

DISPOSAL OF INDUSTRIAL WASTEWATER AS ONE OF METHODS OF HYDROSPHERE PROTECTION IN THE OIL PRODUCTION INTENSIFICATION AREAS

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Oil production in the oilfield areas is accompanied by formation of a large number of wastewater, which carries a potential environmental hazard, especially to surface and groundwater [1].

The main units of industrial equipment, which are the main sources of pollution of industrial areas and water bodies with oil and wastewater are:

- wellhead and near-wellbore areas, where oil spills is possible when violation of tightness of wellhead equipment, as well as during the development of wells, underground and major repairs;

- measuring tanks and ladders of group and individual prefabricated units, where oil leakage and spillage are possible during transfusion over top of measuring tanks, cleaning of measuring tanks and ladders from contamination and wax;

- prefabricated units and industrial storage tanks, where oil spills can occur at the discharge of wastewater from tanks, at oil spills over the top of tanks

Studies have shown that an effective method of control with polluted water is disposal of wastewater of it in deep-lying water-bearing horizon using secondary oil production methods.

This method of utilization of industrial wastewater provides an opportunity not only to ensure the reliability of their disposal, but also allows to increase the coefficient of oil recovery and to save on clean water used in waterflooding of exhausted oil production layers.

The method of wastewater disposal in deep-lying water-bearing horizon is aimed at protection of natural resources from pollution. Therefore, the choice of a place for disposal should be taking into account the prospects for the development of the area's economy, since the water-bearing horizon into which wastewater is pumped, will be out of economic use for a long time.

During disposal of industrial waste, it is necessary to provide sanitary protection zones around the area of removal, which determines the amount of the limitation of the use of natural resources, as well as to organize monitoring of the mode of wells operation, the spread of industrial waste in the horizons, changing the hydrodynamic conditions of neighboring horizons. It is established that the main indicator of normal operation of the absorbing well is the stability of its intake capacity of well.

References

1. <https://www.journals.elsevier.com/science-of-the-total-environment>