

Capabilities for
**OIL & GAS
TERMINALS**



How ChemTreat Helps Oil & Gas Terminal Owners



Utility Treatment Programs

Heating/Cooling Exchange with Water or Process Streams

Wastewater Treatment

Internal Pipelines, Transfer Lines & Storage Tanks

Corrosion and Microbiological Protection of Bilge, Transfer, and Internal Lines

- Pigging and Continuous
- Sentinel™ Advanced Corrosion Protection

Hydrogen Sulfide (H₂S) Vapor Space Requirements

- Conventional and Novel Approaches from ChemTreat R&D

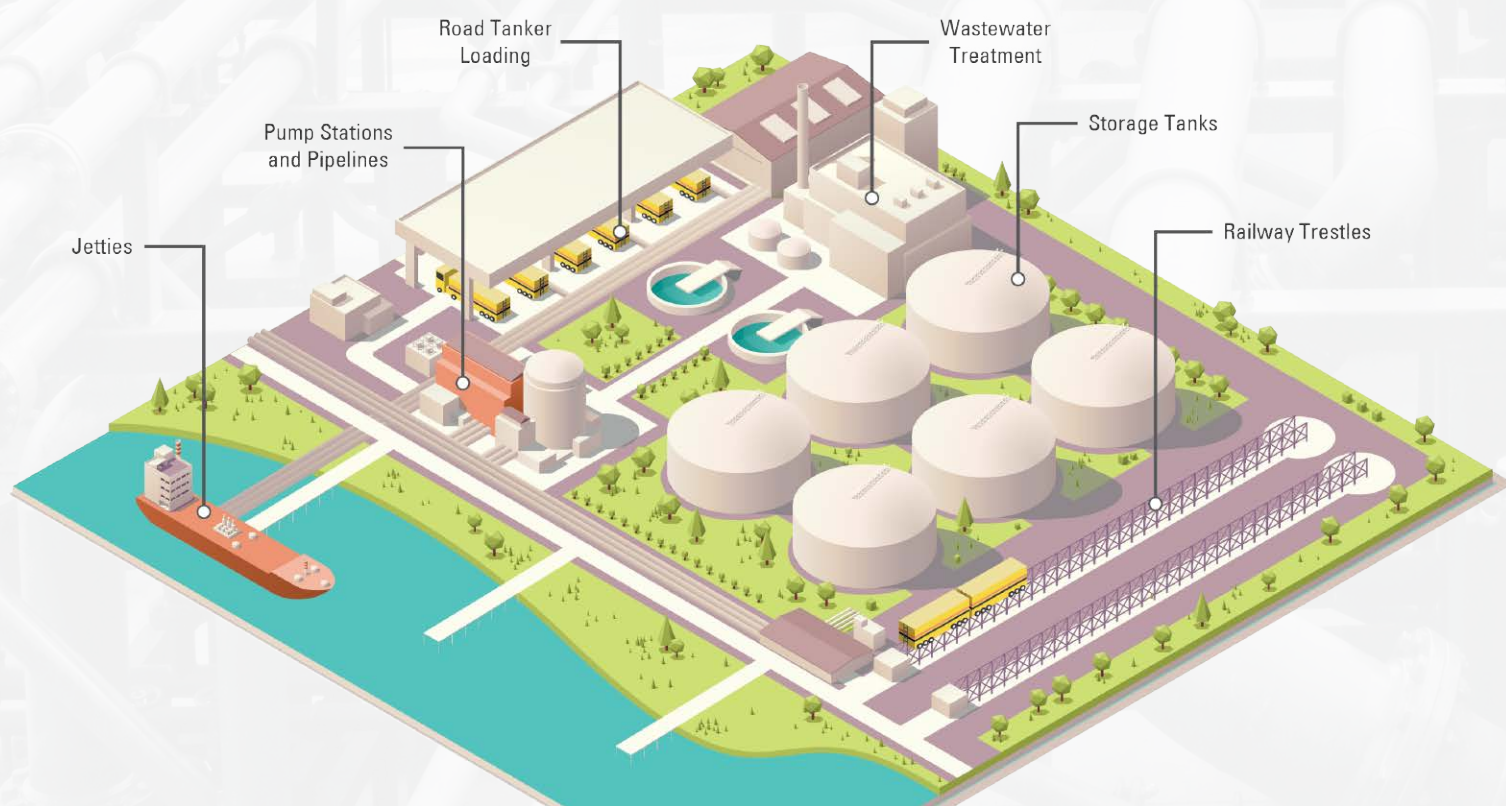
MMA Triazine, Caustic/Catalyst

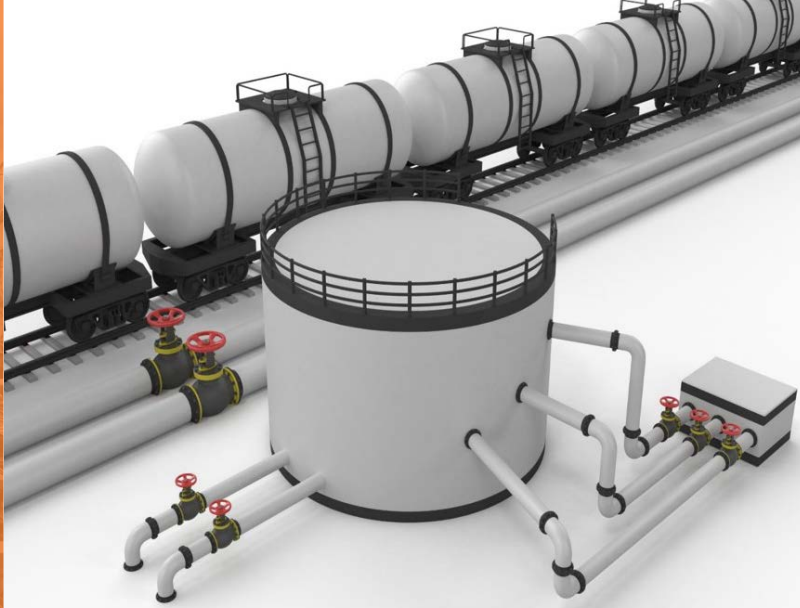
Catalyst PT3165

Various Blends to Reach Target H₂S at Lower Application Costs

Asphaltene/Paraffin: Tank Bottom Mitigation for Cleaning and Viscosity Reduction for Transfer

- Traditional Solvents, Inhibitors, and Converters (FL5478)





Vapor Space H₂S: Catalyst PT3165

Advanced Catalyst Chemistry for H₂S Scavenging
Lowers Dosage and Cost for Oil Sweetening
Not a Triazine (Non-formaldehyde-based)

EXAMPLE

- 1.6% (16,000 ppm) H₂S in vapor phase
- Initial fluid temperature: 90°F
- No post-sampling heat applied

PT3165 Dosage	H ₂ S in Vapor Phase (ppm)		
<i>ppm</i>	<i>One Hour</i>	<i>Three Hours</i>	<i>Eight Hours</i>
200	4,000	700	<2.5
300	1,000	800	<2.5
500	400	350	<2.5
750	400	300	<2.5
1,000	225	<2.5	

In this example, H₂S treatment costs are reduced by 50% over competitive treatment approaches to meet target H₂S specifications for vapor space requirements.

Sentinel™

Proprietary, patent-pending corrosion inhibitor technology for oilfield applications (pigging or continuous injections for internal pipelines)

Bridges the gap between traditional corrosion inhibitors and new technology, providing a stronger, longer-lasting protective film on metal surfaces

Outperforms standard corrosion inhibitors used in terminals

Helps maximize asset protection

Boiler Water Capabilities

Pretreatment Optimization

Scale Inhibitors and Sludge Dispersants

Chemical Treatment Specifications

Steam Purity Studies

Condensate Return Evaluation

Failure Analysis

Fuel Conservation Studies

Results are examples only. They are not guaranteed. Actual results may vary. ChemTreat cannot guarantee results.



ChemTreat's Enhanced Offerings

Cooling Water & Heat Exchanger Treatments

- Specialized chemistries for water reuse options and blowdown reduction
- On-line and off-line heat exchanger cleaning and passivation technology
- High stress corrosion and deposit control programs
- Chlorine dioxide and other chlorine gas alternatives

Oil & Gas Chemistry

ChemTreat offers a full line of industry-specific process chemistries including:

- Defoamers
- Paraffin Inhibitors
- Demulsifiers
- Corrosion Inhibitors
- Iron Sulfide Dispersants
- H₂S Scavengers
- Oxygen Scavengers
- Amine Corrosion Inhibitors

Automation & Control

- Fluorescence monitoring technology for traced treatment programs
- Online data management systems to provide real-time reporting and analysis

Enhanced offerings are optional services. They are not part of all treatment packages.



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