GEOLOGICAL AND GEOMORPHOLOGICAL STRUCTURE OF KASHKADARYA REGION AND THE INFLUENCE OF MAN-MADE FACTORS.

(Example of Shurtan Gas Chemical Complex)

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Annotation. The article focuses on the geological and geomorphological structure of Kashkadarya district, its geographical location and position among neighboring regions, as well as the impact of man-made factors on the environment, flora and fauna, groundwater and surface water, geoecological to study the impact on the state, discuss the improvement of the mechanism for reducing the negative consequences of man-made impacts.

Keywords. Geological, geomorphological, man-made, oil and gas fields, oil spills, environmental disasters, damage to the environment, the environment, geoecology, negative consequences.

Kashkadarya region (28.4 thousand sq. Km.) Is located in the northern part of the subtropical region, in the south of Uzbekistan, south of the center of the natural geographical region of Central Asia, 370 58 'and 390 32' sq. Km. and 640 23 'with 670 42' located between. The present valley of the Kashkadarya passes closer to the northern slope of the Kitab-Shahrizabz basin. The mountains are connected by a wide strip of foothills, which are divided by deep flat valleys with well-drained slopes. Such valleys are especially well developed in the northern and north-western parts of the Kitab-Shahrisabz basin. Along the slopes of the Gissar ridge, they are represented in the form of a narrow strip. From this strip there is a wavy plain towards the river valley. Within this plain, the valleys that divide the foothills are gradually disappearing. Between the rivers, the foothills, which are flat with sloping slopes leading to the Kashkadarya valley, are mostly covered with lyossimon loams. In the stratum corneum, especially in the lower part, lenses of sand and gravel are observed; conical extensions of the lateral shores are common within the undulating plains. In them lyossimonsuglinka lie on gravel deposits. For the relief of this strip there are more or less flat cliffs, and sometimes mainly canonical valleys along the right bank of the Kashkadarya. Short cliffs with steep slopes are found on both banks of the Kashkadarya basin.

Karim, Khojahayron, Sho ' rtepa, Karakum, Qizilrabot, Karabair and other deposits were added. These deposits are the southern part of the basin, known in

the geological literature as the Bukhara-Khiva gas province. The Karakhitoy field, northwest of Kungrad, and the Uvada and Saricha fields in the city of Karshi, Chirakchi district, and the city and district of Shakhrisabz meet the bulk of their gas needs. In addition, fuel is being extracted from industrially important oil fields in the region, such as Ortabulak, Toshli, SharqiyKarael, Nour, Boyburak, and some of them are being prepared for operation. At present, the exploration and geological-economic substantiation of oil and gas fields in the region is underway.

More than 55 state-owned gas and gaseous condensate deposits have been identified in Kashkadarya district (Erdanov, 2002). Of these, 6 are gas-oil fields, two are oil fields, more than 24 are gas-condensate fields and 3 are gas fields.

The natural gas in the Kashkadarya region consists mainly of sulfur and a small amount of low-sulfur deposits, which are important for the extraction of sulfur. Currently, Zevarda, Kultog, Polmuk, Olan low-sulfur Ortabulak, Dengizkol, Kandim high-sulfur gas fields in the district are the main raw material base for the Muboark gas processing plant. In recent years, the proven reserves of 23 gas condensate fields discovered in the region under the category AKV - S1 amounted to 125.8 mln. m3, the launch of the largest deposits, Shurtan, Adamtash, Kyzylbayrak, Zevarda, Pomuq and others, laid the foundation for the establishment of large gas industry enterprises (Erdonov, 2002). The Mubarekneftegaz field department in Kashkadarya region is one of the largest enterprises in the industry, supplying more than 65% of the gas produced in Uzbekistan and more than 80% of oil and gas condensate.

Muborakneftegaz has about 60 gas, gas condensate and oil fields, including 25 fields (Ortabulak, Kokdumalak, Dengizkul, Zevarda, Koltog, Pomuk, Alan, North O The capacity of the Mubarek Gas Processing Plant has been further increased due to the commissioning of Rtabulak, Umid, Kuruk, etc.). In 2001, 35869.7 mln. m3 of natural gas condensate, 3752.2 thousand tons of oil were extracted, or the Murborak gas processing plant was able to produce 251.5 thousand tons of sulfur, which is important for the national economy. It is known that the Mubarek gas processing plant is the second largest in the CIS after the Orenburg gas processing plant. Mubarek Gas Processing Plant processes more than 35 billion cubic meters of natural gas a year.

Guzar district is located in the important transport center of Kashkadarya district. There are roads from Guzar to Samarkand and Termez, as well as a railway from Karshi to Shahrisabz. The northern part of the region is occupied by the Boysuntag Mountains in the south of the KarshiChuli plain. The Okdarya River flows through the district and starts in the mountains. As for the plains, most of the dominant points of the region are dense. Settlements in the mountains are located along highways and river valleys. The region has the richest oil reserves in Uzbekistan.

Rising global demand for energy resources, the development of the oil and gas refining industry, the rapid development of technological processes, the widespread introduction of new technologies in production are leading to an increase in the negative impact of industrial enterprises on the environment. .

Industrial wastes are released into the environment, polluting the air, soil and water, leading to the poisoning of plants, animals and, ultimately, humans. Oil and gas as the main source of energy supply is one of the key factors in the economic and national development of any country. Improving equipment and facilities related to drying, cleaning, separation of aggressive components, studying the negative impact of the gas chemical industry on the environment, prevention of its harmful effects, along with its collection and preparation for gas delivery to the consumer Finding measures and implementing decontamination methods is a very important issue.

Atmospheric air, water and soil are an integral part of the natural environment, embodying the physicochemical changes that occur during the entire period of technogenesis. They are unlike any other component of the natural environment. The importance of this layer for the biosphere is enormous. Therefore, it is necessary to conduct research and continuous monitoring in the above-mentioned layers of the biosphere. Areas where various industrial enterprises, especially gas, chemical and metallurgical enterprises are located and directly adjacent to them, often undergo man-made changes, and industrial wastes, including heavy metals, exceed the permissible limits under the influence of acid rain. Many studies have shown that the melting of heavy metal compounds in the soil causes pollution, erosion and deflation of the soil layer.

The main part. Administratively, the Shortangazkimyo complex is located in the Guzar district of Kashkadarya region. The main reason for the construction of the Shurtangazkimyo complex in Kashkadarya region is that the region supplies more than 30% of the country's gas reserves. The climate of the area where the gas processing complex is located is sharply continental, the summer months are characterized by low relative humidity, warm temperatures (July-August). During these months, the maximum temperature rises to 43-45^{O}C. In winter (December, January, February) the average monthly temperature is 0.6 ° C. The lowest temperature was recorded at -20^{O}C. The average annual humidity is 25%. Annual precipitation is 280 mm.

The region's climate is also affected by year-round winds. In the mountains and in the summer, the relative humidity decreases due to the "Afghan" wind. The wind speed is up to 20 m / s.

The climatic characteristics of the area show that the current climate of the region is characterized by high temperatures, low humidity, low precipitation, high

wind speeds, recurrence of dust storms, sometimes recurrence of temperature inversion and almost no air movement. 'xtab can exacerbate the environmental situation by exacerbating the negative impact of the gas chemical complex on the environment. This is because such climatic conditions pollute the air by releasing toxic substances and dust particles into the atmosphere as a result of the activities of the gas chemical complex.

The Shortangazkimyo complex is located in the light gray soil zone. The parent rock of these soils consists of chalk deposits. Groundwater is characterized by its location in the pit. The humus content in the humus-accumulative layer of the soil is 1.5-1.7%. The amount of humus in the bottom layer of the grass layer decreases sharply. The total nitrogen content in the top layer is 0.10-0.13%, and the total potassium is more than 2.0%. The amount of gypsum is low and does not exceed 11%. The absorption capacity of the soil is small. The total absorption capacity is 5-8 mg / eq. Of this, 77-90% is calcium. Information on the chemical composition of the soil can be found in the table below.

The geographical location, geological structure, soils of the place are important in determining how polluted the environment is.

The Shortangazkimyo complex primarily pollutes the atmosphere. Normative legal documents have been developed in the country to keep the atmosphere clean, not to reduce the amount of oxygen and not to exceed the amount of carbon dioxide. The main guidelines are set out in the Law on Nature Protection

The wastes generated during the production of the complex can be divided into two groups: solid and liquid wastes. Most of the solid waste is aluminum oxide, which is used in the FA-2105 A / V adsorber to absorb the polymer and cyclohexane-containing catalyst, more precisely, the states formed by the catalyst with deactivators.

Silica gel and molecular sieves from solid wastes are also wastes from cyclohexane treatment. Although these wastes are chemically close to alumina, they differ in the percentage of substances they contain.

The bulk of the liquid waste contains cyclohexane. An example is a low molecular weight polymer. Preliminary analysis of the composition of this waste yielded the following results: cyclohexane - 52%; Fraction above S6 - 18.6%; low molecular weight polymer - 29.4%; density (at 200S) - 0.800 g / cm3.

The amount of waste generated by the complex depends more on the brand of polyethylene produced. The density and viscosity of a mixture varies proportionally depending on the proportion and temperature of the lower molecular weight polymer it contains. Therefore, the polymer is disposed of in a landfill.

Treatment of contaminated water from the complex is carried out at the wastewater treatment plant. The wastewater treatment plant has a capacity of 94 m3 / h or 2256 m3 per day, the oil wastewater treatment plant has a design capacity of 36 m3 per hour and 864 m3 per day. However, this device currently receives 1728 m3 of wastewater per day. That's twice the recommended amount. When analyzing the level of distribution of oily wastewater by shops, the steam-gas air supply shop is 728 m3 per day, polyethylene plant is 178 m3 per day, ethylene plant is 180 m3 per day, oily wastewater is discharged into the collector 'shows the mystery. To prevent this, it is necessary to expand the capacity of the sewage treatment plant or build an additional sewage treatment plant.

Conclusion. The various types of hazardous wastes emitted during the production of the Shortangazkimyo complex have a negative impact on the environment, including:

- toxic substances released into the atmosphere are mainly carbon oxides, nitrogen oxides, sulfur oxides and hydrocarbons;

- release of solid and liquid wastes into the environment - reagents and low molecular weight polymers formed by the purification of alumina, silica gel, cyclohexane;

- incompletely treated wastewater from the complex - domestic wastewater, oily wastewater, mineralized wastewater containing chemicals;

Various harmful substances in the waste from the complex, mainly sulfur oxides, nitrogen oxides, carbon oxides, etc., have a negative impact on all components and elements in the biosphere. Therefore, it is necessary to introduce low-waste technologies at the enterprise, improve the treatment of emissions and develop measures to neutralize toxic substances.

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