

Quality Indicators of the Don River in the Influence Zone of Novocherkasskaya Regional Power Station

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Abstract: The Don river water quality was studied from January to December 2017 (monthly) at three points: the background values of the concentrations of water drawn by Novocherkasskaya regional power station 134.5 km from the mouth (PHK-1), at the outlet of the waste water of the Novocherkasskaya TPP of release No. 2 into the flowing waters of the Don River (PHC-2) at a distance of 133 km from the mouth and in the coastal zone of the right bank of the river (PHC-3) at a distance of 132.5 km from the mouth. Twenty-eight water quality indicators were determined: temperature, odor, hydrogen indicator, transparency, suspended solids, dissolved oxygen, BOD₅, BOD full, COD, mineralization, chlorides, sulfates, hydrocarbons, alkalinity, calcium, magnesium, hardness, sodium + potassium, ammonium ions, nitrites, nitrates, phosphorus phosphates, total iron, copper, aluminum, anionic surface active substances (ASAS), petroleum products and toxicity. The Don River quality indicators in the zone of influence of the Novocherkasskaya regional power station are within the acceptable values established by the regulatory documents of Russia.