

# Full-scale STARx Hottpad™ to Treat Crude Oil Sludge as part of a Comprehensive Remedial Program Following Hurricane Dorian

Oil and Gas Terminal Facility in The Bahamas

## Overview

Savron has been contracted for the supply and operation of a STARx Hottpad™ plant as part of a comprehensive remedial program being implemented in response to an oil spill incident that occurred at a terminal facility in the Bahamas following Hurricane Dorian (IMAGE 1). The scope of work includes the excavation and smoldering of oily sludge located in a holding pond, additional crude stored in tanks, and soil from berm walls excavated as part of holding pond closures activities at the site (IMAGE 2). Approximately 4 million gallons of oily sludge will be destroyed via smoldering.

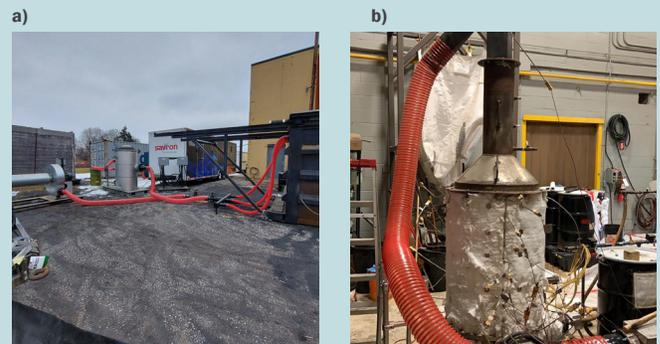


**IMAGE 1:** Oil and gas terminal in the Bahamas, showing the condition of the oily sludge holding ponds following hurricane Dorian.



**IMAGE 2:** Oily sludge holding pond scheduled for closure. Sludge will be excavated and mixed with a porous matrix prior to smoldering in a STARx Hottpad™ system.

Pilot testing of STARx (ex situ) was conducted at Savron's facility in Ontario, Canada in 2021 using oily sludge shipped from the site. The testing involved two scales of Hottpad™ (10m<sup>3</sup> and 1m<sup>3</sup>) to evaluate the operating conditions that lead to the maximum sludge processing rate (IMAGE 3).



**IMAGE 3:** Pilot Hottpads used to evaluate the operating conditions that lead to the maximum sludge processing rate: a) 10m<sup>3</sup> and b) 1m<sup>3</sup>

## Pilot-Scale Results

Pilot testing demonstrated rapid and complete destruction of oily sludge. The destruction rates achieved were used to design a two-pad Hottpad™ system with a combined treatment volume of 500m<sup>3</sup> of mixed material (sludge and porous media) such that the total volume of oily sludge (~4 million gallons) will be destroyed over an 18-month operational period.

## Full-Scale Project

Procurement is currently in progress with equipment scheduled to arrive on site in early 2022, with operations to begin in Summer 2022.

## Conclusions

The STARx technology is a rapid, safe, and low-cost treatment option for the destruction of oily sludge and the remediation of hydrocarbon-impacted soils.

Pilot testing at two different scales was used to evaluate the operating conditions that resulted in the maximum sludge processing rate, such that a 2-pad Hottpad™ with a combined treatment volume of 500m<sup>3</sup> of mixed material (sludge and porous media) can be used to treat the total volume of materials targeted for destruction within the project timelines.