

CASE STUDY

Focus: Reducing the spread of airborne SARS-CoV-2
Client: Embassy Suites Seattle Downtown Pioneer Square



Safeology uses UVC technology to help prestigious Seattle hotel clean the air.

The background.

Seattle's magnificent Embassy Suites Seattle Downtown Pioneer Square hotel opened in 2018 to great anticipation and fanfare. Located in Pioneer Square, it's perfectly situated to provide guests the very best of what Seattle has to offer. Major attractions like Pike Place Market, the Seattle Waterfront, Elliott Bay, Lumen Field, and T-Mobile Park are just steps away, making this sumptuous Seattle hotel a favorite for vacationers and business travelers alike.

The objective.

The first U.S. case of COVID-19 was diagnosed in Everett, Washington, just north of Seattle. As COVID spread rapidly across the U.S. the hospitality industry wanted to ensure the cleanest environments possible and began implementing enhanced cleaning protocols based on available knowledge at that time about how SARS-CoV-2, the virus that causes COVID, was transmitted. Embassy Suites Seattle Downtown Pioneer Square took immediate measures to provide a cleaner environment by participating in Hilton's global CleanStay™ program.

The challenge.

With knowledge about COVID evolving on a daily basis, it soon became widely accepted that airborne transmission of the SARS-CoV-2 virus posed the biggest concern. So in addition to surface cleaning protocols, many hotels began looking for solutions to clean the air. With a focus on public spaces, the Seattle hotel's ownership wanted a solution that was not only effective but also flexible enough that its deployment could change easily throughout the day as hotel usage patterns changed.

The solution.

When Steinhauer Properties, the hotel owner, learned that Electric Mirror, a company with which they'd had a long and successful relationship, was now manufacturing products that clean the air, they reached out. Sold on the company's new Safeology division and its technology, they quickly implemented the use of its Mobile Air Purifiers, which combine UVC technology and HEPA filtration to reduce the airborne spread of SARS-CoV-2.

The results.

Embassy Suites Seattle Downtown Pioneer Square now has multiple Mobile Air Purifiers at work cleaning the air throughout the hotel. Delivering an estimated 6 to 10 air changes per hour, these air purifiers have been scientifically proven¹ to inactivate 99.998% of the SARS-CoV-2 virus in just minutes. In the midst of the COVID pandemic, the Mobile Air Purifiers are providing reassurance that the hotel is actively working to minimize the spread of SARS-Cov-2.



Guest Lounge



Zephyr Bar



Breakfast Area



Fitness Center

Embassy Suites meets the trifecta of hospitality objectives.

Proven Solutions.

After the impact of the COVID pandemic began to be felt throughout the hospitality industry, the CDC discovered that SARS-CoV-2 was being transmitted primarily through the air. Armed with this knowledge, hotels began looking for ways to clean the air so team members and guests could feel confident the hotel was protecting the indoor environment.

Knowing that Safeology's Mobile Air Purifiers have been scientifically tested and proven to eliminate 99.998% of SARS-CoV-2 from the air, Steinhauer Properties President Greg Steinhauer is confident they made the right decision in placing the Mobile Air Purifiers in the hotel. *"This research reaffirms our decision to go with Safeology, and provides proof their Mobile Air Purifiers work."*

Efficient Operations.

Focused on cleaning the air in the hotel's public areas, Property General Manager Nick Kuhns wanted a solution that would flex with hotel usage. With integrated multi-directional casters and optional airflow speeds, the units can be easily moved and efficiently adapted to various rooms as needed.

"In the morning we place them in the Breakfast Area on high speed, helping to clean the air in an area that serves a large number of guests each day. The mobility of the equipment makes them easy to move, and the variable fan speeds allow us to adapt them to any area where guests and visitors gather, such as our fitness center, bar, and banquet rooms."

Customer Satisfaction.

The biggest benefit of all might be the confidence the Safeology company offers to guests. Research shows that 78% of hotel guests believe cleanliness is the most important factor affecting their choice of where to stay. And 90.5% of travelers expect hotels to use increased sanitation practices in public areas.

According to Kuhns, *"We know guests and team members want a cleaner environment; they want to know a hotel is taking action to clean the air. We're always looking for ways to make them feel more comfortable. Using the Mobile Air Purifiers is one more way we can create an environment that engenders confidence and trust."*

"Having the Mobile Air Purifiers visible and working gives team members and guests comfort knowing they're in a cleaner space. In fact, I can just feel that the air is better!"

Greg Steinhauer, President
Steinhauer Properties,
Managing General Partner

The mobile air purifier from Safeology combines proven performance with flexible operations.

Abounding in features and benefits.



- Proven effective in eliminating 99.998% of SARS-CoV-2
- Adaptable to various environments
- Quiet operation due to optimized airflow design
- 6 to 10 air changes per hour
- 9,000 hours lamp life at 85% UVC intensity
- Wireless IoT cloud-based control and monitoring
- Auto-off switch for lamp replacement
- Certified to UL Standards
- Made in America with U.S. and global components

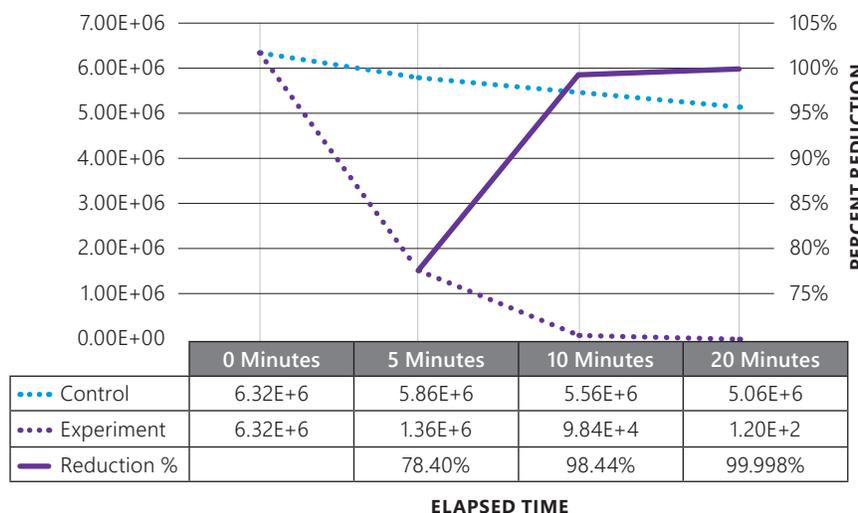
- Proven 99.998% effective
- Adaptable to room size
- No HVAC integration
- Quiet operation

Offering scientifically-proven effectiveness.

In research Safeology commissioned with Innovative Bioanalysis, an independent Level 3 Biosafety Laboratory, the Mobile Air Purifier 1800 was proven to reduce aerosolized SARS-CoV-2. The device displayed a 98.44% reduction after 10 minutes, and achieved a 99.998% (4-Log) reduction after 20 minutes.

The study report concludes by stating *“Taking into consideration the starting concentration of SARS-CoV-2 virus and the volume aerosolized, it can be assumed that the likelihood of entering an environment with this high a level of pathogen present in a real-life circumstance to be unlikely. In addition, based on the understood method by which UVC exposure deactivates pathogens it would be expected that similar results on the various genetic mutations of SARS-CoV-2 would occur.”*²

SARS-CoV-2 (Delta) Neutralization



“These study results point to the Mobile Air Purifier’s ability to virtually remove the SARS-CoV-2 virus from the air.”

Joseph C. Anderson, Ph.D.
Chairman
Safeology Scientific Advisory Board

¹Scientific study results show efficacy of Mobile Air Purifier 1800 in removing 99.998% of SARS-CoV-2 from the air.

Safeology: the ideal choice for cleaner air.

Bringing it all together.

At Safeology, we bring the proven power of UVC light into hotels and other occupied environments to inactivate and reduce the spread of disease-causing viruses like SARS-CoV-2. Contact us today to see how we can help you start creating cleaner air tomorrow.

PROJECT SUMMARY

Customer: Embassy Suites Seattle Downtown Pioneer Square

Location: Seattle, Washington

Facility: 282 room full-service hotel opened in 2018

Objective: Support hotel's commitment to provide a cleaner environment for guests and team members

Strategy: Implement UVC and HEPA technology specifically designed to reduce airborne spread of SARS-CoV-2

Major Decision Drivers: Chosen solution must have a proven record of success, offer flexibility, and be easy to implement

Solution: UVC Mobile Air Purifiers in two sizes: Model SM18 and Model SM7

Cleaning Potential: 6 to 10 ACH, capable of inactivating 99.998% of viruses and removing 99.97% of airborne irritants

Unique Features: Combination of UVC light for virus inactivation and carbon and HEPA filters to trap irritants, all controlled centrally by cloud-based custom software

Installation Date: October, 2021

UVC 101



Normal DNA strand



Broken DNA after exposure to UVC light

How does UVC work?

UVC irradiation is a physical process that alters the DNA and RNA of harmful organisms, leaving them sterile and unable to function or reproduce. Since they can't reproduce, the organisms can't spread, and the pathologic effect has been virtually eliminated.

Why is UVC a good option?

In today's environment, traditional cleaning protocols are no longer enough—especially since they primarily focus on surfaces. In contrast, the UVC mobile air purifier focuses on the primary method of virus transmission, eliminating 99.998% of SARS-CoV-2 from the air.

Why do Air Changes per Hour matter?

Air Changes per Hour (ACH) is a measure of how many times the air within a defined space is replaced each hour. The CDC generally recommends at least 6 ACH to ensure clean, healthy air.



ACCORDING TO EXPERTS

Research commissioned by Procter & Gamble shows 78% of hotel guests believe cleanliness is the most important factor affecting their choice of where to stay.

Source: Institute of Hospitality



DID YOU KNOW

In a study on U.S. Travelers' COVID-19 Safety Expectations, 90.5% of travelers expect hotels to use increased sanitation practices in public areas.

Source: tourismcrisis.org

² Information provided is as documented in Study Report, which uses the term *pathogen*. Study was performed on SARS-CoV-2. For information on research study, contact sales@safeology.com.