



Case Study

Case Study: Large Regional Health Care System (*client confidentiality preserved*) | Toledo & Defiance, Ohio

Average Loss Amount: \$350,000.00 + ongoing time & material

Type of Loss: COVID-19 Mask Disinfection

OVERVIEW

In March of 2020, the novel corona virus began to emerge in Northwest Ohio, aggressively attacking the Lucas County and surrounding populations. Regional hospitals and health care systems, like health care systems across the county and the world, were swiftly overwhelmed and struggled to balance patient care with staff safety. It quickly became clear that masks and respirators were a critical component to safety but there simply was not enough available inventory in the U.S., particularly for the N95 model of masks, – making it clear health care systems needed to find a way to safely re-use existing masks.

Cousino Restoration has carved a niche in partnering with hospital and health care facility systems to keep their buildings and facilities healthy, and frequently responds to emergencies involving flood, mold, and pathogen outbreaks. This system asked for Cousino Restoration's help in working with a multidisciplinary team to design and implement a new process to safely and quickly sterilize large volumes of used health care worker masks and respirators.

This was a challenge because, of course, the entire world was struggling with the same problem but working non-stop with the team of doctors, hygienists, and safety personnel, Cousino Restoration created a clean offsite processing space, with multiple heat treatment ovens to bake the masks and kill the virus. It also instituted a careful pickup, delivery, and tracking system to handle the massive volume of masks that this system uses per day. This project has been a major success and will likely continue until a safe vaccine and herd immunity drive down the dangers of Covid-19.

WORK PERFORMED

- **PROJECT DESIGN, PROJECT PLANNING & PROJECT PERFORMANCE** – as noted above, this Project required the creation of a new prototype health care worker face mask disinfection process effective on the Covid-19 novel coronavirus. Cousino Restoration was an integral part of the design and planning of the process using heat treatment of masks coupled with biocides and is continuing to use this successful process yielding excellent statistical re-use results, even after other processes have appeared throughout the country.

- **BIOHAZARD AND PATHOGEN EMERGENCY RESPONSE AND REMEDIATION AND CLEANUP, DECONTAMINATION, RESPONSE MITIGATION** – the project combined the challenges of an emergency response situation with the challenges of an entirely new virus pandemic, a situation uniquely suited to Cousino Restoration's skill skillset.
- **TREATMENT, TRANSPORTATION AND DISPOSAL OPERATIONS** – because of the volume of masks needing processing, and the fact that used or dirty masks looked identical to disinfected ones, Cousino Restoration has developed a careful tracking, segregation and transportation system to avoid any potential for cross-contamination.
- **ANALYTICAL SERVICES** – the Cousino Restoration team had to work with the infectious disease physicians and pathologists as well as hygienist consultants, to design a prototype process that was effective to kill the virus.

CONTRACT MANAGEMENT

- **24/7 RESPONSE CAPABILITY** – project design and early implementation was emergent in nature and has involved nearly around-the-clock response.
- **TRAINED, QUALIFIED, ER AND CLEANUP PERSONNEL, EQUIPMENT AND MATERIALS** – this project required project managers and field staff trained and experienced in (1) biohazard response and remediation, and (2) working in hospitals and medical facilities that are subject to a wide range of internal and external infection control processes and rules; it also required offsite clean spaces, HEPA air-scrubbing equipment, and various biocidal chemicals and sanitizers.
- **SITE-RELATED DOCUMENTATION** – Documentation of the disinfection processes was required for this project and maintaining tracking logs of the used v. cleaned mask loads, as well as onsite project accounting records.
- **CONTRACTOR'S PROJECT ACCOUNTING SYSTEM** – This project is an IDIQ contract task order based contract. All work is performed on a Time and Materials basis for labor, equipment, and materials utilized, requiring careful segregation of costs and careful billing practices.

Restoration Starts Here.

UNIQUE CHALLENGES

Many complexities and unique challenges were presented in repairing this building. Some of them include:

- Regional health care system is the largest employer in northwest Ohio, with thousands of employees needing multiple mask changes per day to maintain patient and worker safety during the Covid-19 crisis. Their need was and is vast and expected to continue indefinitely.
- As a novel coronavirus, the Covid-19 virus was and is not well-understood so there were no accepted mask disinfection processes in place – this process had to be created and designed as a prototype.
- The sheer daily volume of masks posed a logistical challenge, including the need for an orderly and trackable process that prevented confusing used masks with disinfected ones.

ACCOMPLISHMENTS

- Designed and implemented an emergency and ongoing cost-effective and safe health care worker safety mask disinfection process for large regional health care system suffering mask shortages during the Covid-19 crisis.

PROJECT HIGHLIGHTS

- Assembled and guided a multidisciplinary team including client safety and health professionals, including administrative and medical staff, pathology and infectious disease physicians, hospital infection control specialists, inside and outside industrial hygienists, and contractor project managers.
- Developed an entirely new prototype heat treatment process to safely disinfect a large volume of cloth masks and respirators.

