

PROGRESS AND PLANS OF NATIONAL NANOTECHNOLOGY INITIATIVE (NNI) AGENCIES

September 2020

Department of the Interior (DOI)¹

Bureau of Safety and Environmental Enforcement (BSEE)

Summary

The Bureau of Safety and Environmental Enforcement (BSEE) Oil Spill Preparedness Division (OSPD) Response Research Branch (RRB) focuses on advancing methods and technologies for oil spill response. RRB currently supports research developing a continuous oil/seawater separation technology deployable in arctic conditions aboard oil skimming vessels. The technology would enable the recovery of skimmed oil while producing a safely discharged oil-free water stream. This separation technology involves coupling electrically conducting ultra-filtration membranes with ferromagnetic nanoparticle stabilized oil droplets, therefore permitting the efficient collection and separation of oil from water. This (nano) technology reduces the need to store large volumes of contaminated water.

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