

Case Study

Project Title

Wastewater Technical Approval – Technical Study for Wastewater Discharge to Surface Water Bodies – PT Arutmin Indonesia Batulicin Site

Project Snapshot

Client: PT Arutmin Indonesia Site Batulicin | **Location:** Tanah Sumbu Regency, South Kalimantan

Sector: Coal Mining | **Period / status:** 2025

Ganeca Services: Preparation and Technical Assistance for Wastewater Technical Approval Documentation

Project Overview

As part of water management in a mining operation with an extensive catchment area, PT Arutmin Indonesia - Site Batulicin required a technical study to support the planned discharge of wastewater from the sediment pond (SP) into a surface water body. The scale of the sediment pond, which was designed to accommodate a large catchment area, required a comprehensive assessment of both wastewater characteristics and the environmental conditions of the receiving water body.

The Challenge

Planning wastewater discharge from a sediment pond serving a large catchment area requires more than simply verifying wastewater quality. The condition of the receiving water body also needs to be assessed to provide an appropriate environmental baseline and ensure that the discharge is evaluated in the context of its receiving environment. Another key consideration is the seasonal variation between the wet and dry seasons. Therefore, the study incorporated seasonal environmental conditions through baseline water quality assessment at upstream and downstream segments, as well as sediment quality and aquatic biota assessments, providing a comprehensive basis for the technical evaluation.

Our Solution

Ganeca applied a scientifically based assessment approach, supporting the study through environmental data collection and laboratory testing covering the receiving water body, sediment, and aquatic ecology to establish a comprehensive understanding of the receiving environment. For the receiving water body, sampling was conducted across two segments representing upstream and downstream conditions. Water quality parameters were assessed with reference to Appendix VI of Government Regulation of the Republic of Indonesia No. 22 of 2021, Class II Surface Water Quality Standards. The assessment was further complemented by technical analysis and impact prediction to establish the technical basis for the wastewater discharge plan in accordance with Minister of Environment and Forestry Regulation No. 5 of 2021.

Results & Value

The study resulted in a technical document that serves as an important environmental compliance instrument, supporting the company's compliance with applicable environmental laws and requirements. The document also formed part of the requirements for the issuance of the Wastewater Technical Approval,

supporting the planned discharge of wastewater into the surface water body. The study provided an assessment of the receiving water body's environmental condition. This approach helped ensure that the wastewater discharge was evaluated not only against regulatory limits, but also in consideration of the condition and characteristics to support responsible wastewater management and environmental protection.

Project Photos



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