Evaluasi Kualitas Air Tanah Akibat Air Lindi Di Sekitar Tpa Tanggan, Sragen = Evaluation of Ground Water Quality Due to Leachate Around TPA Tanggan, Sragen

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Abstrak

Tempat Pembuangan Akhir (TPA) sampah merupakan sumber pencemaran lingkungan yang signifikan, termasuk pencemaran air tanah. Lindi, cairan hasil dekomposisi sampah, mengandung berbagai polutan berbahaya yang dapat mencemari air sumur di sekitar TPA. Penelitian ini bertujuan untuk mengetahui dampak pencemaran lindi terhadap kualitas air sumur dan kesehatan masyarakat di sekitar TPA. Penelitian ini dilakukan dengan mengambil satu sampel air lindi dari TPA Tanggan dan 5 sampel air tanah dari lima sumur warga yang berbeda jaraknya terhadap TPA Tanggan. Hasil penelitian menunjukan bahwa air lindi TPA Tanggan melebihi baku mutu untuk parameter BOD dan COD. Karakteristik air tanah pada titik 1 parameter BOD, COD, dan Besi memenuhi baku mutu kelas 1, sedangkan total koliform memenuhi baku mutu kelas 3. Titik 2 parameter BOD, COD, dan total koliform memenuhi baku mutu kelas 1, sedangkan besi memenuhi baku mutu kelas 2. Titik 3 hanya parameter besi yang memenuhi baku mtutu kelas 1, sedangkan BOD, COD, dan total koliform tidak memenuhi baku mutu. Titik 4 parameter besi dan BOD memenuhi baku mutu kelas 1, sedangkan COD dan total koliform memenuhi baku mutu keals 2. Titik 5 parameter besi dan total koliform memenuhi baku mutu kelas 1, sedangkan BOD dan COD memenuhi baku mutu kelas 3. Parameter total koliform, besi, dan indeks pencemaran cenderung turun seiring bertambahnya jarak, sedangkan BOD dan COD cenderung naik. Hal ini membuktikan terdapat pengaruh jarak terhadap kualitas air. Akan tetapi, terdapat juga potensi pencemaran dari sumber pencemar lain seperti kondisi sanitasi.

.....Waste final disposal sites (TPA) are a significant source of environmental pollution, including groundwater pollution. Leachate, the liquid resulting from the decomposition of waste, contains various dangerous pollutants that can contaminate well water around the landfill. This research aims to determine the impact of leachate pollution on well water quality and the health of communities around the landfill. This research was carried out by taking one leachate water sample from the Tanggan landfill and 5 groundwater samples from five residents' wells at different distances to the Tanggan landfill. The research results show that the Tangan landfill leachate exceeds the quality standards for BOD and COD parameters. Groundwater characteristics at point 1, BOD, COD and Iron parameters meet class 1 quality standards, while total coliform meets class 3 quality standards. Point 2 BOD, COD and total coliform parameters meet class 1 quality standards, while iron meets class 1 quality standards 2. Point 3 only iron parameters meet class 1 quality standards, while BOD, COD and total coliform do not meet quality standards. Point 4 iron and BOD parameters meet class 1 quality standards, while COD and total coliform meet class 2 quality standards. Point 5 iron and total coliform parameters meet class 1 quality standards, while BOD and COD meet class 3 quality standards. Total coliform parameters, iron, and pollution index tend to decrease with increasing distance, while BOD and COD tend to increase. This proves that distance has an influence on water quality. However, there is also the potential for pollution from other pollutant sources such as sanitation conditions.