

ABSTRACT

Background : *The management of POME is an essential aspect of the palm oil industry since it has the potential to cause environmental pollution if not properly treated. This study aims to obtain and understand the systems and processes in liquid waste management at PT. Inti Indosawit Subur PMKS Muara Bulian.*

Methods : *This research employed a qualitative descriptive method involving two informants, namely the waste management officer and the head of the technical department. Data were collected through interviews, observations, and documentation, and analyzed descriptively to provide an overview of the company's wastewater management practices.*

Results : *The results show that PT Inti Indosawit Subur has implemented a series of wastewater treatment stages, including cooling, acidification, anaerobic, facultative, and aerobic processes. These stages effectively reduced BOD, COD, and TSS levels to near the environmental quality standards set by the Regulation of the Minister of Environment and Forestry No. 5 of 2014. Furthermore, the treated effluent is reused through a land application system as an organic fertilizer to enhance soil fertility in palm oil plantations.*

Conclusion : *Overall, the wastewater management system at PT Inti Indosawit Subur PMKS Muara Bulian has been implemented properly and aligns with the principles of sustainable environmental management. However, improvements are still needed in pond maintenance and routine monitoring to optimize the treatment results and fully meet all wastewater quality parameters.*

Keyword : *Wastewater management, palm oil Industry, POME*

ABSTRAK

Latar belakang : Pengelolaan limbah cair (Palm Oil Mill Effluent/POME) merupakan salah satu aspek penting dalam kegiatan industri kelapa sawit karena berpotensi menimbulkan pencemaran lingkungan apabila tidak ditangani dengan baik. Penelitian ini bertujuan untuk mendapatkan dan mengetahui sistem dan proses dalam pengelolaan limbah cair di PT. Inti Indosawit Subur PMKS Muara Bulian

Metode : Penelitian ini menggunakan metode deskriptif kualitatif dengan dua orang informan, yaitu pihak pengelola limbah dan kepala bagian teknik. Data diperoleh melalui wawancara, observasi, dan dokumentasi, kemudian dianalisis secara deskriptif untuk menggambarkan kondisi pengelolaan limbah cair di lapangan.

Hasil : Hasil penelitian menunjukkan bahwa PT Inti Indosawit Subur telah melakukan pengelolaan limbah cair melalui beberapa tahapan, yaitu pendinginan, pengasaman, pengolahan secara anaerob, fakultatif, dan aerob. Proses tersebut mampu menurunkan kadar BOD, COD, dan TSS hingga mendekati baku mutu lingkungan yang ditetapkan oleh Peraturan Menteri Lingkungan Hidup dan Kehutanan Nomor 5 Tahun 2014. Selain itu, hasil olahan limbah dimanfaatkan kembali melalui sistem land application sebagai pupuk organik untuk menyuburkan tanaman kelapa sawit.

Kesimpulan: Secara keseluruhan, sistem pengelolaan limbah cair di PT Inti Indosawit Subur PMKS Muara Bulian sudah berjalan dengan cukup baik dan sesuai dengan prinsip pengelolaan lingkungan berkelanjutan. Namun, perlu dilakukan peningkatan pada aspek pemeliharaan kolam pengolahan dan pengawasan rutin agar hasil pengolahan lebih optimal serta memenuhi seluruh parameter baku mutu air limbah.

Kata Kunci : Pengelolaan limbah, industry kelapa sawit, POM

