



CHEMICAL CLEANING HISTORY BY REFINERY TYPE

SAGD SITE CHEMICAL CLEANING HISTORY



OPERATIONAL SCOPE

Steam-assisted gravity drainage or SAGD sites often rely on higher levels of process efficiency to maintain operations within budget and schedule. This parameter often requires SAGD plants to operate inside specified maintenance as well as shutdown or turnaround schedules where individual units or vessels up to entire plants are taken out of operation and then isolated for full decontamination and degassing for return to peak efficiency. The contaminants causing issue can vary across process unit to process unit but can be consistent within a given process areas such as in heating, heat exchange, separation, fluid storage, and scrubbing.

PROCESS ISSUES

Each of these areas can create specific emissions or contaminant issues such as H₂S, LEL gases or volatile organic compounds (VOC's), scale deposition, and sludge accumulation. Without proper mitigation, these issues can lower heat production and exchange efficiency, prevent entry of units or tanks for inspection or repair, or cause general accumulation leading to a reduction in operational efficiency.

Operators at these sites often require development and implementation of a coordinated chemical treatment program to provide safe and efficient removal of scale, sludge, general fouling accumulation, and gas contamination. These chemical cleaning programs will be completed often using liquid circulation and occasionally accompanied by vapor phase co-injection techniques, depending on site logistics, asset configuration, and deposit accumulation.

OUTCOMES

SAGD sites across northern Alberta have coordinated successfully with industrial service providers and cleaning contractors for over 3 years to return their assets back to optimum operation using West Penetone products.

Throughout this history, West Penetone has and continues to provide products to combat specific fouling and contaminant issues at SAGD sites and plants, with brief examples of assets returned to operational efficiency included in the table on the next page.



ADVANTAGES

SAGD ASSET	PROGRAM DESCRIPTION
MBF Tanks	Chemical decontamination and degassing
Skim Tanks	Chemical decontamination and degassing
Utility Boilers	Chemical cleaning
BFW/Emulsion Heat Exchangers	Chemical cleaning
Treater & FWKO Drums	Chemical decontamination and degassing
Mix Gas Scrubber	Chemical decontamination and degassing
Processing Plants	Vapor Phase decontamination and degassing

These programs are also supported extensively with comprehensive characterization of field samples, subsequent solubility testing where needed or required, as well as scheduled chemical delivery. 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 cleaning 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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