

DON'T LET **WASTE** GO TO
THAT **WASTE** WASTE.

Rethink how you dispose.



Eliminate disposal costs

Produce pellet fertilizer



Make some Mooola!



VULCAN
DRYING SYSTEMS

vulcandryingsystems.com | 660-263-7474



Poultry, Bovine, and Swine Manures

Vulcan Drying Systems Technology was developed to address the growing problems produced by the oldest and most natural fertilizer in the world... manure. Historically, animal manures have been handled as a solid and were either directly deposited to pastures or collected along with animal shelter bedding and applied to land as a crop nutrient. As the concentration of animals on farms increased, the need for more efficient methods of manure management developed. Hauling nutrients to cropland in raw form became very expensive compared to hauling the same amount of nitrogen or phosphorus in the form of a commercial dry fertilizer. Until recently, despite the negative environmental impact, manure has not been strictly regulated. Now, amidst the conflicts over who is responsible for pollution caused by manures, new and more stringent regulations have been introduced.

Contact Vulcan Drying Systems, and let us help you turn your animal manure into a marketable commodity.

Problems created by manure:

- Pressure from government regulations to use alternative management practices.
- Risk of serious environmental issues.
- Costly disposal fees.
- Fines if not disposed of correctly.
- Hauling and storage challenges.

Solutions by drying in a Vulcan Drying System:

- Disposal cost in many cases can be reduced or completely eliminated.
- Drying and other conversion technologies we provide, drastically reduce the volume of manure, adding value in the process.
- Manure odors are reduced, and odor producers, such as ammonia, are able to be sequestered from the vent gas.
- Produce a marketable dry pellet fertilizer or biochar, generating revenue from what was waste.



A dry fertilizer product has many advantages over wet waste applications including less potential for run off, an increase in the number of days available for application, as well as an exponential increase in available sites for application.

With uses in agriculture, horticulture, landscaping, and other industries, the potential markets for revenue generation are numerous.

BENEFITS

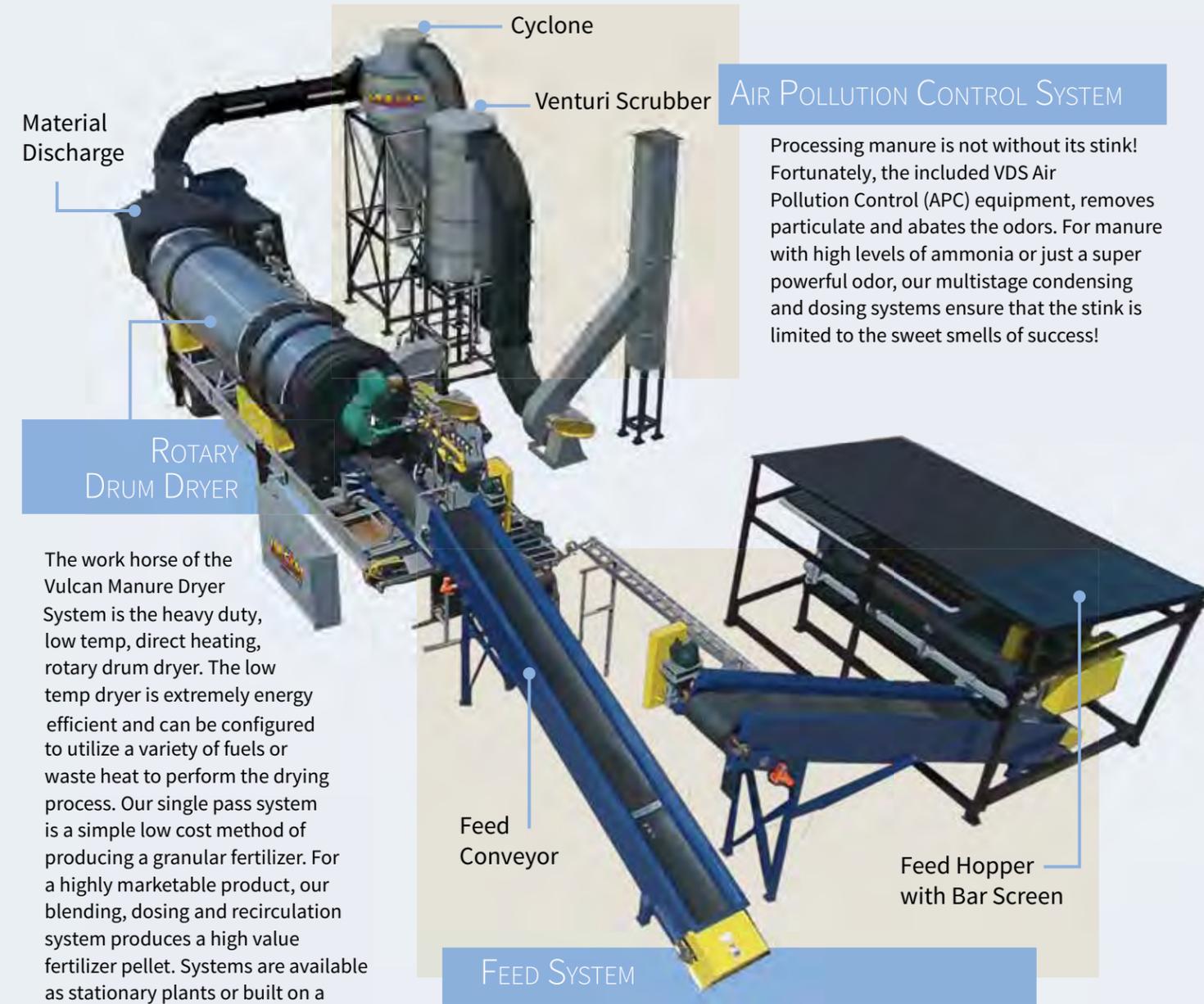
BENEFITS OF MANURE DERIVED FERTILIZER

Manure is an expected by-product of the livestock industry. If left untreated, manure is just that... manure. When properly processed manure becomes a value added marketable commodity, also known as fertilizer.

The composition of nitrogen, phosphorous, potassium and other nutrients makes treated manure an excellent fertilizer. The organic matter also helps to improve soil structure, aeration, water infiltration and soil moisture-holding volume.

SYSTEM PROCESS FLOW

We know our customers expect not only a good product, but a company and service that stands behind its work and its word. Each system is supplied complete with all the equipment and infrastructure components you need to quickly get up and running. Our installation, commissioning, and training services are included in each system sold. At Vulcan Drying Systems, we know our success is measured by your success.



The work horse of the Vulcan Manure Dryer System is the heavy duty, low temp, direct heating, rotary drum dryer. The low temp dryer is extremely energy efficient and can be configured to utilize a variety of fuels or waste heat to perform the drying process. Our single pass system is a simple low cost method of producing a granular fertilizer. For a highly marketable product, our blending, dosing and recirculation system produces a high value fertilizer pellet. Systems are available as stationary plants or built on a mobile platform.

AIR POLLUTION CONTROL SYSTEM

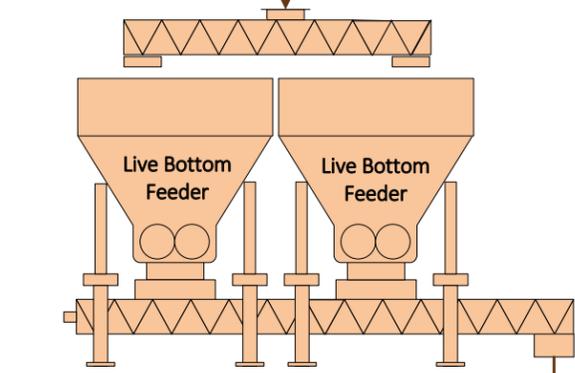
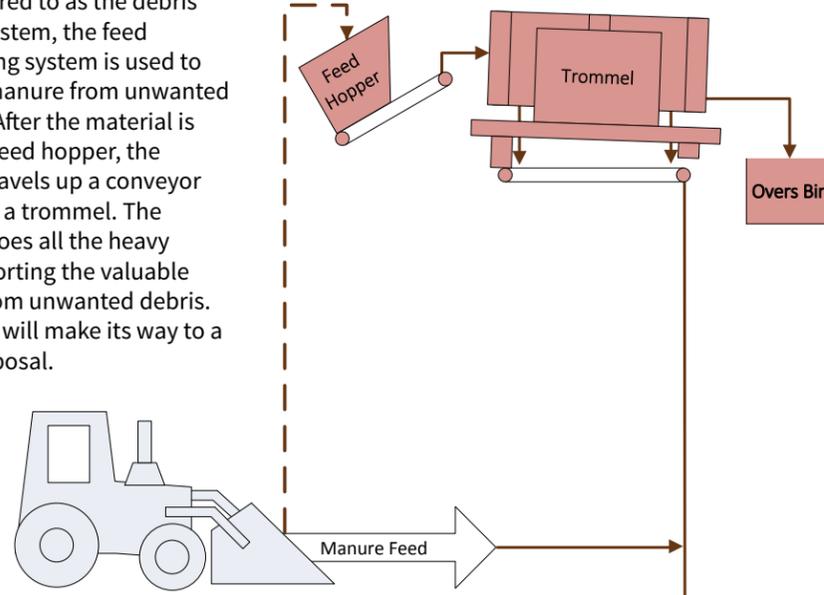
Processing manure is not without its stink! Fortunately, the included VDS Air Pollution Control (APC) equipment, removes particulate and abates the odors. For manure with high levels of ammonia or just a super powerful odor, our multistage condensing and dosing systems ensure that the stink is limited to the sweet smells of success!

FEED SYSTEM

We understand that not all manures are created equal, and the consistency of the manure, the arrangement of the feed system, and the intended beneficial reuse will drive the material selection of the handling equipment. Vulcan Drying Systems provides best in class manure feed handling options for clumpy, lumpy, sticky and just plain trashy feed. We know how to handle it all!

Feed Conditioning System (Optional)

Often referred to as the debris removal system, the feed conditioning system is used to separate manure from unwanted products. After the material is fed into a feed hopper, the material travels up a conveyor and enters a trommel. The trommel does all the heavy lifting by sorting the valuable manure from unwanted debris. The debris will make its way to a bin for disposal.

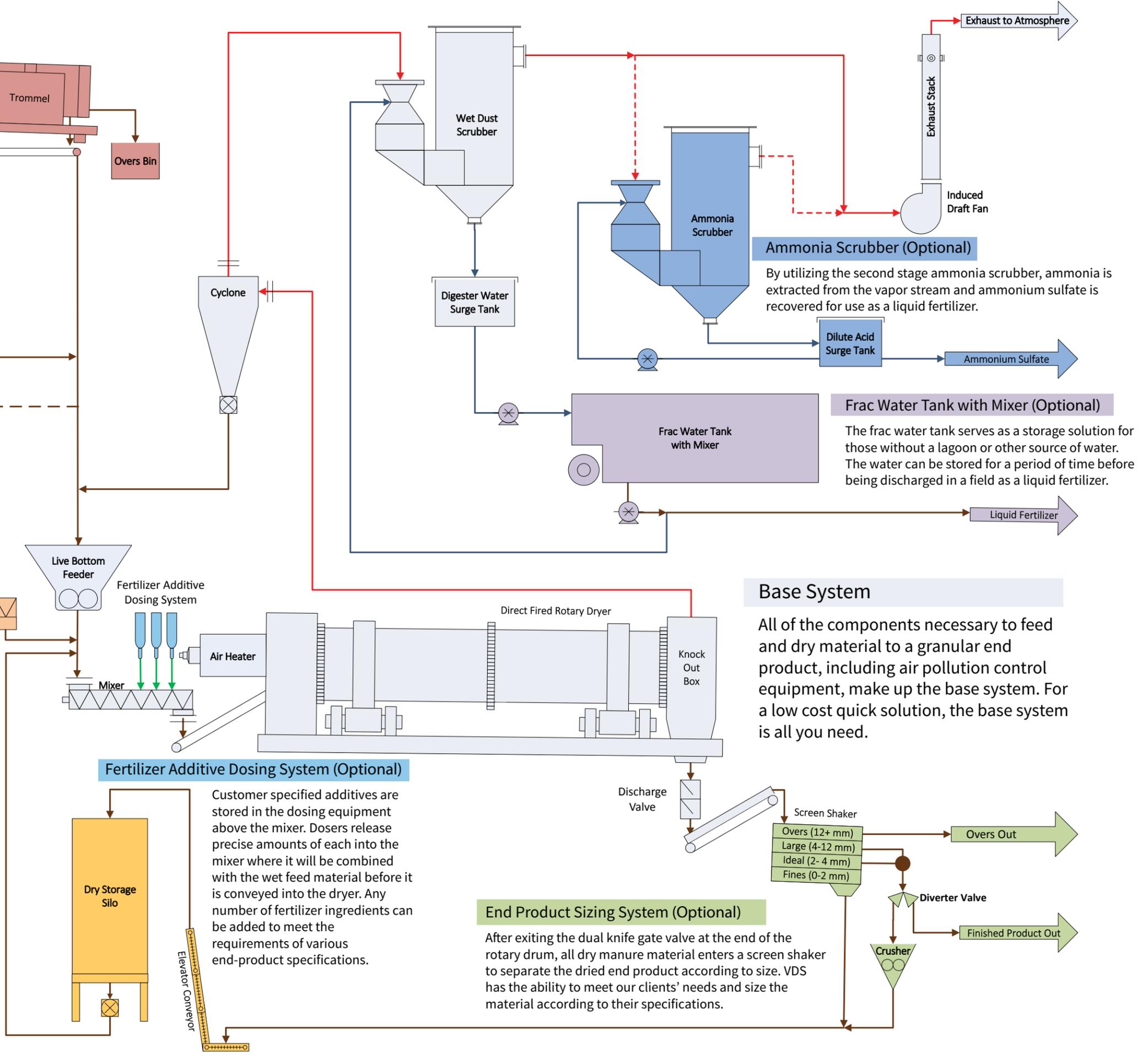


Weight Monitoring Feed Hoppers (Optional)

Additional feed hoppers can be added to the beginning of the process, which include weight cells and constant feed weight monitoring. This addition allows for streamlined control and highly accurate recordkeeping of feed processing rates.

Dry Storage Silo and Elevator Conveyor (Optional)

The elevator conveyor brings off-spec granules from the screen shaker to be stored in the dry storage silo. The silo allows material, that does not meet required sizing specifications, to be stored and then recirculated back into the feed as seed material to produce the specified granules.



Ammonia Scrubber (Optional)

By utilizing the second stage ammonia scrubber, ammonia is extracted from the vapor stream and ammonium sulfate is recovered for use as a liquid fertilizer.

Frac Water Tank with Mixer (Optional)

The frac water tank serves as a storage solution for those without a lagoon or other source of water. The water can be stored for a period of time before being discharged in a field as a liquid fertilizer.

Base System

All of the components necessary to feed and dry material to a granular end product, including air pollution control equipment, make up the base system. For a low cost quick solution, the base system is all you need.

End Product Sizing System (Optional)

After exiting the dual knife gate valve at the end of the rotary drum, all dry manure material enters a screen shaker to separate the dried end product according to size. VDS has the ability to meet our clients' needs and size the material according to their specifications.

See why we are a leading technology provider for animal manure nutrient recovery.

Why Vulcan Drying Systems?

Vulcan Drying Systems is a leader in custom-designed thermal systems. Our thermal technology has assisted clients from a host of industries to reduce operating, storage and transportation costs, meet environmental regulations, find renewable energy sources and process what was once considered waste for beneficial reuse.

Servicing accounts on six continents and in over 80 countries is a testament to our ability to handle any size thermal project and provide our clients with an economical solution.

Contact Vulcan Drying Systems today to learn more about our innovative manure processing technology.



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