



a CERTIFIED Coil Sterilization Process



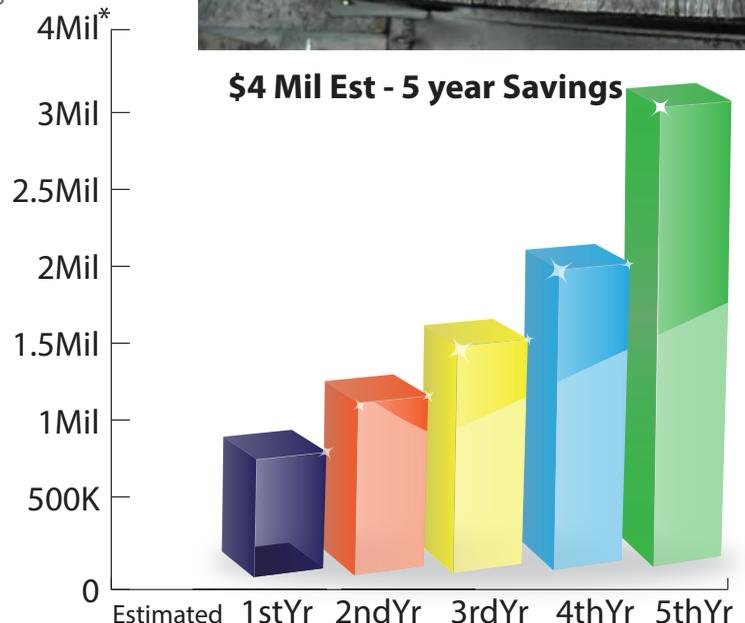
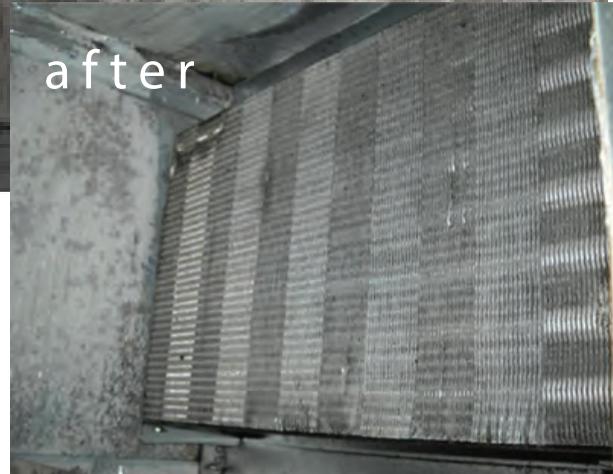
Case Study Florida State University

Steam Coil Cleaning Saves **\$800K** Energy Consumption Annually for University

The Project:

Tallahassee, FL -- Pure Air Control Services, an industry leader in mechanical and environmental cleaning technologies, tackled head-on, Florida State's (FSU's) dirty coils to provide the students and teachers a healthier learning environment.

Cleaning the coil with the environmentally friendly, and proven PURE-*Steam* method vs. the foam/rinse method that only superficially cleaned the surface of the coils and pushed small debris along with residue, further into the coil causing decreased air flow, a musty odor, and decreased temperature and humidity control and decreased the quality of the indoor air.



*4 Million in saving over the course of the 5 year plan



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FSS Contract GS-10F-0488R

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Concern:

With energy costs rising, Florida State University (FSU), had taken a closer look at HVAC maintenance, including the total operating cost of its HVAC system. They found that the conventional coil cleaning foam/rinse method only superficially cleaned the surface of the coil and pushed small debris further into the coil causing decreased air flow, a musty odor, decreased temperature and humidity control and decreased the quality of the indoor air. In addition, FSU was concerned about the thousands of gallons of chemicals that would otherwise be sent in the water system polluting the eco system.

Solution:

A chemical free steam coil cleaning process so efficient and safe for the environment that in the first year of its implementation alone saved the university over \$800,000 of their power bills and were able to provide the students and teachers a healthier learning environment. Over the next five years FSU will have saved over \$4 Million from their energy budget. The estimated payback in less than **eight (8) months** was **157% return on investment (ROI)**.

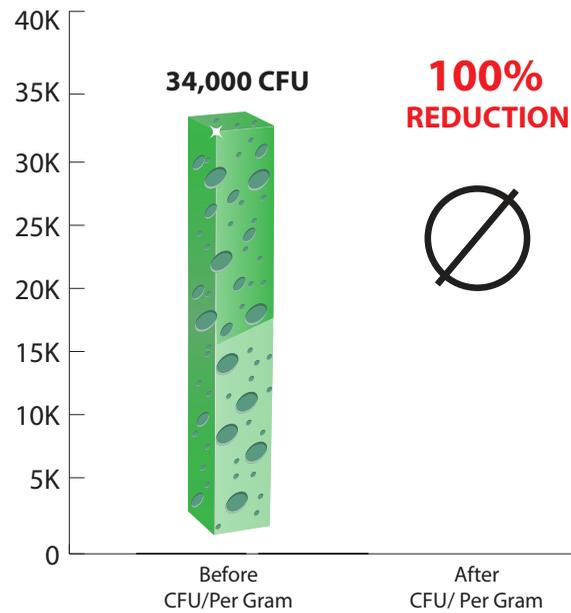
Benefits of PureSteam:

PURE-Steam Coil Cleaning process is totally GREEN – uses no chemicals, utilizing a proprietary (up to) 350 degree steam for a deep cleansing of the coils helping to

- **Sanitize the coils/blowers assembly (Green process)**
- **Removes latent debris from deep within the coils**
- **Creates improved air flow**
- **Create better cooling capacity**
- **Saving energy (approx .22 cents per sq ft)**
- **Improving indoor air quality**
- **Extends HVAC equipment life**



Analysis



Lab ID #04077
WO# 012589



"I would estimate we are saving 7-10% on the chilled water equipment. Some of this is from reduced fan energy and the rest is from an increased delta T across the coil which reduces pumping energy and increases chiller efficiency. As an estimate 35-40% of our utility bills are for HVAC so just keeping our coils clean should save between **\$600K to \$800K** off our utility bills annually at the low end. As for ROI if you use the most conservative numbers we have paid approximately **\$0.14 per square foot** for coil cleaning to date. We have saved about **\$0.22 per square foot annually**. So the payback is less than 8 months and the **ROI 157% annually.**"

Tom Shewan, PE Facilities Manager with Florida State University (FSU) discusses the energy savings from our steam coil cleaning process:

