

International Conference on the Management of Naturally Occurring Radioactive Materials (NORM) in Industry

VIRTUAL EVENT

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Investigating marine ecotoxicological effects of offshore petroleum infrastructure-associated contaminants

Successful removal and decommissioning of subsea oil and gas infrastructure requires a safe and effective approach of assessing and managing waste products. These products, often present as scale on internals of pipelines, include naturally occurring radioactive materials (NORM) and trace metals. Understanding the ecological effects of these contaminants, both individually and in combination, on marine fauna is crucial to managing this global issue. This study will firstly collect and synthesise the available information about the bioavailability and ecotoxicological effects of contaminants associated with offshore petroleum infrastructure using a systematic literature review. We will collect effects data for a subsequent meta-analysis examining different contaminant classes and biological responses. The literature review will inform future lab studies aimed at assessing how NORMs and trace metals from pipeline scale are bioaccumulated in benthic marine organisms. This project will deliver new knowledge on the potential toxicological interactions of scale residues associated with the offshore petroleum industry. Our results will assist to establish the appropriate decommissioning strategies for offshore oil and gas operations.

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