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## THE PROBLEM OF STORAGE OF SLUDGE WASTE OF MYKOLAIV ALUMINA PLANT (ПРОБЛЕМА ЗБЕРІГАННЯ ШЛАМОВИХ ВІДХОДІВ МГЗ)

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У статті подано умови зберігання небезпечних шламових відходів МГЗ, кількісну статистику створення промислових токсичних відходів МГЗ за останні роки, та їх негативний плив на навколишнє середовище, зокрема на здоров'я людей.

**Ключові слова:** шлам, МГЗ, Російська коса, відходи, шламосховища, навколишнє середовище, небезпечні відходи

The article presents the conditions of storage of hazardous sludge waste of Mykolayiv Alumina Plant (MAP), quantitative statistics of industrial toxic waste MAP for recent years, and their negative impact on the environment, in particular on human health.

**Keywords:** Sludge, MAP, Russian spit, waste, sludge storage facilities, environment, hazardous waste

Sludge is a solid or pasty mixture of waste, which was created as a result of the separation of alumina (raw material for aluminum production) from bauxite, contains oxides of iron, titanium, silicon and water, characterized by a strong alkaline environment.

Over the last 10 years, the amount of hazardous waste accumulated in the sludge fields of the Mykolayiv Alumina Plant has increased from 28 million tons to 43 million tons of red sludge.

«Mykolayiv alumina plant» (MAP) creates the largest amount of waste of the 4th class Industrial waste of the 4th class of danger (according to the appendix E DBN B.2.4-2-2005) which with the permission of local bodies of sanitary-and-epidemiologic, ecological service and fire inspection are accepted for drawing up at the landfill of solid household waste) in Mykolayiv area.

This report provides data of management of statistics in Mykolayiv area about the main indicators of creation of waste in 2017. According to these data, in Mykolayiv and Mykolayiv area the volume of the generated waste for 2017 makes 2.3 million tons, 77% of which - sludge «MAP». As of January 1, 2020, 47.2 million tons of red sludge was accumulated in sludge storage facilities. This is 84.3% of all accumulated waste of the 4th class in Mykolayiv area, the plant is the largest polluter of atmospheric air in the region on quantity of emissions.

Red sludge at the Mykolayiv Alumina Plant is stored in two sludge storage facilities. The first was put into operation in 1980 with a design capacity of 20 million m<sup>3</sup> of sludge.

Sludge storage №1 is located on the first floodplain terrace of the Dnieper-Bug estuary, in dams 22 meters high from the estuary and 12 meters from the slopes. The sludge was stored by the wet method - for ease of transportation was diluted with water.

Sludge storage №2 was put into operation in 2007. Storage of sludge is carried out by the dry method by thickening. Construction was carried out taking into account the latest technologies. Design capacity of 1.5 million m³ per year.

«In the Mykolayiv area there is no landfill of industrial toxic waste therefore galvanic silt, oil products, waste of paints and varnishes, slime accumulate at the enterprises, most often in places unsuitable for this purpose. As a result of activity the environment is polluted by dust and gas emissions, sewage and red slime », - it is spoken in article «Processing of useful sludges at the Mykolayiv alumina plant» of candidates of technical sciences V.V. Khromyak and I.D. Borshchinin, published in the Scientific Bulletin of the National Forestry University of Ukraine.

In the material «Processing of useful slimes at the Mykolayiv alumina plant» it is specified that each year from sludge storages fix several cases of spraying of dry red slime. As a result of spraying, the suburban villages of Prybugskee, Lymany, Halytsynovo, and recreation centers located on the Ruska Spit suffer, and with them thousands of hectares of agricultural land and the Southern Bug River. Spraying sludge on the Russian spit is very dangerous, because it destroys annuals and perennials for up to 10 years, the alkali present in the sludge damages the outer coverings of fish, mollusks, crustaceans, leads to their death or disease (depending on the concentration of chemicals in the river) It should be noted that red sludge is harmful to human health, it causes burns on skin, mucous membranes, and in children there is a decrease in intellectual level and increased aggression, adults can have increased blood pressure, numbness of the extremities, muscle pain, headache, abdominal pain, impaired memory, immunity, potency, liver and kidney damage.

It is possible to draw a simple conclusion that wastes of production of MAP - red slime - are one of the main problems of ecology of region and threaten the Mykolayiv area with ecological

catastrophe, therefore the owner of waste has to adhere to requirements of their treatment, and not to allow clogging and pollution of even bigger territories.

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## THE IMPORTANCE OF MANAGER'S PERSONALITY FOR SUCCESS OF THE COMPANY

**Вєтрова Н.С.** – здобувач вищої освіти групи МЕН 1/2.

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В статті розглянуто основні види керівників та впив соціуму (підлеглих) на модель поведінки керівника. Визначено яка з цих моделей поведінки дає найпродуктивніший результат на підприємстві. Встановлено пряму залежність між типом характеру та поведінкою підлеглих та лідерськими якостями керівника та заходами їх реалізації.

**Ключові слова**: керівник, лідер, дисциплінованість, авторитетність, товариські (дружні) стосунки, розвиток, продуктивність, риси характеру, ключові правила для керівника, ліберальний, тоталітарний, демократичний, тип поведінки.