



# BioSAFE Engineering

A Clean Technology Company



**Focused on Healthier,  
Cleaner and Safer Environments.**

Global Leaders Dedicated to the Design, Engineering,  
Manufacturing, Installation and Service of the World's  
Most Trusted Waste Treatment Technology.



## Our Mission

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BioSAFE Engineering is the global leader in the design, manufacture, installation and service of waste treatment equipment used in research facilities, health-care, industry and science to eliminate the threat of hazardous or infectious agents. We are an advanced scientific applications engineering company providing unique non-incineration, environmentally responsible solutions for treatment and disposal of biologic and medical waste in both liquid and solid forms.

Our goal is to provide the most cost effective, proven, reliable products worldwide to safely dispose of infectious waste while protecting the end user and the environment. BioSAFE Engineering provides up front engineering support, design, manufacturing, installation, commissioning and treatment for our entire line of products.



## Technology and Management for Your Toughest Environmental Challenges

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BioSAFE Engineering offers proven, technical solutions for dangerous and infectious waste streams generated everyday in real life operating and research environments. Our deep understanding of the realities of life science, healthcare, pharmaceutical, plant and animal research facilities enables us to assist clients in solving the toughest material disposal challenges.

Based on patented, environmentally-safe processes, our products can be designed to treat waste on a scale from laboratory bench-top to commercial operations. Our equipment can be configured to be mobile or installed for decades of service in a single placement within high containment facilities.

## Our Relationship with Customers

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BioSAFE Engineering offers our clients a full-scale, enterprise engagement. We integrate our services with A&E firms, offer financing options tailored to client needs and even provide introductions to trusted third parties for independent assessments on matters ranging from efficacy testing to wider systems integration. Once the equipment is in place, we provide all the services necessary for a long, productive operating life.

It's a commitment to customer satisfaction measured in decades. That being said, we can provide customer reference testimonials and site visits to offer new perspectives and peace of mind.

## Professional Engineering and Consultative Services

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BioSAFE Engineering pioneered the use of safe, cost effective methods for neutralizing infectious solid and liquid biological waste byproducts without the need for incineration or burial. Our engineering and technical sales staffs provide years of hands-on experience for assisting with technical feasibility, conceptualization, economic projections, site preparation and permitting, regulatory compliance and process maintenance.

BioSAFE Engineering is our core technology and management group. R&D, patents and expertise, sourcing and assembly, logistics and product monitoring and field service are all managed by an experienced and professional staff.



### BioSAFE Life Sciences

BioSAFE Life Sciences provides up front engineering support, design and manufacturing, installation, commissioning and training for its line of tissue digesters and effluent decontamination systems.



### STI BioSAFE

STI BioSAFE offers products designed to mitigate the time and expense of healthcare waste through efficacious waste treatment, logistics, transportation and disposal.



### BioSAFE Government

BioSAFE Government Services is structured to serve public sector entities with rapid and custom solutions for managing tasks such as disease control, bioterrorism response, ports and borders, mass animal mortality and regulated garbage.



## BioSAFE Life Sciences

A Division of BioSAFE Engineering

### Tissue Digesters

For over 20 years, BioSAFE Life Sciences' patented alkaline hydrolysis technology has met and exceeded some of the world's most hazardous, infectious and critical disposal challenges.

Operating today on five continents, across the public, government and private sectors our engineered systems are the purest expression of commitment to make our world healthier, cleaner and safer. BioSAFE Life Sciences takes great pride in the fact that the origins of this technology and company are traced back to the industry's original systems used to treat infectious waste. Our equipment has been validated and is in service throughout the world, working under several standards and guidelines ranging from noncritical to highly infectious BSL3-Ag and BSL4 laboratories.

Over the course of time, BioSAFE Life Sciences has expanded the capacity, speed, range and mobility of these specialized systems to accommodate the needs of the constantly changing market environment. With market leadership and constant growth, we have expanded the capacity of both our in-house engineering team as well as our manufacturing capacity to better serve our clients. BioSAFE Life Sciences' customer service and extended warranty programs are now deployed around the world. Most importantly of all – BioSAFE Life Sciences has never wavered from its commitment to a repeatable validated process.



*500 lb stainless steel wet digester with an automatic locking ring lid and removable basket for ease of operation.*

### Effluent Decontamination Systems

From Bio-Safety Laboratories (BSL) ranging from level 1 through 4 research facilities to healthcare, the world is placing higher scrutiny on potentially dangerous liquid wastes.

BioSAFE Life Sciences has an extensive track record in the design, installation and maintenance of EDS systems. Our experience and installations range from small, self-contained units within cabinetry, to large-scale integrated systems meant to address the requirements of an entire facility.

We know that this technology requires a thorough understanding of present laboratory function and future applications, liquid/solids characterization of streams, normal and peak activity levels and even emergency operations. You can depend on us to engineer systems for the most stringent physical and biological validation requirements, regardless of whether organisms and agents are known or unknown.

The value of working with our technical team extends beyond clean and safe. Energy efficiency and overall operating cost control are important aspects of all the equipment we design. The promise of a long operating life comes directly from critical component selection, system redundancy, process monitoring and dependable service programs.



*Three 1,750 gallon per cycle effluent decontamination system installed at the Ohio Agriculture Research and Development Center, The Ohio State University.*



1,500 lb per cycle high pressure BSL-3Ag containment tissue digester.



BioSAFE Engineering's Bio-Cremation™ Unit.



600 gallon collection tank with 250 gallon processing vessel at the Oregon National Primate Research Center.



11 lb per cycle low pressure tissue digester.



Installation of 10,000 lb per cycle tissue digester.



Effluent Decontamination Systems: Standard Siemens controller, other PLCs can be adapted.



*300 lb per hour exterior on-site treatment installation.*



*1,000 lb per hour interior on-site treatment installation.*



*6,600 lb per hour centralized regulated medical waste treatment facility installation.*



*1,000 lb per hour external international quarantine waste treatment installation.*



## Medical Waste Systems

In the mid 1990s, STI BioSAFE pioneered the replacement of incineration used in the health-care industry with its patented processes.

That innovation continues today as this technology is now utilized on a global basis to inactivate a range of waste streams including regulated medical, health-care/risk medical, infectious, anatomical, crop science, animal research, path lab and ports and borders/homeland security.

Our equipment's unique ability to run continuous through-put, combined with a wide range of capacity, options and configurations, results in an engineered solution to meet our customer requirements. These systems offer significant benefits and values by minimizing the cost, complexity and environmental impact of inactivation as well as issues dealing with handling, compliance and logistics.

STI BioSAFE provides a wide array of medical waste treatment system capacities to choose from. Products range from 300 pounds per hour to 3 metric tons per hour.



*The STI BioSAFE system does not create any air, water or soil pollution.*



*90% bulk reduced steam-treated waste.*

## Landfill Avoidance Through Gasification of Final Product

STI BioSAFE is laying the groundwork to redirect the treated waste from historical landfill disposal to recycling alternatives. With one-third the cost of medical waste treatment associated with disposal, we are developing a long term, low operating cost alternative to landfill via recycling of treated medical waste.

Our machine output has been tested and approved for the Vadxx biofuel recovery process as part of our effort to help our customers gain public image benefits from landfill avoidance.

## Partnership With Operators (PWO)

A low up-front capital program makes cost of ownership of the STI BioSAFE unit competitive with any other technology available. Our PWO programs lets healthcare environmental service organizations focus on their strengths, leaving the waste treatment asset service life, efficiency, and uptime in the hands of STI BioSAFE. With the PWO program, long term, stable disposal pricing becomes a real possibility.



*STI BioSAFE Waste Treatment Systems: Please contact our team to learn more about the capacity of these systems, which range in throughput from 300 lb per hour to 4,000 lb per hour.*



# BioSAFE Engineering

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BioSAFE Engineering is a global leader in the design, manufacture, and installation of equipment used in healthcare, industry, and science to eliminate the threat of hazardous or infectious agents. We engineer and deploy our technology so that customers can count on a healthier, cleaner and safer work environment.



## BioSAFE Life Sciences

Effluent Decontamination System  
Tissue Digester



## STI BioSAFE

Medical Waste Treatment  
Bio-Agricultural Devitalization



## BioSAFE Government

Mass Animal Mortality  
Bioterrorism Response  
Ports and Borders



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