

CHEMICAL CLEANING HISTORY BY REFINERY TYPE

GAS PLANT CHEMICAL CLEANING HISTORY



OPERATIONAL SCOPE

A natural gas processing plant can encounter several impediments in operations over its lifetime, depending on the source and overall quality of the raw material being processed. These impediments often include accumulation of fouling and VOC contamination that either reduce operational efficiency over time across all assets or literally prevent specific units or vessels from being inspected for continued operation. Specific units or vessels that have lost operational efficiency or require inspection must undergo periodic cleaning to be returned to optimum or safe operational limits.

PROCESS ISSUES

In the setting of a natural gas processing plant, these units or vessels often include separators, treaters, or storage tanks or vessels where the extraction or treatment of one material from or in another, along with final storage, causes condensation or precipitation and ultimately accumulation of contaminants such as sludge, scale, LEL gases or volatile organic compounds (VOC's), and even H₂S.

Operators at the processing facility often require development and implementation of a coordinated chemical cleaning program to return all assets back to operational specification. These chemical cleaning programs will be completed using high-pressure jetting, liquid circulation, or steam equipment, depending on site logistics.

OUTCOMES

Natural gas processing facilities across British Columbia, Alberta, and Saskatchewan have coordinated successfully with industrial service providers and cleaning contractors for over 15 years to return their assets back to optimum operation using West Penetone products.

Through this history, West Penetone has and continues to provide products to combat specific contaminant issues at natural gas plants, with brief examples of chemical programs included in the table on the next page.



ADVANTAGES

UNIT & CONTAMINANTS	CHEMICAL PROGRAM	METHOD OF EXECUTION
Phase separators – sludge, debris, H ₂ S and VOC gases	ROC product, CITRIKLEEN HD	High-pressure jetting
	RAMSOL BCX, PENBLITZ 688L, LEMON LITE INDUSTRIAL	Liquid circulation utilizing hot-oiler equipment
Amine contactors – sludge, scales	PENBLITZ 688L, RAMSOL BCX, WESTSURF 10, PENSCRUB AS-150	Liquid circulation using chemical circulation equipment
Fractionation towers – sludge, VOC gases	RAMSOL BCX, PENBLITZ 688L, LEMON LITE INDUSTRIAL	Liquid circulation using chemical circulation equipment
	ROC 60VP	Steam co-injection, high-pressure jetting
LPG storage bullets – VOC gases	ROC 60VP	Steam co-injection
NGL storage tanks – sludge, H ₂ S and VOC gases	ROC 55X, CITRIKLEEN HD	High-pressure jetting

These programs are also supported with supplementary chemical products to manage residual hydrogen sulfide release, adjust pH of effluent to within disposal limits, inhibit and provide corrosion protection, as well as reduce foaming and provide emulsion separation. All programs are also provided with demonstrated job monitoring techniques to support management and verification of chemical consumption and job completion, where needed or required, to create a continued history of successful chemical cleaning projects at gas plants.

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.

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