

TECHNOLOGY HIGHLIGHT - CLEAR

AMGAS CLEAR Maximizes the Marketability of Less Desirable Crudes with a Versatile and Flexible Service Offering

CLEAR HIGHLIGHTS

EFFICIENT AND INNOVATIVE TECHNOLOGY FOR SOUR CRUDES

CLEAR CAN REDUCE COSTS BY UP TO 40% AND CHEMICAL USE BY 90% COMPARED TO TRADITIONAL SOLUTIONS AVAILABLE

SUBSTANTIAL ELIMINATION OF VAPOR PHASE MERCAPTANS

PREVIOUSLY STRANDED SOUR ASSETS CAN BE RECOVERED

MAXIMIZES OIL VALUE BY OPENING UP PREVIOUSLY RESTRICTED SALE POINTS

SMALLER SITE FOOTPRINT WITH MODULAR CAPABILITIES

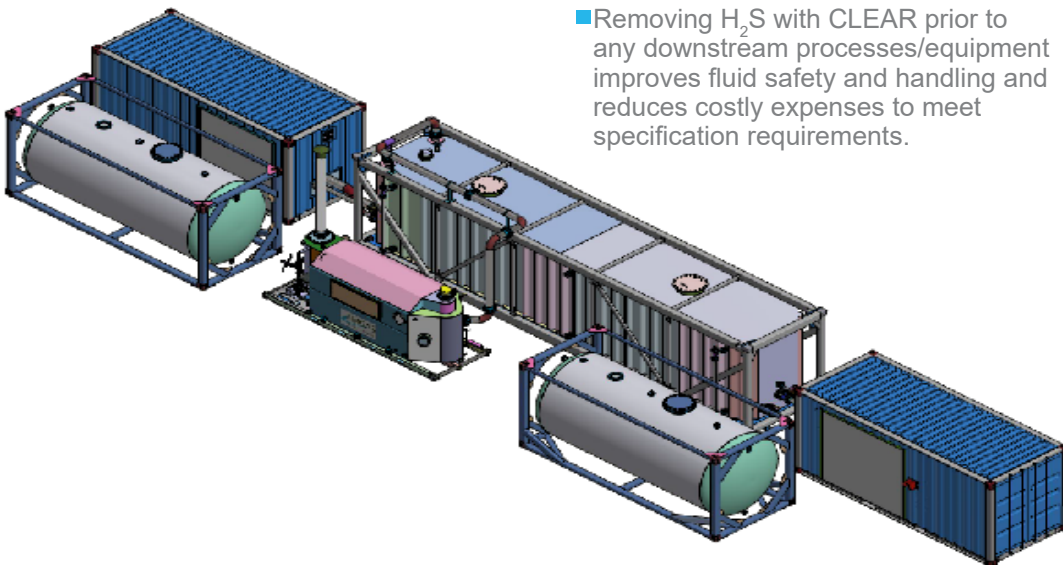
AMGAS is dedicated to leading the H₂S Treatment and Emission Control industry with innovative technology that is ever adapting to changing H₂S regulations and guidelines. When preparing H₂S pipeline regulations, the Railroad Commission of Texas, Oil and Gas Division, follows NACE MR-01-75. These regulations consider the amount of H₂S, material composition and the process conditions encountered during sour exposure. Unlike many traditional solutions, AMGAS offers an all-encompassing external treatment method to avoid the costly implications that can present themselves while adhering to these regulations, thus allowing for higher profitability when incorporating AMGAS CLEAR into the project.

AMGAS CLEAR provides a superior guaranteed result by removing H₂S from the oil by leveraging flexible treatment methods, all which ultimately meet our Client's needs. The versatility of CLEAR provides the opportunity to reduce or eliminate the associated risks typically found with traditional treatment options. CLEAR offers a smaller footprint size in comparison to crude sour oil stripping facilities, as well as modular capabilities if scale-up becomes required in a growing project. As H₂S can cause corrosion cracking and scavengers can produce nuisance chemical byproducts that can be detrimental to pipelines and/or simply not accepted by refineries, the final sweetened oil treated using CLEAR avoids these risks completely.

AMGAS CLEAR allows for seamless and real optimization that handles all H₂S concentrations across the spectrum (ppm up to % level concentrations). This takes the guess work out of scavenger mixing ratios in direct treating scenarios and eliminates the need for field personnel continually overseeing the direct chemical injection. Additionally, the chances of over or under treatment when working with fluctuating H₂S concentrations is greatly reduced.

CLEAR ADVANTAGES

- Removing H₂S with CLEAR prior to any downstream processes/equipment improves fluid safety and handling and reduces costly expenses to meet specification requirements.
- The CLEAR process does not have any negative effects on the oil quality and permanently removes H₂S from the final product, eliminating the risk for downstream re-release as the treatment is not reversible.
- AMGAS ensures all service offerings meet Area Regulator guidelines and provides our clients with verified and accurate testing and results. Our clients can rest assured that their reporting objectives will be met.
- AMGAS can accurately project plan and provide budgetary bids backed on our years of experience in the industry, allowing CLEAR to be cost effectively quoted and commercially implemented successfully.



**Please note that all AMGAS projects are quoted based on process conditions and pricing may vary.