



Picture 1: Bacillus on Cotton Fiber

## Engineered-Clean Infection Control

Inside engineered clean spaces, the most common infectious agents are fomites. Fomites are any object or substance capable of carrying infectious organisms – like passengers on an airplane. For example, the purple bacillus bacteria shown can be transported on the 50x magnified green surgical scrub fiber shown in Picture 1. Ecostratum has compiled Table 1 of common fomites capable of transporting infectious agents. CMS compliance starts with understanding where HAI agents are located.

Table 1: Location of Fomites

Fomite	Found
Fiber (F <sub>1</sub> )	Cotton from scrubs and bedding
Fiber (F <sub>2</sub> )	Fiberglass from optical lens wipes & insulation
Fiber (F <sub>3</sub> )	Synthetic lint from sterile covers-gauze
Dust (D <sub>1</sub> )	Surfaces of electronics - carpets
Droplet (D <sub>2</sub> )	Aerosols-Cleaning Solutions-Sneezing
Skin (S <sub>1</sub> )	Human shedding-Animal dander
Soot (S <sub>2</sub> )	Bovie cautery – Air Filters

## Calendar of Events

November 19, 2015: Building Environmental Council of Ohio (BECO), Columbus, Ohio  
*"News from Regulators of Ohio's Environmental Protection"*

January 8, 2015: TriState Healthcare Engineers (TSHE) Cincinnati Ohio.  
*"Environmental Discharge Control in Healthcare"*

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## The Real Estate Due Diligence



No one really knows the origin of the term "Mulligan", but it has been in common use at golf courses since the 1940s. Everybody knows the term means "do-over". If you are a real estate purchaser or lender who requires pre-transaction environmental due diligence, your risk management might need a mulligan do-over. Most due diligence screens are delivered under a report cover called Environmental Site Assessments (ESAs) – a highly scripted and mass produced consultation product developed in the 1980s to manage risks associated with industrial site redevelopment. But, these don't make a lot of sense in today's commercial, retail, or housing deals where repurposing assets is the key. Savvy buyers and lenders realize most ESA findings are irrelevant and simply adjust plans for reuse without any environmental corrections. Ecostratum, by understanding that the real buyer-lender risk is not being able put their money to work making profits quickly, takes a transactional approach by treating each deal as unique with applications for planned future use. Often, this means client tailored ESA considerations. Good risk management supports transaction valuations based upon both historical use and planned redevelopment.

## Healthcare Engineering

Healthcare is the 21<sup>st</sup> Century Smoke Stake Industry: Hospitals have replaced factories as the predominant source of environmental pollution. Huge power plants are needed to operate millions of square feet 24-7-365. These power plants are the steel, coal and plastics factories of the 19<sup>th</sup> century with similar industrial hygiene concerns. Pay attention to environmental discharge like never before as regulators are catching up. Non-permitted or untreated discharges can be an expensive decontamination lesson. For example, the Cincinnati Metropolitan Sewer District (MSD) has been in negotiations with the Federal EPA since 2002 regarding control of combined sewer overflows (CSOs) into the Ohio River. A look back in history reveals MSD was designed at a time when "dilution of pollution" was the solution – not anymore. Be sure to understand where your facilities tie into these utilities. It is wise decision making to recall that in June 2013, MSD reached an EPA agreement to implement CSO changes reported to cost upward of \$450M. As of now, this is unfunded. Clearly reducing stormwater load to this system is needed.

"A Higher Level of Thinking". Technical developments are presented with a business case underpinning. Contact Steve Rucker at [srucker@ecostratum.com](mailto:srucker@ecostratum.com)