all technical measures for construction and protection of such types of waste rock dumps.

- Surface mining of minerals (metallic copper ore)

The surface mining of the mineral (metallic copper ore) will be performed using the so-called NONEL blasting technology which generates minimal dust emissions, within a radius of about 200 meters, with minimal noise and vibration emissions. Given the above, and considering the time schedule of the blasting activities and the distance between the open pit mine (as the source of emissions of dust, noise, etc.) and the village of Kazandol, according to the EIA Study, the blasting activities will not cause any significant impact on the people living in the village of Kazandol.

If necessary, the ore will be crushed using so-called primary crushing – to particles about 15 cm in size. The crusher will use means for dust reduction – water spraying/wetting or special preparations designed for that purpose. According to the EIA Study, this particle size is optimal for the ore leaching process, and the ore will not undergo any further crushing or grinding, thereby reducing potential emissions of dust and fine particles into air.

- Leaching process and using a sulfuric acid solution

Leaching of the mineral (metallic copper ore) will be carried out on specially designed pads lined with a waterproof liner, using a solution with low concentration of sulfuric acid – up to 0.5% (up to 5 gr of sulfuric acid in 1 l of solution) which is a lower concentration of acid than that found in many commercial products used in everyday life – e.g. 5% sulfuric acid can be used to prevent must oxidation in homemade wine. Some detergents also contain a certain amount of sulfuric acid (1-5%), for example Woolite products.

The solution will be sprayed over the ore with a special grid of pipes using the drip irrigation method, which allows for the solution to be dispensed directly onto the heap surface as drops.

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The sulfuric acid cannot evaporate into the air, for the simple fact that acid evaporates at temperatures exceeding 300°C, which is practically impossible to achieve in normal atmospheric conditions. Moreover, the acid part in the solution reacts with the copper in the ore, forming copper sulfate (blue vitriol) which is widely used in agriculture as a protective agent, while in the case of the Mining Complex Kazandol, it will be used in the copper processing and production process.

Prepared by: Vlatko Cvetanoski /signature/
Controlled by: Aleksandar Petkovski /signature/
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