

## THE VALUE OF A HOSPITAL ONSITE-GENERATED DISINFECTANT AND CLEANER

The presentation discusses the benefits of using onsite-generated disinfectants and cleaners in hospitals, specifically focusing on a trial conducted at the Orlando Regional Medical Center in Orlando, FL, USA. The trial lasted for 18 months and evaluated various metrics such as ATP verification, SIR report, employee safety, employee survey, sustainability, and chemical cost.

Key findings from the trial include:

- A significant reduction in healthcare-associated infections (HAIs) such as *S. aureus* MRSA (67.0% reduction) and *C. difficile* (27.9% reduction) after implementing the onsite-generated disinfectants.
- Sustainability improvements, including the elimination of 54,600 lbs. of wipes and packaging waste annually and 1,040 chemical product bottle waste annually.
- A reduction in employee sick days due to confirmed chemical exposure 1.
- A decrease in the usage of legacy disinfectants and cleaners, with the onsite-generated solutions (HOCl, NaOH, HGUM) being more effective.

The presentation also highlights the use of electrolyzed water chemistry and onsite generators for producing the disinfectants, as well as the implementation of health care grade ultra-microfiber (HGUM) wipes and mops.

Overall, the onsite-generated disinfectants and cleaners proved to be effective in reducing infections, improving sustainability, and enhancing employee safety.

### List of chemicals in case study

| Pre-Viking Pure       | Post Viking Pure              |
|-----------------------|-------------------------------|
| Clorox Wipes          | C diff positive case only now |
| Stainless Steel Wipes | Usage Reduced Significantly   |
| Crew Emerel Plus      | Usage Reduced Significantly   |
| Prominence            | Eliminated                    |
| High Milage           | Eliminated                    |
| Pro Strip             | Eliminated                    |
| Crew N/A              | Eliminated                    |
| Glance                | Eliminated                    |
| GP Forward            | Eliminated                    |
| Virex Plus            | Eliminated                    |

|                           |                               |
|---------------------------|-------------------------------|
| Spitfire                  | Eliminated                    |
| Revive Plus               | Eliminated                    |
| Clorox 360                | C diff positive case only now |
| Carpet Extraction Cleaner | Eliminated                    |
| Oxivir                    | Usage Reduced Significantly   |
|                           | Viking Pure Disinfectant      |
|                           | Viking Pure Cleaner           |

Rooms tested for ATP

### 3M ATP Data June 2022- June 2023

ATP pass = 225RLU

North Tower (38 rooms 1076 tests)

| Area             | % Intial Cleaning Pass | Total Tests | Average RLUs | Total Retests | % P |
|------------------|------------------------|-------------|--------------|---------------|-----|
| North Tower 8E   | 100%                   | 11          | 9            | 0             |     |
| BMT Unit         | 100%                   | 538         | 12           | 2             |     |
| Outpatient BMT   | 99%                    | 135         | 4            | 1             |     |
| North Tower 14   | 97%                    | 39          | 16           | 1             |     |
| North Tower 11W  | 95%                    | 20          | 23           | 1             |     |
| LP 8             | 93%                    | 303         | 16           | 2             |     |
| North Tower 12   | 90%                    | 20          | 11           | 3             |     |
| North Tower 5NBT | 80%                    | 10          | 50           | 2             |     |
| AVG              | 94.25%                 | 1076        |              | 12            |     |
| SD               | 6.32%                  |             |              |               |     |

South Tower (36 rooms 273 total tests)

| Area           | % Intial Cleaning Pass | Total Tests | Average RLUs | Total Retests | % P |
|----------------|------------------------|-------------|--------------|---------------|-----|
| South Tower 5C | 100%                   | 10          | 33           | 0             |     |
| South Tower 2C | 80%                    | 50          | 66           | 14            |     |
| South Tower 6C | 79%                    | 24          | 38           | 18            |     |
| South Tower 8C | 78%                    | 59          | 59           | 76            |     |
| South Tower 7A | 69%                    | 59          | 134          | 46            |     |
| South Tower 5B | 68%                    | 60          | 87           | 4             |     |

|                  |     |    |     |    |  |
|------------------|-----|----|-----|----|--|
| South Tower 5BCV | 67% | 6  | 44  | 0  |  |
| South Tower 6A   | 66% | 44 | 122 | 40 |  |
| South Tower 3C   | 60% | 10 | 144 | 0  |  |
| South Tower 8A   | 55% | 11 | 306 | 10 |  |