

A d.b.a. of:

### Optimum Indoor Air and Environmental, Inc. 4100 Scandia Way, Los Angeles, CA 90065

Cal. Lic. #984738

### Partial Photo Gallery:

## Duct Cleaning and HVAC Restoration

#### Some of the equipment used by Professional Duct Cleaning





TurboJet Max II negative air machine







Compressed air tools used to effectively reach and clean previously inaccessible areas.





Duct augers, used to agitate contaminates, which are then removed by negative air.





All customer furnishings are well protected during all of our cleaning work.



Before use of octopus whip w/negative air pressure



After use of octopus whip w/negative air pressure



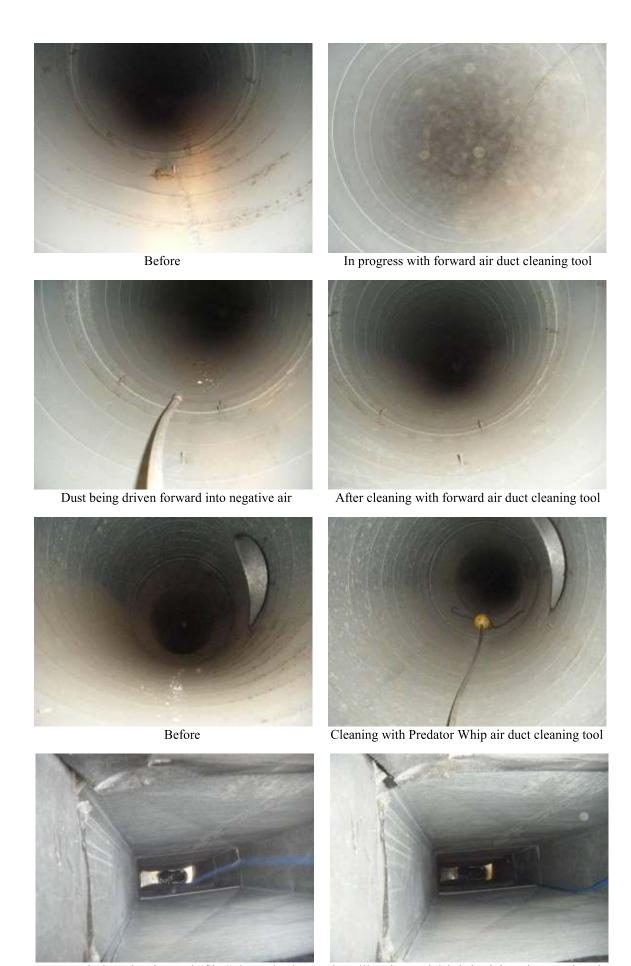
Before



During cleaning



After



Reverse air duct cleaning tool "flies" down the ductwork, pulling dust and debris back into the negative air.







During cleaning



After



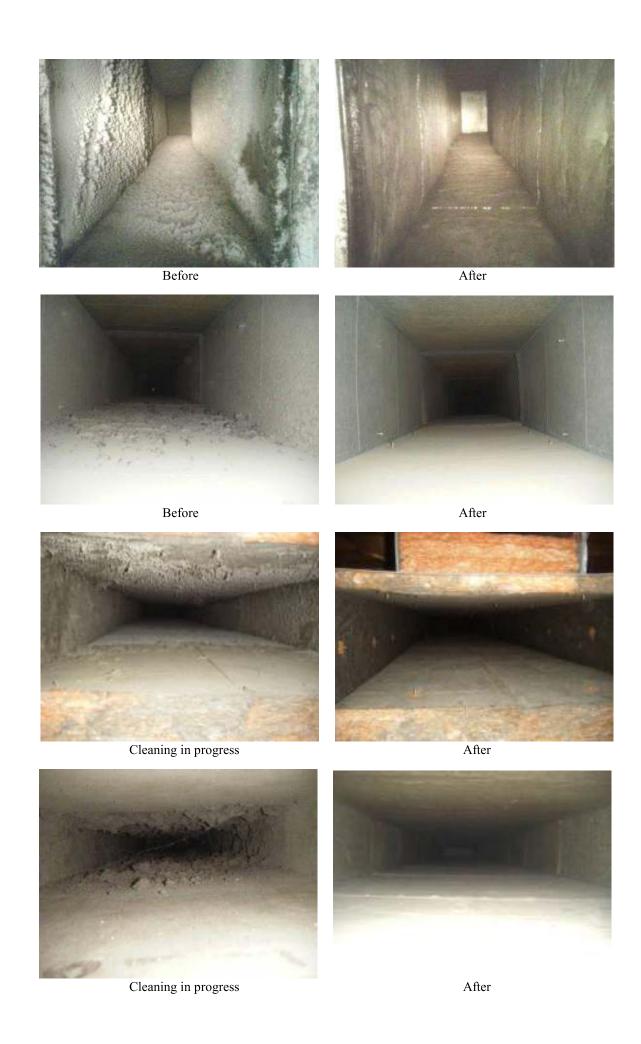
Cleaning with reverse air Scorpion duct ball.



After cleaning with reverse air Scorpion duct ball.



Our crew in action cleaning air ducts.







Before







Before

During cleaning



After

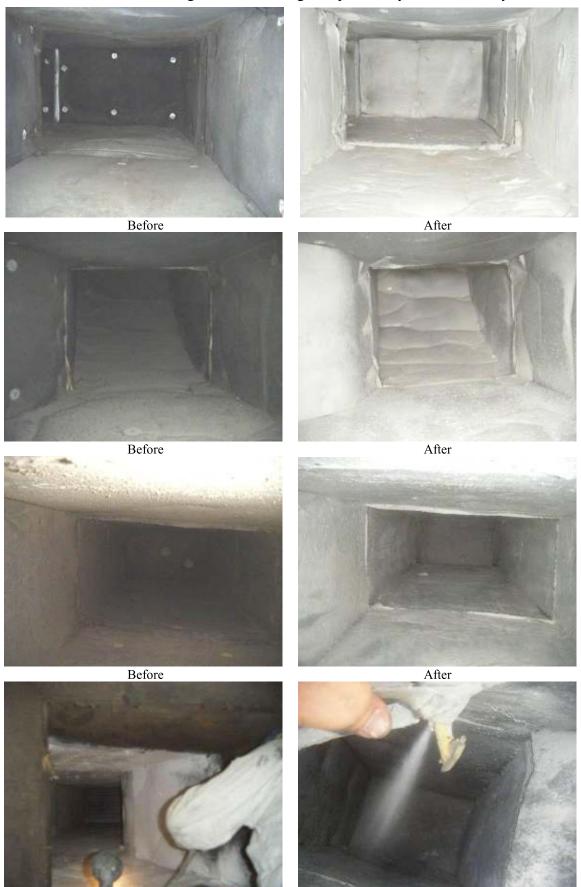




Before A



Deteriorated fiberglass duct liner encapsulated (seal-coated) with DP-3050 AF, an anti-microbial coating which was designed specifically for use in air systems.



Our technicians in action encapsulating deteriorated fiberglass liner within ductwork.



Deteriorated fiberglass insulation can also be overlain with Astrofoil reflective foil insulation.

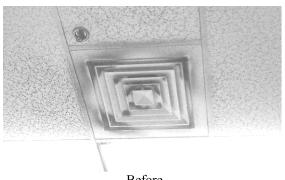


Ductmate access door installed.





Access holes made in ducts for cleaning purposes are sealed with galvanized sheet metal panels of the same or heavier gauge metal as the duct. Panels are installed with duct sealant and screwed onto the duct at four inch maximum on center all around as required to maintain an airtight seal.



Before



After



Before



After



Our team in action cleaning registers with a mild, paint-safe detergent and water.



Underside of coil seen here



High pressure coil cleaning



Deteriorated coil pan is quite obvious.



Coil pan after restoration.





Motors will be disconnected and removed from direct-drive fans, and fans themselves will be taken out and washed with a mild, paint-safe detergent and water, then reinstalled as found.



Interior of heating/air conditioning unit after removal Interior of same heating/air conditioning unit after of blower, showing deteriorated fiberglass liner.



cleaning and sealing with an anti-microbial coating.



A d.b.a. of:

#### Optimum Indoor Air and Environmental, Inc. 4100 Scandia Way, Los Angeles, CA 90065

Cal. Lic. #984738

# Partial Photo Gallery: Kitchen Exhaust Cleaning



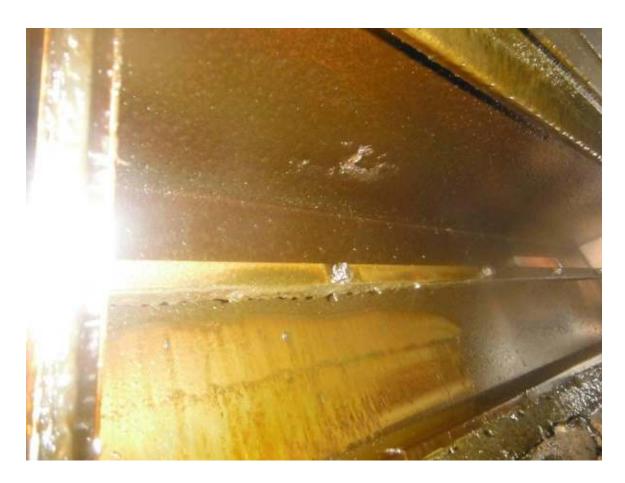
Example of before cleaning (above) and after (below) in kitchen areas.





Before (above) and after (below)





Before (above) and after (below)





Before (above) and after (below)





Before (above) and after (below)





Before (above) and after (below)





Before (above) and after (below)





Before (above) and after (below)





Before (above) and after (below)





Before (above) and after (below)





Before (above) and after (below)





Before (above) and after (below)



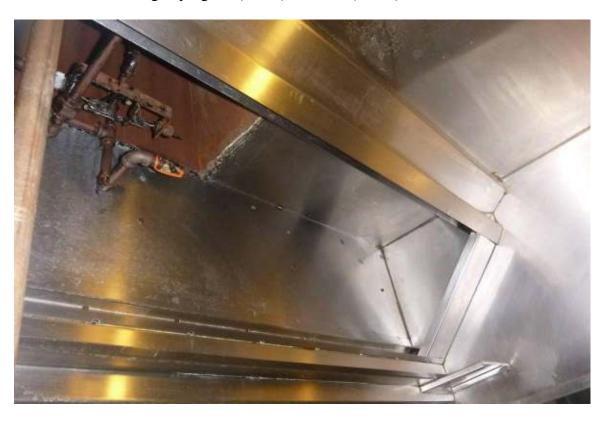


Our dedicated servicemen go the extra mile to make sure your system is properly cleaned!





Cleaning in progress (above) and after (below) in kitchen area.





Before (above) and after (below) in kitchen area.





Cleaning in progress (above) and after (below)





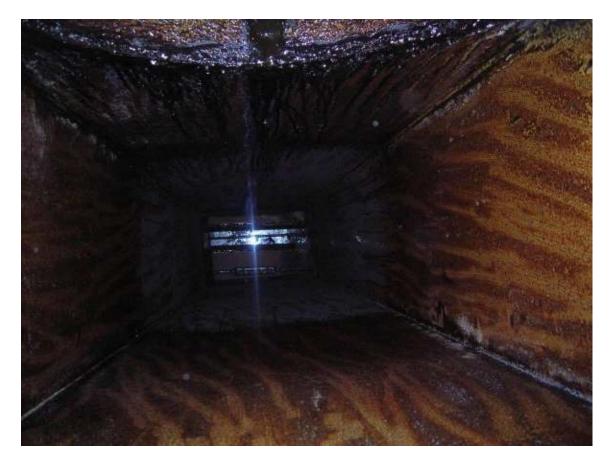
An extremely large quantity of grease was removed during the course of our work.



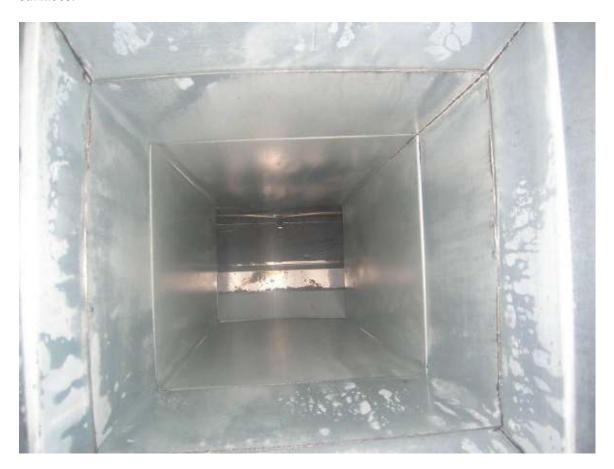


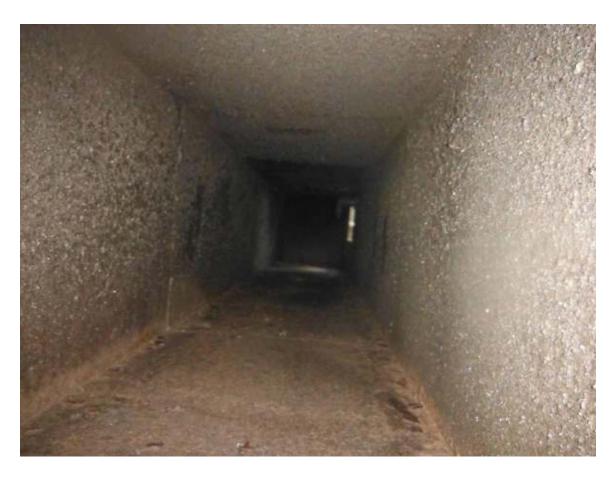
Approximately 100 lbs. of grease was removed during the initial cleaning of the plenums at this facility in downtown Los Angeles!





Heavy grease in duct systems requires our special time-penetrating, foaming degreaser which adheres to the tops and sides of the duct, allowing thorough cleaning of all surfaces.





Example of before cleaning (above) and after (below) in the ductwork.





Before (above) and after (below)





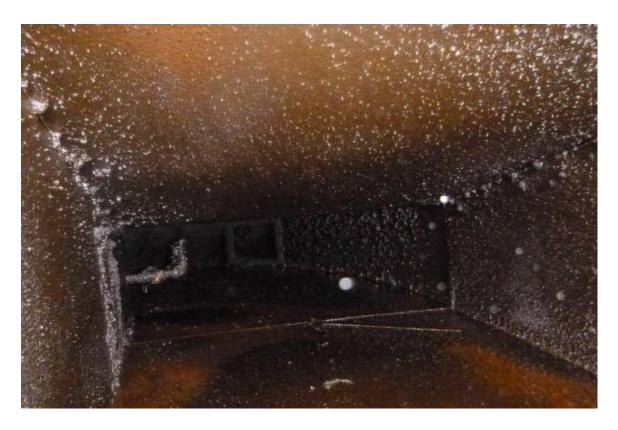
Before (above) and after (below)



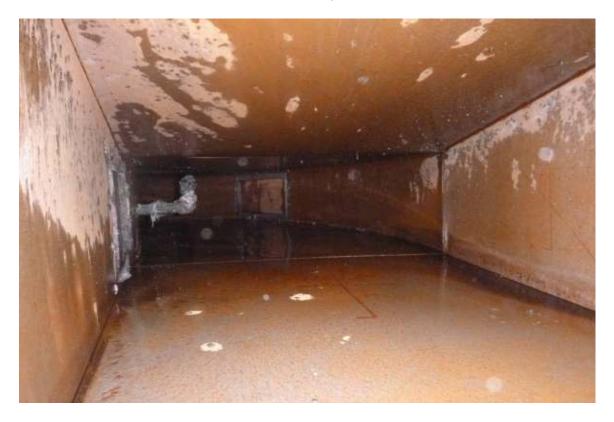


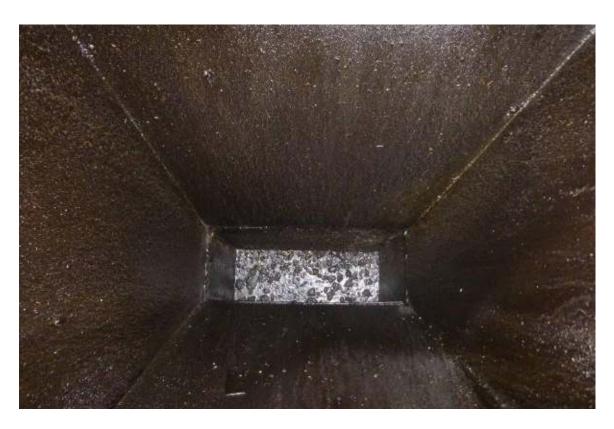
Before (above) and after (below)





Before (above) and after (below) cleaning of vertical duct can be seen here





Before (above) and after (below) picture of vertical duct.





Before (above) and after (below)





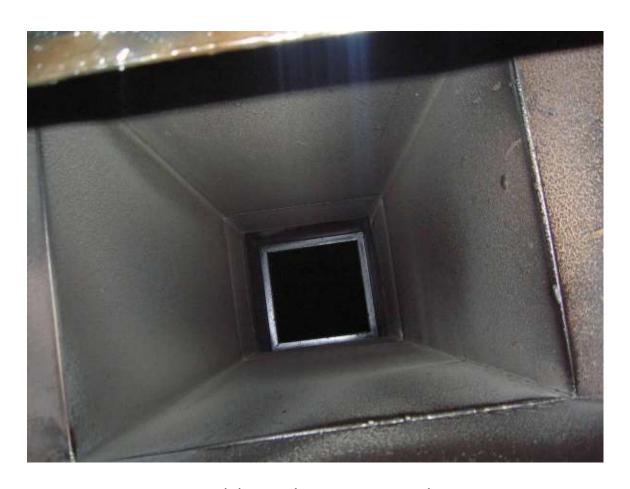
Before (above) and after (below)





Cleaning in progress (above) and after (below)





Fan and ductwork came out very clean.





Before (above) and after (below)





Dried grease buildup in horizontal duct and fan came out very clean.





Before (above) and after (below)





This example of before cleaning (above) and after cleaning (below) of an exhaust fan at a very large facility in West Los Angeles is shown here.





Before (above) and after (below) pictures exemplify the need for hinges, which previously kept the grease exhaust systems from being properly cleaned.





Another example of proper fan cleaning.





Before (above) and after (below)





Before (above) and after (below)





Before (above) and after (below) – Fan is much cleaner.





Another example of fan before (above) and after (below) cleaning.





Before (above) and after (below) – Installation of hinges to these up-blast exhaust fans now allows them to be opened and the vertical ductwork/fans thoroughly cleaned regularly.





Before (above) and after (below) – A new high temperature access door was installed onto grease exhaust duct in order to reach previously inaccessible ductwork.





Before (above) and after (below) – Another example of a new high temperature access door installed onto this vertical grease exhaust duct in order to allow proper cleaning of previously inaccessible ductwork.





A d.b.a. of:

Optimum Indoor Air and Environmental, Inc. 4100 Scandia Way, Los Angeles, CA 90065 Cal. Lic. #984738

## Partial Photo Gallery: Industrial Cleaning



We are quite adept at the use of aerial lifts for difficult access situations.



We clean commercial ovens and fans, as well as many different types of industrial spaces and equipment.

We are commonly called upon to perform cleaning work that cannot be performed by other companies. We have a long history of taking on one-of-a-kind projects, analyzing and formulating the most workable approach for proper accomplishment of the work, and then carrying the job out to successful completion.





As an example of the above, in a large, well-known food production factory here in the Los Angeles area, the tank shown above had a deteriorating interior Teflon coating which needed to be removed.





Our crew, after careful advance planning and research, stripped the covering away inside the tank so as to render the interior surface areas completely free of Teflon coating.



Animal droppings and various other types of debris can be removed by us through the use of many different techniques, along with sanitization of the areas concerned.





Difficult access cleaning areas are a specialty of ours. Through the use of varied cleaning techniques depending upon the situation, we are able to effectively achieve the desired result.





The two photographs pictured here are of a large food factory roof cleaning job in progress.





This flour silo was cleaned by us. As you can see below, its interior was entirely free of flour, residue and debris after our cleaning. Also, confined space procedure is strictly in place, as well as all other OSHA guidelines, during our cleanings.





A d.b.a. of:

Optimum Indoor Air and Environmental, Inc. 4100 Scandia Way, Los Angeles, CA 90065 Cal. Lic. #984738

## Partial Photo Gallery: Silo and Tank Cleaning





Silo/tank exteriors were quite contaminated prior to job commencement. Work in progress...





These silo/tank exteriors came out sparkling clean after much hard, dedicated work!

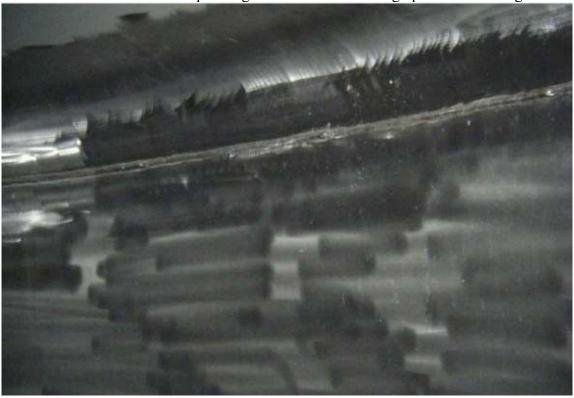


Contamination within silo was completely handled by our cleaning!





Silo interior came out sparkling clean after our thorough pressure washing.





We are quite adept at cleaning even the most difficult to access areas.





On this project, a Civil/Structural Engineer, registered in all 50 states, prepared calculations substantiating and certifying the structural integrity of anchorage points as being adequate to sustain a 5000-pound load applied in any direction without permanent deformation, per California Code of Regulations. Title 8. Chapter 4. Division of Industrial Safety Subchapter 7. General Industry Safety Orders Group 1. General Physical Conditions and Structures Article 5. §3291.







Safety is always of paramount importance in the performance of our work. We adhere closely to all CalOSHA requirements.







Our technicians have high morale due to high production!



