

This abstract will be presented during LNG2023 conference on 10-13 July in Vancouver, Canada among many other innovative projects, ideas and outlooks. LNG2023 will provide a unique platform for the global LNG industry and key stakeholders to discuss, debate, and showcase the latest industry developments and opportunities.



LEAD AUTHOR

Philippe Bouchy
H&S Manager, Elengy

CO-AUTHORS

Christophe Guery
Project manager Elengy

Anthony Courtois
CEO Polymaris

BIOPOLYMERS, A NEW AND INNOVATIVE ECO-RESPONSIBLE SOLUTION FOR WATER TREATMENT FOR LNG RECEIVING TERMINALS

As an operator of LNG terminals, Elengy takes and returns large quantities of sea water to regasify LNG in ORV. Water is treated with a biocide, the sodium hypochlorite, in order to prevent the development of organisms in the water networks.

In the industrial port complex of Fos-sur-Mer, air and water pollution have become a major concern and the impact of chlorination sub-products constitutes a preoccupation which called a concrete response from Elengy.

A 4 year R&D program : After an exercise of screening to identify possible alternatives to chlorination, Elengy with ENGIE R&D center and a biotech start-up decided to choose and test marine biopolymers which are chains of sugars naturally secreted by bacteria in the seas as a mucus.

Thanks to their dispersing power the biopolymers prevent the settlement of micro/macro organisms at an early stage. A bit like if Nature did not like conflict and the living organisms in the water considered the place occupied and move along and develop elsewhere.

Test on a pilot and then on a scale up at Fos Cavaou terminal for a year allowed us to check different protocols of biopolymer injection and verify its efficiency.

Implementation on Fos Cavaou terminal : Since September 2022, after adaptation works, the new water treatment is in place and the result are tangible with a more than 90% chlorination reduction.

The biopolymers solution is non biocide, biodegradable, non-dependent on environmental regulation and easily adaptable.

To view the full conference agenda, visit <https://www.lng2023.org/lng-programme-overview>