

THE SOURCE OF TOXICITY OF BACKWASH WATER FROM A SWIMMING POOL FILTER BED WASHINGS

Anna LEMPART ^{a*}, Edyta KUDLEK ^b, Mariusz DUDZIAK ^c, Aleksandra ZAWADZKA ^d

^a MSc; Faculty of Energy and Environmental Engineering, Institute of Water and Wastewater Engineering, The Silesian University of Technology, Konarskiego 18, 44-100 Gliwice, Poland

*E-mail address: anna.lempart@polsl.pl

^b PhD; Faculty of Energy and Environmental Engineering, Institute of Water and Wastewater Engineering, The Silesian University of Technology, Konarskiego 18, 44-100 Gliwice, Poland

^c Prof.; Faculty of Energy and Environmental Engineering, Institute of Water and Wastewater Engineering, The Silesian University of Technology, Konarskiego 18, 44-100 Gliwice, Poland

^d Eng., Faculty of Energy and Environmental Engineering, Institute of Water and Wastewater Engineering, The Silesian University of Technology, Konarskiego 18, 44-100 Gliwice, Poland

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Abstract

The necessity of reducing the operating costs of swimming pools leads to attempts to reuse of backwash water from washing swimming pool filter beds. Their use for watering plants, sprinkling tennis courts and play fields, draining to nearby watercourses or even returning to swimming pool installations is taken into consideration. Current researches proved the toxicity of these waste streams. The results of these studies raise doubts about the rightness of the attempts to introduce washings from pool filters directly into the environment. The aim of the presented work is to determine the source of toxicity of filter backwash water. The assessed in the work washings were characterized by high turbidity, high content of both suspended solids and organic compounds. A decrease in value of general impurity indicators after the filtration process of washings has been shown, suggesting that the main source of toxicity may be the suspension, including various anthropogenic organic micropollutants. Although this is just a research hypothesis. For this reason, comparative studies on the occurrence of toxic organic micropollutants in raw filter backwash water, supernatant water and filtrate collected after the filtration process were carried out.

Keywords: Filter backwash water; Micropollutants; Swimming pools; Toxicity; Water reuse.