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Bioxy Research is proud to introduce H2S Terminator™. H2S Terminator is a unique formula containing a patent-pending Advanced Organic Biopolymer (AOB) and a biodegradable natural amino acid complex that both **eliminates** hydrogen sulfide and **inhibits** its formation in oil, produced water, and wastewater. It was scientifically formulated to eliminate H2S with no negative impact on oil quality and no formation of other undesired compounds.

The Technology

The core of the H2S Terminator technology is the AOB, an ultra-pure balance of beneficial, long-chain, negatively charged, stable carbon groups that act as a natural buffering agent, creating a stable treatment environment. AOB also acts as a sequestering agent binding metal ions into an insoluble stable complex that becomes a non-toxic organic metal complex and mineral. As a chelating agent, H2S Terminator detoxifies poisonous metal agents by converting them to a less toxic biochemically inert form while providing an unprecedented capacity to capture and absorb a wide array of contaminants found in oil and gas exploration and refining operations. In addition to the AOB, H2S Terminator contains a broad spectrum amino acid complex that speeds up the natural degradation of organics by efficiently catalyzing complex organic molecules found in crude oil. H2S Terminator is designed to quickly reduce H2S and toxicity through its ability to alter the environmental factors in crude oil that form H2S. Elemental sulfur and sulphates are neutralized and organics are stabilized while the oxygen-deficient environment is reversed inhibiting the conversion to H2S. Treatment also reduces the corrosive effects on metals related to H2S/salt-based solutions to piping and equipment. Therefore, H2S Terminator shows a significant competitive advantage over alternative products for the treatment of crude oil and produced water.

Why apply H2S Terminator?

Hydrogen sulfide is classified as a **broad-spectrum poison** at fairly low concentrations. 10 ppm is the OSHA permissible exposure limit for an 8-hour period. The following table explains the effects on human health:

Concentration	Human Health Effect
10-20 ppm	Eye irritation
50-100 ppm	Eye damage
100-150 ppm	Olfactory nerve paralysis; sense of smell loss
320-530 ppm	Pulmonary edema; potentially fatal
800 ppm	Lethal for 50% of humans with 5-minute exposure
1000 ppm	Immediate collapse and death from a single breath

Bioxy
H2S TERMINATOR
Hydrogen Sulfide Inhibitor & Eliminator

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Hydrogen sulfide is also highly corrosive to steel piping, equipment and concrete enclosures. Damage to these assets can be very costly and greatly increase liability and risk to human health. H2S Terminator converts hydrogen sulfide to biochemically benign compounds and significantly reduces that risk.

H2S TERMINATOR CONVERTS HYDROGEN SULFIDE TO BIOCHEMICALLY BENIGN COMPOUNDS, REDUCING HAZARD TO HUMAN LIFE AND ASSETS.

Where can H2S Terminator be applied?

H2S Terminator can treat **crude oil, produced water or wastewater** downhole, in pipelines, storage tanks, wastewater/stormwater treatment ponds/lagoons, railcars and trucks - anywhere there is adequate mixing.

Does H2S Terminator really work?

Case Study Summary #1: H2S Terminator eliminates hydrogen sulfide in oil.

The following table shows results from a third party laboratory following a recent trial in North Dakota where oil samples were treated with a small dosage of H2S Terminator as operator had a long residence time. No negative effects on oil quality were detected. Faster reaction times are possible with higher doses if limited by a shorter residence time.

Sample ID	H2S (ppm by weight)
Prior to treatment	19.8
Day 1 - 12 hours after treatment	10.6
Day 2 - 24 hours after treatment	6.1
Day 3 - 48 hours after treatment	3.0
Day 6	1.5
Day 7	<1.0

Case Study Summary #2: H2S Terminator eliminates hydrogen sulfide from produced water.

A 300 barrel sample of produced water from an oil well in Utah was collected in an empty storage tank. Application of 3 gallons of H2S Terminator (1 gallon per 100 barrels of water) produced the following results:

Sample ID	ORP	pH	H2S (ppm)	H2S % Reduction
Immediately prior to treatment	-385	7.8	800	**n/a**
3 hours after treatment	-320	7.5	400	**50.0%**
12 hours after treatment	-280	7.5	180	**77.5%**
12 days after treatment	+165	7.5	0	**100%**

These results demonstrate the product's ability to not only **eliminate** H2S at the production site, but also to reverse the oxidation reduction potential (ORP), **inhibiting** the formation of hydrogen sulfide.

For more information, please visit our website at www.bioxyresearch.com or contact us at info.bioxyresearch.com.