

OXIDATION POND MODIFICIATION

Roger Hu

Abstract

The oxidation pond (also called sewage lagoon) is the most commonly used treatment method for municipal sewage among small to medium-sized communities in New Zealand.

This paper reviews the design/operation criteria of the six existing oxidation ponds within Central Hawke's Bay District and the latest improvement technologies for the oxidation ponds. In particular, the "in-pond" improvement technologies have been studied and incorporated into a staged modification project at Otane Oxidation Pond. In this paper, extensive analytical results from each stage of the modification are provided, together with detailed design information.

The results of this modification have demonstrated that oxidation pond improvement, which could be the most cost effective means, should be considered first before selecting any high tech modern plant, especially in rural communities.

Bio

Roger Hu has recently joined Infracon Ltd as the technical manager. This is the result of the on-going co-operation between Infracon Ltd and Central Hawke's Bay District Council who has owned 34% share of the Infracon Ltd. Roger Hu was a senior civil engineer in Technical Services unit, Central Hawke's Bay District Council when he was working on this project. His 15 years civil engineering experience covers both roading and utilities fields. He has worked for both private consultants and local government organisations in the past 10 years in New Zealand.