

CASE STUDY

EMISSIONS CONTROL AT SAGD SITES



SCOPE

Odor and emissions management at SAGD sites using **ROC 55X** and **OXY-BRITE SB1.5**.

The PROBLEM

Steam-assisted gravity drainage or SAGD operations are often confronted with unique and rather specific process issues that can impede, interrupt, and even slow the extraction process and the ultimate transfer of product to an upgrader or refinery. These issues or restrictions often revolve around treatment processes where a fluid or effluent requires extraction of a contaminant or overall treatment to mitigate hazardous gas emissions.

Specific issues can be identified in such areas as slop oil treatment, in non-regenerative scavenging units, as well as with general fluid handling at storage tank farms. Each of these areas can create specific emissions or contaminant issues such as H₂S, LEL gases or volatile organic compounds (VOC's), and even polysulfide deposition. Without proper mitigation, these issues can prevent transport of waste for disposal, entry of units or tanks for inspection or repair, or safe storage tank farm operations which can ultimately increase budgetary costs.

Our SOLUTION

Operators at these sites often require development and implementation of a coordinated chemical treatment program to provide proper emissions control either directly with a fluid or in units or vessels requiring entry for repair or inspection. These chemical treatment programs will often require coordinated sample and product testing both in the laboratory and the field for successful program development.

SAGD sites across northern Alberta have coordinated successfully with **West Penetone** for over 10 years to acquire proper emissions control as well as to improve the efficiency of their processes using West Penetone products.

Through this history, West Penetone has and continues to provide products to combat specific emissions issues at SAGD sites, with brief examples of chemical treatment programs included in the table below.



AREA WITH EMISSIONS CONTROL ISSUE	PROCESS ISSUE	TREATMENT PROGRAM DEVELOPED
Slop Oil Storage Tank Farm	Slop oil being delivered by tanker for downhole disposal required control over H ₂ S and VOC emissions for safe handling and transport.	ROC 55X – Developed to treat and manage both VOC's and H ₂ S emissions in waste effluent following periodic product efficiency and chemical consumption tracking.
Non-Regenerative Scavenging Unit	Gaseous emissions were creating large external odor plumes along with extensive problems in worker decontamination.	Oxybrite SB 1.5 – Developed to manage polysulfide deposition and related gas emissions as well as temperature increases and gas production while flushing the unit under internal circulation.

Such programs are also supported extensively with comprehensive acquisition and analytical characterization of field samples, subsequent field testing and evaluation of products formulated to treat novel field samples, as well as scheduled chemical consumption tracking. All programs are also provided with demonstrated job monitoring techniques to support management and verification of job completion, where needed or required, to create a continued history of successful chemical treatment projects at SAGD sites.

A comprehensive and integrated approach

With over 100 years of product development, manufacturing and application experience, the West Penetone family of companies has designed and patented many products to satisfy the needs of our clients world wide.

Our technical group provides customers effective support to ensure that contaminants are paired with the right chemistry for any task.

Establishing and maintaining a collaborative approach with our customers in tackling their operational and maintenance challenges is key to realizing efficiencies and cost savings.

Questions? solution@westpenetone.com

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