# Analisis risiko kesehatan lingkungan akibat pembuangan limbah cair pembangkit listrik tenaga panas bumi PLTP Ulumbu ke sungai pada Lapangan Panas Bumi Ulumbu Kabupaten Manggarai Nusa Tenggara Timur = Environmental risk assessment of ulumbu geothermal power plant wastewater into the river at Ulumbu geothermal field Manggarai District East Nusa Tenggara

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Abstrak

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Analisis Risiko Kesehatan Lingkungan Akibat Pembuangan Limbah Cair Pembangkit Listrik Tenaga Panas Bumi (PLTP) Ulumbu ke Sungai (Pada Lapangan Panas Bumi Ulumbu, Kabupaten Manggarai, Nusa Tenggara Timur)
Pembangkit Listrik Tenaga Panas Bumi (PLTP) merupakan salah satu sumber energi yang ramah lingkungan karena menghasilkan volume limbah yang rendah, salah satunya adalah limbah cair. Limbah cair panas bumi mengandung unsur kimia, salah satunya adalah Arsen. Limbah cair PLTP akan menimbulkan dampak apabila dibuang secara langsung ke sungai. Tujuan penelitian ini adalah untuk mengidentifikasi besarnya konsentrasi Arsen pada limbah PLTP dan air sungai di lokasi penelitian dan dampaknya terhadap konsentrasi Arsen di sungai serta dampak terhadap kesehatan lingkungan. Dari penelitian ini didapatkan hasil konsentrasi Arsen pada limbah PLTP sebesar 0,0365 mg/l. Kandungan Arsen dalam limbah yang dibuang masih berada di bawah baku mutu, yaitu sebesar 0,5 mg/l. Pembuangan limbah cair PLTP ini juga tidak meningkatkan konsentrasi Arsen di sungai. Konsentrasi Arsen pada air yang dikonsumsi masyarakat adalah 0,008 mg/l. Perhitungan risiko kesehatan masyarakat yang mengkonsumsi air sungai menunjukkan tidak menimbulkan risiko kesehatan RQ < 1 (RQ = 0,6522).
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Geothermal power plant is one of the green energy which produces low waste volume, including wastewater. Geothermal wastewater contains Arsenic, a dangerous chemical. It can generate impact when it is discharged to the river nearby. The purpose of this research is to identify Arsenic concentration in the geothermal wastewater and in the river on the research location. The result of this research shows that geothermal wastewater Arsenic concentration is still below the regulation, that is 0,0365 mg/l. Its content in the discarded waterwaste is still below the quality standar, which is 0,5 mg/l. Geothermal wastewater discharge has no effect to the Arsenic concentration in the river. Arsenic concentration in the river that people consume is 0,008 mg/l. Based on this concentration, health risk assessment ot the comunity who consume the water from the river shows no

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