



Providing Treatment Solutions for Air, Water, & Land

[www.TheiaLLC.com](http://www.TheiaLLC.com)

(888)330-2260

## Biogas Solutions



Theia provides all your solutions for treating & handling methane produced from landfills and digesters.



Media Replacement Service

H<sub>2</sub>S  
(Hydrogen Sulfide)  
Removal



Service, Repair,  
& Upgrades of  
Existing Systems

Siloxanes  
Removal

## Better Media, Better Equipment, Better Systems

Since introducing its first BG media to the market 5 years ago, Theia Air continues to outperform everything else in the market for H<sub>2</sub>S as well as for Siloxanes Removal. Not only does Theia offer the lowest operating cost, we typically offer the lowest installed cost for new systems, proving that well engineered systems do not have to be needlessly complicated or expensive.

While our H<sub>2</sub>S media has helped our customer save a lot of money, they really appreciate the ease of replacement service when it does come time to replace the media. The media does not clump, foul, or bind together and it is removed either by gravity or by a simple vacuum system. No confined entry is required. Equipment is typically serviced and back on line in a matter of hours and not days.





## H<sub>2</sub>S (Hydrogen Sulfide Removal)

Hydrogen Sulfide (H<sub>2</sub>S) removal from methane gas seems complicated and expensive but it does not have to be. Theia offers simple cost effective solutions, starting with the highest performance dry media in the world. Theia offers multiple solutions and will work with you to find the one that is best for your site, your application and your budget.

**H<sub>2</sub>S Media:** Theia Air offers the longest life media in the industry. Our media will outlast iron based technologies like Sulfatreat and Iron Sponge. H<sub>2</sub>S Rex medias remove nearly 70% of their own weight in H<sub>2</sub>S by converting the H<sub>2</sub>S to sulfur and capturing those molecules. There is no regeneration process and our media is safe to handle when it is new and when it is spent.

Unlike iron sponge or other iron based medias, our media will never clump, clog, or foul. Removing **our media when it is spent is as easy as putting it in when it is new, GUARANTEED.** Spent media will never leach any sulfides and can be placed into any landfill without issue. We hope to have the media approved in the future as a soil amendment as it contains high levels of sulfur and is a wood based media.

**EOS System:** The Eos system is a relatively new treatment system but it utilizes a number of well known and established technologies to offer a simple treatment system. This is not a black box but rather an innovative combination of proven technologies to make a simple but robust and reliable treatment technology. EOS combines the reasonable capital costs associated with dry media systems with the low operating costs associated with premium wet systems.

The system is simple to operate and maintain and is built on several proven technologies that have been applied in the industry for many years. EOS can handle virtually any flow rate and H<sub>2</sub>S level and does not utilize any dangerous chemicals. The system generates elemental sulfur along with calcium sulfate either of which can be applied as a soil amendment. EOS directly converts the captured sulfides without the use of any chemical oxidants or any biological processes using only ambient air.

**Icarus DH media/System :** Icarus media will directly adsorb H<sub>2</sub>S and offers the lowest cost per pound of H<sub>2</sub>S of any media in the industry. We are presently conducting some testing to determine how many times it can be regenerated on site before launching it commercially. The media is regenerated without the use of chemicals or oxidants and generates sulfur and calcium sulfate as a byproduct.





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## Better Equipment

Theia offers wide range of equipment designs and sizes for utilizing dry media to treat your gas. This equipment ranges from a single canister to a multi-vessel system including our self emptying units that the customer can change out themselves without the use of a vacuum truck or specialized equipment.



*High Flow Single & Dual Bed Vessels:* Box style vessels that can treat up to 10,000 CFM of gas in a single vessel.



*Cylindrical Vessels:* made from heavy duty epoxy coated carbon steel or stainless steel and can handle flow rates up to 5000 CFM and 14.8 psig.

EOS System offers removal of High Levels of H<sub>2</sub>S with low operating costs and reasonable capital costs



Easy-Dump:  
empty units without a vac truck: with the pull of a lever





## Siloxanes Removal

Siloxanes are another troublesome and less understood problem facing those hoping to use gases derived from landfills, digesters, etc. Theia offers simple solutions which are designed for YOUR application to efficiently remove the Silica based molecules which are actually present in the gas. We offer a variety of media, each designed for a specific range of contaminant, and will combine them or use a single media, depending on the gas we are treating and based on your targets.

Theia offers specialized targeted media for removing D3-D5 range Siloxanes . Our BGS media will remove 3-5% weight by weight of these compounds . Because of the highly selective pore structure, this media will not be consumed by other contaminants, and as such, will last longer in service.

Theia also offers several proprietary blends which use BGS media as well as other high grade carbon products to remove siloxanes as well as other target compounds such as Silanes, Silanols, and Volative Organic Compounds.

Our team will service your existing equipment and optimize, retrofit, or replace systems from our competitors that just do not work. Of course, we also offer the highest quality and most innovative equipment designs in the marketplace.

