



To whom it may concern,

April 2, 2020

This COVID-19 pandemic has us all worried. How do we cleanse it from our environment? This viral contagion travels through enclosed spaces in a slight puff of breath, or by the touch of a seemingly clean hand. To remove it requires a disinfectant that can travel to every surface, every crack and crevice the virus can land on. Cleaning surfaces that are touched continuously is merely good hygiene, but wipes can't go places COVID-19 can. Critical Services has the solution for the rapid and complete decontamination of your aircraft. We use a vapor that can sterilize air conditioning systems, ducts, and many places human hands can't reach, but the virus can. If your passengers are concerned with COVID-19 rest assured Critical Services uses the best available technology, procedures, and methods for eradicating these strains of viruses on surfaces.

Our technology was developed through a partnership with DARPA to kill weaponized anthrax. After years of research and testing, Binary Ionization Technology (BIT) emerged as the winning technology for combating virulent and resistant forms of microbiota. Binary Ionization Technology has the highest microbiological kill rate in the industry of 99.99 % for Norovirus, to 99.9999 % for Flu type viruses, including Coronavirus strains. All our systems incorporate Binary Ionization Technology manufactured by SteraMist™.

SteraMist™ equipment produces an aerosol that kills viruses, molds, and bacteria on surfaces on contact. Their equipment effectively distributes high concentrations of aerosol hydroxyl radicals and peroxide within the mist. Creating these active ingredients involves cold plasma interacting with a unique solution supplied by SteraMist™. Once decontamination is complete, all remaining active ingredients are sucked out of the space and replaced with clean air. To prevent any stray airborne contamination from exiting the contaminated space, we use a Super Vacuum System to capture and destroy any outbound infection.

Our vacuum system uses state of the art technology, which neutralizes the mist while capturing particulates and destroying viruses and microorganisms before they enter the blower system. All contaminated disposable filter cartridges are sterilized during the vacuum process and can be removed without decontaminating the entire vacuum. Continuous decontamination of disposables increases safety, preventing cross-contamination between sites.

Send mail to: P.O. Box 629 Frankfort, MI 49635
Physical Address: 6520 Chippewa Hwy, Ste 100

Bus. (231) 970-9800



We achieve the highest kill rate in the industry by Coupling Binary Ionization Technology with the Super Vacuum. We appreciate the opportunity to assist you. We have emergency services available on a 24-hour call. If you have any questions, please do not hesitate to contact us.

Kind Regards
John Carr, P.E.
Critical Services and Environmental Solutions

Site Assessment and Decontamination Procedures:

A. Prior to Site assessment and or Treatment activates:

Ingress and egress will be established with Command-Post (CP) dedicated for site evaluation and treatment, preferably upwind from any potential exposure. The CP will consist of a designated safe area, barrier taped off and or isolated outside exclusion zone. Exclusion zone will be determined upon indicial site visit and will encompass boundaries defined by barriers and or caution/danger signage taped off accordingly. The exclusion zone may be reduced after hazard has been assessed. Multi stage Decon chambers will be in placed between exclusion zone and Command post with designated entry and exit locations as needed, these will include suit-up chambers (Clean-Room), de-clothing chambers (Dirty room) and shower/disinfecting chamber. All disposable PPE suites gloves etc. will be discarded and placed into 6-mil poly bags placed in dirty room. Similar Decon facilities for equipment may used as needed.

B. Clothing & Footwear:

IMPORTANT: All clothing (i.e., inner and outer layers) and footwear should be decontaminated after every site visit using the most appropriate Application or otherwise cleaned and dedicated for use at individual sites or areas as determined appropriate. Use of a disposable suit (e.g., Tyvek® or ProShield®) or site-dedicated, reusable suit (i.e., coveralls) is an appropriate strategy to minimize sediment/soil accumulation on clothing during research and or investigation activitys, stated earlier, all clothing layers should still be decontaminated or otherwise cleaned and dedicated after every use. Disposable items, regardless of condition, should not be reused. Contain all used equipment in plastic bags upon final exit from site, separating disposable materials from reusable equipment. Seal and store plastic bags in plastic containers until trash can be properly discarded, and/or exposed reusable equipment can be properly decontaminated off site.

C. Resperators:

Critical Services respiratory protection as a minimum will use Fullface protection with eye mouth and nose protection utilizing HEPA/Organic lavender Filters as a minimum. Cardridges will be sealed and or disposed of upon each use and will be disinfected accordingly through the Decontamination facility and may use Disinfectant Soap Alcohol wipes and or sprayed with Stermist. Resperators once cleaned will be stored in leak tight containers. Any Used Filters dismounted from resperators will be disposed of as contaminated and not to be reused.

D. 5.) Prepare a strategy (i.e., Outline how/where all equipment and waste materials will be contained, stored, treated and/or discarded after returning to the vehicle/base area)

The daily decontamination of equipment and, where applicable, between individual sites visited on the same day, unless otherwise directed by local state/federal or land management agency instructions. Confirmed contaminated sites or those with a high index of suspicion for contamination should be visited only after those sites of unknown cases have been visited, to further reduce the risk of inadvertent transmission. PROCEDURES FOR DECONTAMINATION: Thoroughly remove sediment/dirt from equipment immediately upon exiting from the site. Contain all exposed and potentially contaminated equipment in sealed bags/containers for treatment away from the location. Decontaminate the outside hard, non-porous surfaces of containers and bags prior to moving them to a secondary location (e.g., vehicles, labs, or storage). Store all exposed and decontaminated equipment separately from unexposed equipment. Clean hands, personal equipment and exposed skin using hand/body disinfecting soaps soaps/shampoos alcohols and or other approved sanitizing materials and, when feasible, change into clean clothing and footwear prior to entering a vehicle. Off site departure, REMOVE dirt and debris from the outside of vehicles (especially wheels/undercarriage) prior to additional site visits, especially when traversing through high risk areas or scenarios categorized as "Not Recommended"

CLEAN submersible and non-submersible equipment according to manufacturer's specifications. Sediments and debris significantly reduce the effectiveness of treatments. Laboratory trials have demonstrate that the use of conventional cleansers like Woolite® detergent or Dawn® dish soap (ie Surfactants) aided in the removal of sediments and debris prior to treatment with sanitizing cleaners such as Alcohol and or Hydrogen Peroxide, contributing to the effectiveness of decontamination. TREAT submersible or non-submersible equipment only in a safe manner according to the equipment and product labels using the most appropriate application or product listed. For equipment that cannot safely be treated in accordance with both the manufacturer's recommendations and product labeled instructions, dedicate to individual sites as determined appropriately. Submersible Equipment (i.e., equipment that can safely withstand submersion in water or other specified product for the recommended amount of time without compromising the integrity of the item): Treatment of submersible equipment must be done in accordance with manufacturer's recommendations for your equipment. The preferred treatment for all submersible equipment is submersion in hot water that maintains a temperature of at least 55°C (131°F) for a minimum of 20 minutes. Ensure that all equipment surfaces remain in direct contact (i.e., avoid all trapped air) with the hot water treatment for the duration of the treatment period.

Consider that although many commercial and home washing machines with sanitize (or allergen) cycles may be capable of submerging gear in the recommended hot water application for the required time, it is incumbent on the user to be sure that machines to be used attain and sustain the needed temperatures throughout the process. If heat may compromise the safety and/or integrity of the otherwise submersible equipment, consider equipment dedication or other products listed in SDS Manual. When considering other products recognize that the applicability and effect of such products on the safety and integrity of equipment remains untested. Be aware the use of preferred applications and products should be done with extreme caution and proper personal protective gear due to the risk of personal injury. ii. Non-submersible Equipment (i.e., equipment that may be damaged by liquid submersion): Treat all non-submersible equipment using the most appropriate application or product complies with the equipment manufacturer's recommendations and product label instructions, where applicable. The listed applications or products may not be appropriate or safe for non-submersible equipment. Dedication of equipment should always be considered the preferred application in these circumstances. d.) RINSE equipment, as appropriate, thoroughly in clean water. Allow all equipment to completely dry prior to the next use

E. Environmental Scientific Equipment:

Always consider the use of disposable Environmental equipment and materials between individual use. All disposable of Environmental equipment (e.g., work surfaces, bags/containers/envelopes, gloves, etc.) should only be used once then discarded after use. Re-useable equipment shall be decontaminated in designated disposable decon chamber with Negative air-Hepa filtration. (e.g.,bags, plastic containers, etc.) must be disposed of after each use.

F. Electronics, Camera, phones and Related Equipment and Accessories:

Dedicate, as necessary, or decontaminate all electronic equipment (e.g., detector, camera, tablets, cell phones, laptops, carrying case, lenses, microphone(s), mounting devices, cables, etc.) using the most appropriate procedures for existing conditions. The material composition of this equipment requires careful review and adherence to the manufacturer's care and use standards to maintain their functionality and protective features. If application/product options are not approved by the manufacturer's care and use standards for the respective type of equipment, clean equipment accordingly and dedicate to similarly classified Electronic devices used as terrestrial equipment, independent handling work, pose a limited risk of transmission (i.e., Particulate/ air monitors personal or fixed point detector surveys, analytical materials (ie Capture cassettes and paperwork) may be placed in a sealed plastic casing, plastic bag, or plastic wrap to reduce the potential for contact/exposure with contaminated environments.



Prior to opening or removing any plastic protective wrap, first clean, then remove, and discard all protective wrap.

G. COVID-19 Specific:

Procedures for Critical Services personnel and protocol. All Critical personnel will sign affidavit good health including no flu like symptoms experienced after the COVID-19 outbreak. Personnel will disclose if living in HOTBED's areas to Critical services and customers (as determined by State and or Federal Government) prior to any site activates. As additional precaution Critical Services will record forehead temperature with infrared thermal device and brief questionnaire on health and resent places traveled. Critical Services will maintain a log of all customer sites visited and the level of potential exposure if determined. Critical Services will record any breach in PPE during site visits and determine the potential level of risk of exposure and quarantine themselves as may be required for protection and to minimize the risk of COVID-19 spread.