EVALUASI IPAL INDUSTRI OLAHAN DAGING DI KABUPATEN JOMBANG TAHUN 2023
(Studi pada Industri Olahan Daging Kabupaten Jombang Tahun 2023)

Bilkis Nabilla Putri[1], Iva Rustanti E.W.[2], Demes Nurmayanti[3]

Kementerian Kesehatan RI
Politeknik Kesehatan Kemenkes Surabaya
Program Studi Sanitasi Lingkungan Jurusan Kesehatan Lingkungan
Email: bilkisnp@gmail.com

ABSTRAK

Industri pengolahan daging merupakan sektor industri pangan yang berpotensi besar untuk berkembang. Salah satu industri olahan daging berdiri di Kabupaten Jombang. Permintaan produksi yang meningkat setiap tahunnya dan ekspansi produksi yang semakin besar berpengaruh terhadap volume limbah cair. Pengolahan air limbah dengan sistem IPAL (Instalasi Pengolahan Air Limbah) di Industri Olahan Daging Kabupaten Jombang sebagai pengolah limbah masih belum maksimal dengan tidak adanya proses pemisahan minyak dan lemak serta adanya kandungan NH_3 pada efluen. Penelitian ini bertujuan untuk mengevaluasi efektivitas kinerja IPAL Industri Olahan Daging di Kabupaten Jombang.

Penelitian ini merupakan penelitian kuantitatif. Teknik pengumpulan data kuantitatif melalui *grab sampling* lalu dilakukan pengukuran lapangan meliputi parameter suhu, DO, pH, SV_{30} serta pengujian di laboratorium meliputi COD, NO_3^-, TSS, NH_3, minyak dan lemak yang disesuaikan setiap unit IPAL. Hasil pengujian parameter akan dianalisis berdasarkan kesesuaian kriteria desain, efisiensi removal, dan efektivitas IPAL dengan baku mutu Pergub Jatim Nomor 72 Tahun 2013.

Hasil penelitian ini menunjukkan bahwa IPAL masih belum efektif dalam menyisihkan konsentrasi parameter FOG karena masih melebihi baku mutu. Pihak industri dapat melakukan evaluasi dan perbaikan dengan membangun *fat, oil, and grease trap*, melakukan pengolahan kembali (*recycle*) *activated sludge*, meningkatkan kadar oksigen dalam air limbah pada bak aerasi, dan pergantian ulang tanaman eceng gondok secara berkala di *constructed wetland* sesuai waktu tinggalnya.

Kata Kunci: IPAL, limbah cair, Industri pengolahan daging, evaluasi instalasi pengolahan air limbah, limbah cair industri

EVALUATION OF WWTP FOR MEAT PROCESSING INDUSTRY IN
JOMBANG REGENCY 2023
(Study at Meat Processing Industry in Jombang Regency 2023)

Bilkis Nabilla Putri[1], Iva Rustanti E.W.[2], Demes Nurmayanti[3]

Ministry of Health Republic Indonesia
Polytechnic Health Ministry of Health Surabaya
Environmental Sanitation Study Program of Environmental Health Department
Email: bilkisnp@gmail.com

ABSTRACT

The meat processing industry is a part of the food industrial sector, which has potential to grow big. One of them has been established in Jombang Regency. On the increase of highly annual market demand of formed meat products and enlargement of product expancies have affected the amount of sewage. The meat processing industry in Jombang Regency has been using Wastewater Treatment Plant (WWTP) as sewage disposal treatment was not functioned optimally since have not had grease and oil trap, in addition NH_3 was found on effluent. This research was to evaluate the meat processing industry's WWTP in Jombang Regency.

This research used quantitative method design. The quantitative data collected through grab sampling then measured by parameter including temperature, DO, pH, SV_{30} as well as laboratory tested such as COD, NO_3^-, TSS, NH_3, and FOG which based on each WWTP units. The data result would be analyzed based on design criteria, removal efficiency, and WWTP effectivity be adjusted according to East Java Governor Regulation Number 72 of 2013.

The research shows that existing wastewater treatment plant still not effective to reduce FOG parameters meet with the quality standard. The industry can evaluate and repair by way of build a fat, oil, and grease trap, recycling activated sludge in aeration tanks, increasing oxygen levels especially in aeration tanks, and changing the water hyacinth periodically at constructed wetland due to the detention time.

Keyword: WWTP, Wastewater, Meat processing industry, Wastewater treatment plant evaluation, Industrial wastewater