

DIRECT TECHNICAL ASSISTANCE PROGRAM FOR BIOTREATMENT OF REFINERY WASTES

Project Overview

Challenge:

Refinadora Costarricense de Petróleo (RECOPE), a member of ARPEL, specializes in refining and distributing petroleum products in Costa Rica. RECOPE applied for technical assistance to support biodegradation of refinery wastes. Maintaining an effective balance between moisture, oxygen and nutrient levels for biological destruction of hydrocarbons can be difficult in a tropical setting, especially during the rainy season.

Solution:

Matrix was retained by ARPEL to provide direct technical assistance to RECOPE. Matrix designed the program to meet both the short-term and long-term objectives by assessing and troubleshooting the existing biodegradation facilities and providing technology transfer to enable RECOPE personnel to design and manage future facilities.

In 2004, an environmental engineer from Matrix assessed three RECOPE biotreatment facilities, reviewed the availability of local resources and tailored a training program suitable for RECOPE's needs. The engineer worked with a local fourth-year engineering student to assemble technical materials and prepare a bilingual presentation for the refinery and bulk station personnel. The program included classroom and field components.

Successfully, they taught personnel the fundamentals of bioremediation and practical solutions to implement in a tropical rainforest setting. Implementing superior methods will not only pay off with reduced clean-up costs in the future, but will also enhance Costa Rica's goal of ecological protection.



COSTA RICA

Matrix's Role

Matrix Solutions provided technology transfer, enabling the host company to meet not only its immediate needs, but to be better prepared to manage environmental challenges in the future.