



Helping to protect your community from contamination requires everyone's help. Vanguard System was developed in an effort to help protect your greatest asset... *your people.*

VANGUARD
S Y S T E M S



- Effective Anti-bacterial anti-viral protection
- Easy to Use One touch operation
- Light Weight Doesn't wear your crew out
- Built to Last High quality materials and components
- Economical Low operating cost
- Multi-Use Tubes, Tool Boxes, Nozzles, Gloves, Boots...
- Adjustable Variable concentration control
- Affordable Low investment cost



Effectiveness:

Independent lab studies show the Vanguard System kills and/or removes up to 98% percent of all bacteria and viruses found on the jet hose, which is the most commonly handled piece of equipment found on a sewer truck. Common sense tells us if we reduce the worker's exposure to these pathogens, we reduce the opportunity for infection and illness.

Adjustable:

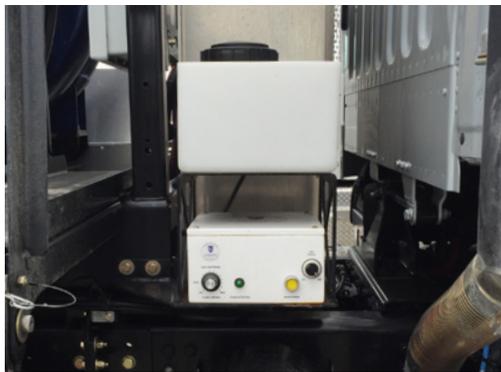
The Vanguard System easily converts into a spraying system with a 50' reach. Workers can clean vacuum tubes, tools, controls, and common surfaces on their sewer truck. The spray system also provides the water volume, cleaning, and killing power required for effective SSO clean up.

Environmental Protection:

Sewer trucks equipped with a Vanguard System protect the environment by eliminating hoses and cables dripping with bacteria, viruses, feces, and toilet paper from contaminating the work site. These same work sites often have children playing in or around them soon after the trucks are gone. The Vanguard Pathogen Protection System is ready for any sewer emergency, whether sanitary or storm, without fear of transferring contaminants from a dirty environment to a clean one.

Economical:

It only costs a few dollars per day to operate the Vanguard System. This investment is paid for by a reduction in worker sick days and potential reduction in health and liability insurance premiums.



The Vanguard system's hydraulic pumps, hose reel, control box housing, switches and other components have all been selected because of their rugged construction and history of long life when used in truck mounted applications.

Note: The Vanguard System is designed to assist you in further protecting your workers against exposure to known bacterial and viral contaminants. The Vanguard System does not replace, in any way, your current worker safety programs, policies, procedures or equipment. All current safety equipment, policies and procedures are to remain in place with the addition and / or use of the Vanguard System.

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"The Vanguard Systems were easy to install on our trucks and the system has proven easy to operate. It didn't take long for our guys to adapt to using the Vanguard System as part of their sewer cleaning routine and they are happy to have it."

MITCH RILEY
Collections Supervisor - City Of Englewood

"Employee safety is very important to us. Reducing employee contact with the biologic hazards contained in wastewater is clearly part of our program. It only made sense that we added it to our program."

DUANE RIVARD
Wastewater Manager - City Of Lakewood

"We were amazed to see how well it cleaned off the mess in general not to mention the viruses and chemicals our workers would have normally been touching. Our guys really appreciate that we are being pro-active in looking out for their health."

DAYNA LIVINGSTON
Maintenance Foreman - City Of Medicine Hat

THE PROBLEM The Wastewater Industry Has Known For Years That Wastewater And Raw Sewage Contain An Abundance Of Dangerous Bacteria, Viruses, And Parasites.

Continuous exposure to these pathogens poses a health risk to sewer workers, and a number of industry organizations[1], including OSHA[2], have finally acknowledged this fact. Public health officials have recently alerted the public to a new health risk posed by antibiotic resistant bacteria, commonly known as "super bugs." [3] These "super bugs" are resistant to treatment by our current arsenal of antibiotics. Medical experts have also warned us that new antibiotic drug development is at an all time low, with no guarantee of future success.[4] At the same time, viruses are busy changing their genetic structure and reproducing new forms of themselves.[5] The results could be equally dangerous.

Of particular interest to our industry is a new wastewater study finding "MRSA," a highly dangerous "super bug," in three out of four wastewater treatment plants tested.[6] "Super bugs," previously confined to hospital isolation wards, are now commonly found in sewer lines and wastewater treatment plants. Cleaning sewer lines exposes sewer workers to these "super bugs" and other viruses.

MRSA Infections Are Responsible For Over 20,000 Deaths A Year In The US.[7]

[1] Safety and Health in Wastewater Systems, Manual of Practice, Water Environment Federation AFSCME Health 7 Safety guide for Water & wastewater treatment Plant Workers

[2] OSHA 29CFR, Part 1901.120

[3] B Spellberg, The Epidemic of Antibiotic-Resistant Infection, CID 2008:46

[4] M. Herper, How to Avert an Antibiotic Apocalypse, Forbes, 2013

[5] Cantalupo PG, et al. 2011. Raw sewage harbors diverse viral populations. mBio 2(5):e00180-11. doi:10.1128/mBio.00180-11.

[6] Bob Roehr. 2012. MRSA in waste treatment water poses potential risk. Environ Health Perspect BMJ 2012;345:e7673

[7] New Scientist, January 2011

THE SOLUTION The Vanguard System Removes Up To 98% Of Bacteria And Viruses Found On The Jet Hose.

[1] The 'jet hose' is the component of a sanitary sewer truck handled most often by wastewater workers; therefore, it is the primary culprit behind the transfer of bacteria and viruses from the sewer to the operator. In addition, the Vanguard System provides a spray nozzle attachment that allows the crew to apply the same anti-bacterial, anti-viral solution (Sani-Solution™) to the work area, external controls, and commonly touched surfaces on their truck. It also gives sewer workers the water volume and "big time" cleaning and killing power required for effective SSO clean up.

The Vanguard System's modular design makes it easy to mount on any make of Combination, Jet, or CCTV Truck. With the push of a button, it pumps Sani-Solution through a delivery hose to a lightweight manhole roller or spray nozzle attachment.

The Vanguard System costs only a few dollars a day to operate, and the investment is offset by reductions in lost time due to illness, health insurance premiums, liability exposure, and employee morale.

Constructed from stainless steel, "6061" aircraft aluminum, and the highest quality electrical and mechanical components, the Vanguard System is trouble free and built to last – proudly made in the USA.

[1] TG Labs, May 2011.



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