

# FacilitySafe

*Advanced Cleaning + Infection Control to  
Secure Indoor Environments*



WCP Facility Solutions



# Mission

Utilize physics and chemistry to improve indoor air quality and surface hygiene in the places we work, learn, and play.

# About WCP Facility Solutions

## Business centered around Facility Health and Wellness

- Healthcare (HAI / CAI Eradication)
- Education (Student + Staff Safety / Savings + Benefits per Facility)
- Industrial (Employee Absenteeism / Environmental Safety)
- Agriculture (EPA Restrictions / Eliminate Mold / Fine Reduction)
- Entertainment (Music Venues / Stadiums, Arenas, Theaters, Clubs)
- Recreation (Cruise line Safety / Hospitality Industry, Gyms)
- Retail (Odor Reduction / Antimicrobial Laundry Additive)
- Liability Risk Mitigation / Lawsuit Avoidance

## Product Agnostic

- Find best in class products, design and implement a coordinated symbiotic suite of healthy building technologies and integrate them into profit solutions



# FacilitySafe Agenda

## PHASE 1

**Identify the Problems**

## PHASE 2

**Increase Indoor Air Quality (IAQ) and implement cleaning and infection control solutions**

## PHASE 3

**Develop monitoring tools for the staff to ensure system compliance**

## PHASE 4

**Construct Cost/Benefit Analysis**

## Immediately: “*Upgrade current public health practices.*”

WCP Facility Solutions recognizes there are no “*silver bullets*” in the world of infection control. We know the problem is complicated and requires multiple solutions. WCPFS specializes in implementing safer cleaning and infection control strategies to “*control*” the spread of bacteria.

### Let us attack this problem for you by

- Using a systematic layered approach focused on proven methods of transmission and transference
- Instituting state of the art technologies to alleviate costs
- Implementing disruptive products to provide superior outcomes

# Methods of Transmission



## Surfaces

*Touch Contamination*



## Textiles

*Spore Capture / Bacteria*



## Hygiene

*Hand Washing*



## Exposure

*Outside Sources*



## Air

*Vectors / Air System Handling*

# The Problem: Healthcare & Community Acquired Infections

- 1 in 20 patients in hospitals will acquire a Healthcare Acquired Infection
- Of the nearly 2 million patients impacted by HAIs per year approximately 100,000 will die from these infections
- **Costs:** HAIs cost hospitals up to \$45 billion a year and the average hospital incurs \$28 million in unnecessary costs per year due to HAIs. Surgical-site MRSA infections alone cost as much as \$60,000 per case, and the average case costs \$15,275.
- **Litigation:** The typical hospital is the target of seven HAI-related lawsuits per year with an average settlement of \$1.5 million, for a total of \$10.5 million per hospital. Now that 27 states require hospitals to report incidence of HAIs, the number of awards is expected to rise.

**HAIs kill more people than breast cancer, auto accidents and HIV combined**



# BIOPROTECT™

## 6 Hour Hand Sanitizer

- Regular hand sanitizers work only when the product is wet
- BIOPROTECT™ unique alcohol-free foaming hand sanitizer delivers 6-hour residual protection on skin surfaces
- Benzalkonium Chloride/Aloe formulation, non-sticky, non-greasy, no odor
- Once applied the material bonds to the skin surface and provides continual protection even after hand washing/hygiene procedures
- Application on hands reduces inoculation of touch points throughout the environment, reduces cross contamination
- Alcohol-free, no fire hazard for storage, or false positive drug testing results for personnel
- Reduces staff absenteeism and presenteeism





# Surface Antimicrobials

**Chlorine Dioxide (ClO<sub>2</sub>) Solution Surface Deodorizer**

**Chlorine Dioxide (ClO<sub>2</sub>) - Off Gassing Deodorizing Tablets**

**Hypochlorous Acid (HOCL) - Disinfectant**

- **Chlorine Dioxide (ClO<sub>2</sub>)** is an all-purpose, surface cleaner which is an excellent solution to eliminate smoke and odors
- **Off Gassing Tablets** require no labor – simply place the tablet in the appropriate container of water
- **Chlorine Dioxide (ClO<sub>2</sub>)** is the CDC's recommended product for disinfection of PPE vs Ebola.
- **Hypochlorous Acid (HOCL)** is made naturally by white blood cells in all mammals for healing and protection
- **Hypochlorous Acid (HOCL)** is a powerful oxidant that is effective against bacteria, fungi, and viruses

## **Label Claims Bacteria and Fungi**

- Salmonella enterica
- Escherichia coli
- MRSA
- Salmonella enterica
- Acinetobacter baumannii
- Staphylococcus aureus
- Legionella pneumophila
- Aspergillus niger
- Enterobacter aerogenes
- Listeria monocytogenes

## **Label Claims Viruses**

- HIV-1
- Norovirus (feline calicivirus surrogate)
- Respiratory syncytial virus
- Rotavirus
- H1N1 flu virus
- H5N1 flu virus
- Hepatitis B
- Hepatitis C

# SHIELD™ Disruptive Biostatic Agent 90 Day Surface Protectant

- Effective on surfaces for up to 3 months
- Eliminates bacteria, mold, fungus, algae, and other odor causing microbes
- Organic, non-toxic, non-leaching, water-based molecule
- Persistently kills organisms mechanically instead of chemically
- EPA approved for porous and non-porous surfaces
- Works on textiles in laundry solutions, provides odor control
- Provides an anti-static component to laundered materials
- A Silicone Quaternary Ammonium Salt (Organo-Silane Molecule)
- Approved for direct surface food and pet contact
- Edison Award Winning product





# SHIELD™

## Laundry Treatment

- Organic product non-toxic, water-based molecule laundry softener for clothing, uniforms, textiles, and tablecloths
- Add ½ ounce to laundry during rinse cycle to turn garments antimicrobial and hydrophobic
- Extends garment/uniform life as bacteria feed off dead skin cells embedded within the clothing fibers
- When the SHIELD™ treatment has dried and establishes its mechanism of defense the matrix inherently adds beneficial hydrophobic qualities to textiles with which it has been applied
- This process enhances the material's ability to resist spills, soiling, liquids and absorption of sweat and body odors while still allowing the garment to significantly breathe and provide evaporative cooling
- Provides anti-static component
- Exceptional odor control

# Perfect Clean Microfiber

- **Physically removes 85% of grime, dust and Micro-organisms**
- **Durable and Chlorine Stable designed to meet CDC guidelines for Blood-Borne Pathogens**
- **Lint-free therefore lessens particulates produced from paper towels**
- **Multicolor to identify use area (Bathroom vs Kitchen Applications) helps limit cross contamination**
- **Provides an electrostatic charge to *attract* debris**
- **Aides in achieving Dwell Time**
- **Reduces waste**
- **Highest Absorption Capacity of any Product Tested**
- **Multiple patents including internationally patented "Built-in Antimicrobial Product Protection"**



# Scrub & Clean Sponge

Proprietary Antimicrobial coated.  
One side is a dense terry-type material ideal for cleaning and the back side has “thin film” knitted into the surface to provide for a less aggressive scrubbing action. The terry side is made from TW420AM, a proprietary double sided terry material developed to meet the rigorous quality, durability and performance of the commercial laundry. Adhering to strictest Quality Control Standards this material offers the highest concentration of micro-denier fiber resulting in unrivaled performance – it takes the effort out of cleaning.



# **SIMIX™ Floor Treatment**

- **Provides a Nano-Technology Surface Treatment rendering flooring surfaces antimicrobial, through high pH (12) and inclusion of Spot-On technology**
- **Nano-Technology forms a glass-like composite, and is not a wax, therefore much less slippery**
- **Easy-to-use (two people can apply 10,000 square feet in approximately 2-hours)**
- **Maintenance is as easy as periodic swabbing with Simix™ Multi-Surface Cleaner**
- **Significant labor cost savings over conventional floor treatments**
- **Adjunctive to increased air quality: Eliminating bio burdens**





**Liquid Cleaners and  
Disinfectants Leave  
Behind Biofilm**

**Simix Cleaner**

**Detergent**

*Dissolves the  
lipid membrane*

**Hydrogen Peroxide**

*Destroys viral structure*

**High pH**

*Hostile to viral and  
microbial growth*



**Biofilm is a Hideout  
and a Food Source for Microbes**

**Simix Removes and Prevents  
Biofilm Build-up**

# SIMIX™ Floor Coating Reducing “Slip and Fall” Incidents

SIMIX Multi-Surface Ceramic Clearcoat creates less slippery floors and is rated as high traction by ANSI standard “Dynamic Coefficient of Friction” (DCOF) testing. Using a tribometer on a wet surface, floors treated with Simix™ maintain high DCOF ratings (above .42) and are safer for students, customers, faculty and staff. This results in a reduction of “slip and fall” incidents, relating filing of potential lawsuits, insurance claims and processing of requisite paperwork.



Coating DCOF result ANSI Standard Range SIMIX  
Ceramic Clearcoat = .436 High traction

# Indoor Air Quality Approach

We understand that decreasing overall particulates and bio-burdens found in the environment of confined spaces, leads to requisite decreases in associated cleaning costs, along with decreased risk of microbial touch contamination, airborne related illness and exposure to nosocomial organisms.



# Air – Greentech™ Containment Filter with ODOgard™

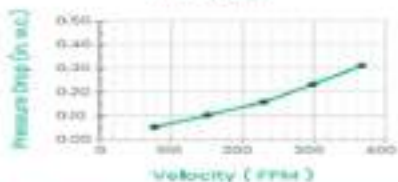
- The most cost effective solution for improving indoor air quality, eliminating odors, and saving energy in commercial buildings.
- Great for older equipment, areas that require better filtration, construction material off-gassing, high traffic areas, LEED buildings, and any odors or volatile organic compounds, everywhere you have a pleated
- True mechanical MERV 13A with low pressure drop equal to a true mechanical 8A airflow, for better energy efficiency and provides less stress on existing HVAC systems.
- 2 in 1 filter- High MERV rated filter plus the advantages of gas phase reductions for odors and VOC's.
- ODOgard™ creates a molecular bond with odors and renders the odor inert, eliminating them.





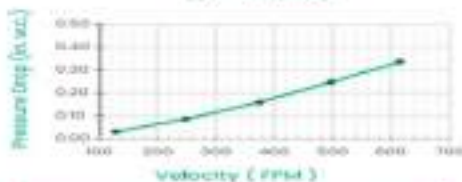
## Greentech Filters+ Pressure Drop vs. Flow Rate

1" Filter



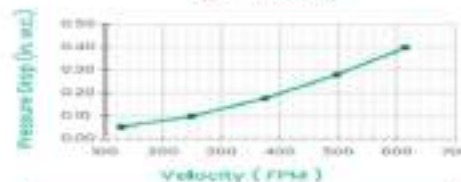
| Velocity (fpm) | Press Drop (in. w.c.) |
|----------------|-----------------------|
| 73.75          | 0.05                  |
| 147.50         | 0.10                  |
| 221.25         | 0.16                  |
| 295            | 0.23                  |
| 368.75         | 0.31                  |

2" Filter



| Velocity (fpm) | Press Drop (in. w.c.) |
|----------------|-----------------------|
| 123.00         | 0.03                  |
| 246.00         | 0.09                  |
| 369.00         | 0.16                  |
| 492.00         | 0.25                  |
| 615.00         | 0.34                  |

4" Filter



| Velocity (fpm) | Press Drop (in. w.c.) |
|----------------|-----------------------|
| 123.25         | 0.05                  |
| 246.25         | 0.10                  |
| 369.50         | 0.18                  |
| 492.50         | 0.28                  |
| 616.75         | 0.40                  |

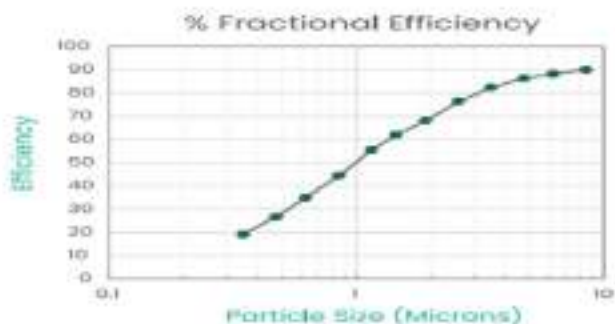
## ASHRAE 52.2 Test Data

**Filter Size:**  
24" x 24" x 2"

**Test Aerosol:**  
KCl, Neutralized

**Flow Rate:**  
1,968 CFM

**Velocity:**  
492 FPM



| Size Range (µm) | Initial Fractional Efficiency |                |
|-----------------|-------------------------------|----------------|
| 0.30 - 0.40     | 19.0%                         | E <sup>1</sup> |
| 0.40 - 0.55     | 26.7%                         |                |
| 0.55 - 0.70     | 34.9%                         |                |
| 0.70 - 1.00     | 44.3%                         |                |
| 1.00 - 1.30     | 55.3%                         | E <sup>2</sup> |
| 1.30 - 1.60     | 61.9%                         |                |
| 1.60 - 2.20     | 68.0%                         |                |
| 2.20 - 3.00     | 76.3%                         | E <sup>3</sup> |
| 3.00 - 4.00     | 82.3%                         |                |
| 4.00 - 5.00     | 86.3%                         |                |
| 5.50 - 7.00     | 88.2%                         |                |
| 7.00 - 10.00    | 90.0%                         |                |

# Monitoring – We do what we say we do...

- WCP Facility Solutions maintains a number of strategic alliances with technology companies providing monitoring of viable air samples and surface contamination with cloud based and off-site notification capabilities
- Providing “state of the art” measurement of environmental parameters such as:
  - Temperature
  - Humidity
  - Ozone
  - CO<sub>2</sub>
  - CO
  - Pressure Differentials
  - Particulate Matter from 0.1 micron to 10 micron
  - VOC's
- We have the ability to detect/analyze biofilms on surfaces, and in conduits to detect inoculation with Legionella and other water-borne microbes
- Protect staff, employees, guests, visitors and decrease likelihood of transmission to residents







## Keep Public Spaces Safe 24/7

- Clean all Transport Trains, Buses, and Vehicles with Microfiber
- Deodorize with Chlorine Dioxide (ClO<sub>2</sub>) Off-Gassing tablets
- Disinfect with Hypochlorous Acid (HOCl)
- Residually Protect with SHIELD™ Protectant Technology
- Remain continuously and residually protected from home, to school, to work, and all spaces in between

# FacilitySafe Summary



## Lower Operating Costs

*Cleaning, Staff Absenteeism and Presenteeism*



## 24/7 Protection

*Continuous surface + textile cleaning and sub-micron air filtering*



## Helps Ensure Safety

*of staff and visitors*



## Environmentally Safe

*Exceptional mold and odor control*

SHIELD™ Surface Protectant

BioProtect™ 6-Hour Hand Sanitizer

SHIELD™ Laundry Treatment

Perfect Clean™ Microfiber

Hospital Grade Disinfectants

Simix™ Products

ATMO-Cube™ Air Monitoring

Microbial Environmental Monitoring

Infection Control Consulting



WCP Facility Solutions

Your Partner for Safe and Healthy Facilities

# Thank You For Your Interest!

Ken Horton  
President  
WCP Facility Solutions  
Tel: 480.861.1427  
email: [ken@wcpfacility.com](mailto:ken@wcpfacility.com)  
Please visit us at <https://wcpfacility.com>

---