

CASE STUDY

UCSF Medical Center at Mount Zion

California Hospital Solves Pharmacy Exhaust Issues With Duct Sealing

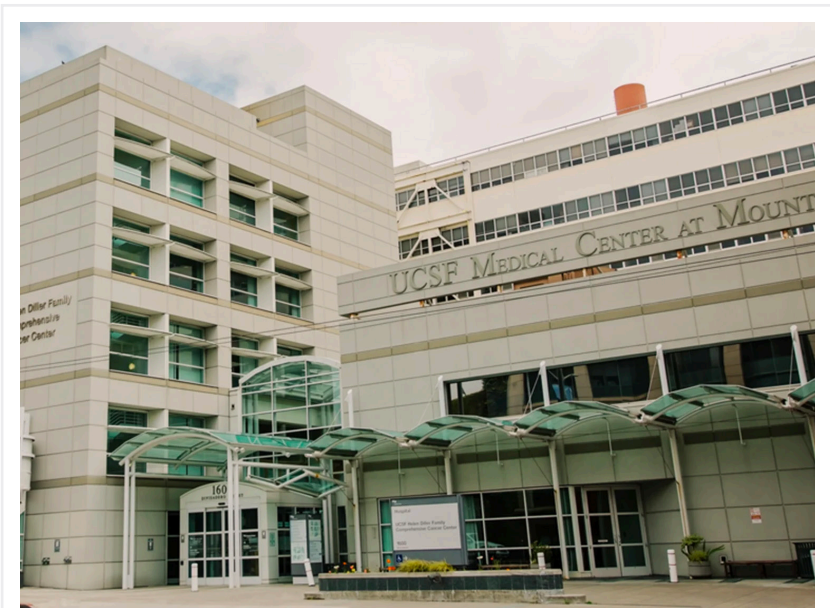
Expansion Project Could Not Open on Time without Solving Vent Hood Problems

The UCSF Medical Center at Mount Zion was remodeling one of its pharmacies when it hit some ventilation issues. As soon as contractors realized these issues could delay the project, it gained their full attention. Project delays in a 24/7 healthcare environment can set off a chain reaction of issues.

Two ventilating hoods in the pharmacy required sufficient exhaust levels or else a fail-safe system registered a malfunction and the equipment automatically shut off. And based on the chemotherapy chemicals being prepared in this facility, it is critical that all airborne particles be exhausted from the hoods and ductwork system. Even after meticulous construction with manual duct sealant (e.g. mastic, tape) applied to all 300 feet of ductwork, the exhaust system was simply not providing enough pull to meet duct leakage specification or to keep the HVAC system running properly.

Over a two-month period, the contracting team could not find the source of the leakage. The exhaust ductwork, covered in fire insulation, was unwrapped, manually resealed, and rewrapped. With the building's scheduled opening fast approaching, the design engineers assisted the contractor in identifying the area of potential leakage. Working collaboratively, the contractor and design engineer performed several tests that narrowed the largest source of leakage to a particular section of ductwork. This particular section proved to be tough to access, sitting above an occupied section of the hospital making it difficult to manually seal. When the contractor described the challenges associated with the particular section of ductwork, Interface Engineering knew Aeroseal duct sealing was the solution. Interface Engineering new the Aeroseal process would locate and seal the leaks from the inside of the ductwork.

With no time left for a test run, hospital administrators gave Coast Environmental, a duct and IAQ specialist, the green light to clean and seal the air duct system using Aeroseal. The Aeroseal sealing process took just forty minutes to complete (20 minutes for each of the two sections of ductwork being sealed), and the entire process was conducted without interruption to the hospital's regular operations.



PROJECT OVERVIEW

BUILDING
UCSF Medical Center at Mount Zion

LOCATION
San Francisco, California

AEROSEAL CONTRACTOR
Coast Environmental

CONTRACT ENGINEER
Interface Engineering

GOAL
Meet sufficient exhaust for two ventilating hoods (ductwork) in the hospital pharmacy and improve

HVAC system performance

BEFORE AEROSEAL
580 CFM of leakage

AFTER AEROSEAL
23 CFM of leakage

RESULTS
Sealed ductwork to 96% reduction in leakage; Met duct leakage specification for pharmacy to have proper functioning of the ventilation hoods

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Using AeroSeal, the contractor could actually watch holes and cracks in the ductwork getting sealed in real-time. A computer-generated chart showed a plunging line on the AeroSeal computer screen representing the real-time decrease in leakage. After two months of trying to find the leaks and seal them by hand, the contractors had their leaks sealed using AeroSeal in only 40 minutes. Best of all, the new pharmacy opened on schedule.



We weren't even sure leaks were the issue. All we knew was that the new ventilation hoods weren't functioning properly and we were running out of time. So we proceeded on the advice of a trusted consultant familiar with the technology...and it worked beautifully. It quickly sealed the leaks and fixed the problem.

Robert Gaderlund
Project Manager
UCSF Medical Center at Mt. Zion



We tried adjusting the fans, resealing the ductwork and various other solutions. Duct leakage kept us from getting sign-off on the project. In the end, it took 40 minutes to fix the issue. AeroSeal was a real project saver.

Rick Schaffel
General Contractor
TCB Builders
San Francisco, California



It turned out to be a perfect solution to finding and easily sealing all of the holes and leaks throughout the entire duct system. I love how you can actually see the progress and know it's working.

Adrian Welsh
Duct Specialist
Coast Environmental
Carlsbad, California



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