coronavirus
Solutions for Buildings

Presented By

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Agenda

- Background
- What is Coronavirus?
- How is it Transmitted?
- Control & Prevention
- Environmental Spread
- Environmental Management
- Considerations/Next Steps
- Questions & Answers
Background: Corporate Overview

- Founded in 1984
- 3 Specialized Divisions
  - Building Sciences, EDLab, Building Remediation
- 600 Million+ Square Feet of Experience
  - 10,000+ Buildings Serviced
  - Government, Education, Healthcare, Commercial
- Industry Standard Certifications & Affiliations
- Cooperative Contracts, GSA Contract
Background: Coronavirus/Pandemic

- Coronaviruses Known Since 1960’s
- New Strain of Coronavirus discovered in Late 2019 in Wuhan, China
- Initially Named as 2019-nCoV, Then COVID-19 (Coronavirus Disease)
- The World Health Organization (WHO) Declared COVID-19 a Pandemic on March 11, 2020

www.who.int

www.cdc.gov
What is Coronavirus?

- Spherical or Pleomorphic Envelope
- Spikey Projections Which Make it Look Like a Crown (Latin = Corona)
- Contains Single-Stranded RNA
- Zoonotic in Nature
- Exact Source/Origin of COVID-19 is Still Unknown

Source: Wikimedia Commons
How is it Transmitted?

- Animals to Human (Zoonotic)
- Person to Person, Within 6 Ft
- Aerosol/Airborne Droplets
  - Respiratory Droplets from Coughs or Sneezes
- Non-Airborne Transmission
  - Contact With Contaminated Surfaces/Objects
  - Hand to Face Contact

Control & Prevention: Clinical

- Increase Personal Hygiene
- Barrier Intervention
- Avoid Contact
  - Social Distancing
  - Quarantine
- Care Giver
  - Personal Protection Equipment
- Manage Anxiety & Stress

Source: iStock, skodonnell
Environmental Spread

- High Touch Surfaces/Objects
- Surface Viability
  - Up to 9 days*
- Temperature & Relative Humidity
- Increase Building Hygiene/Custodial
- Use Disinfectants for Emerging Pathogens (DEP)

Environmental Management

- Planning & Important Data
- Temperature & Relative Humidity
- Disinfectants for Emerging Pathogens (DEP)
- Multi-level, Engineered Approach
  - PURE-Decon
    - Intensive Topical Cleaning
  - PURE-Steam
  - PURE-Duct

Source: iStock, simonkr
Planning & Important Data

- Scenario or Situation Briefing
- Building Use, Age & Condition
- Total & Situational Square Footage
- Approximate Number of Occupants
- HVAC System Schedule, Including Ductwork
- Stakeholder, Point(s) of Contact Information

Source: iStock, simonkr
PURE-Decon Hand-Held

- Proactive, Routine
- Agile, Tactical Method
- Portable Electrostatic Sprayer
- EPA Registered DEP
- Focused on High Touch Surfaces
- No Harmful Byproducts After Use
PURE-Decon Indoor Environment

- Containment Set-up Protocols
- Portable Electrostatic Sprayer/Mister
- EPA Registered DEP
- Treatment of Enclosed Space
- Disinfects Anywhere Mist Permeates
  - Hard to Reach Surfaces
- No Harmful Byproducts After Use
PURE-Decon Spray DEP damages and penetrates the cell envelope.

Next it binds to the RNA halting replication and metabolic functions.

Finally, it incapacitates the cell’s enzymes or energy source.
PURE-Steam HVAC/Coil Cleaning

- Detailed Spec: 14 Point Checklist
- Eco-Friendly, Green Clean Institute
- Steam at up to 350°F, 176°C
- Improves Hygiene & Performance
- Reporting: M&V Testing, Data, Photos
PURE-Steam HVAC/Coil Cleaning

Common Conditions Observed in AHUs
PURE-Steam HVAC/Coil Cleaning

Before

After
Containment Set-up Protocols
No Cross Contamination
Particulate Monitoring
Mechanical Experience: Access
NADCA & VSMR Certified
Reporting: Testing Data & Photo Log
PURE-Duct Cleaning

Before

After
PURE-Duct Cleaning

Before

After
A proactive measure that can be routinely scheduled/performed. It is comprised of our hand-held PURE-Decon service that utilizes an electrostatic charged EPA Disinfectant for Emerging Pathogens (DEP) which is sprayed on high touch surfaces.

Room to Room tactical spraying, including HVAC grills.
Technical Approach: Level II

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<tr>
<th>LEVEL II: Occupied Spaces &amp; Steam Clean AHUs</th>
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<td>Decontamination for the occupied space and HVAC system with containment. Level II includes our PURE-Decon atomized DEP treatment of the indoor environment and air conveyance system (ductwork). It also provides for the full sanitization of the Air Handling Unit (AHU) and coils with our PURE-Steam Process.</td>
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LEVEL III: Occupied Spaces, AHUs, & Ductwork

Level III includes everything performed under the Level II protocol but also includes a PURE-Decon topical cleaning as well as PURE-Duct cleaning of ductwork, VAV terminal boxes and reheat coils. Level III environmental topical cleaning consists of HEPA vacuuming and then spraying and/or wet wiping surfaces with an EPA registered sanitizer.
LEVEL IV: Occupied Spaces, AHUs, & Ductwork +

MORE INCLUSIVE, Level IV provides all protocols listed in Level III with a more thorough topical cleaning *that does* include computers, electronic equipment, any kind of stock (e.g. office supplies, merchandise, books folders, etc.), wall decorations (e.g. picture frames, posters, artwork, etc). The books and sensitive items will be cleaned via laminar flow chambers.
LEVEL V: Occupied Spaces, AHUs, & Ductwork ++

MOST INCLUSIVE, Level V provides all protocols listed in Level IV with the most thorough topical cleaning that does include toilets, showers, interior of cabinets and desk drawers, dishes, canned foods, refrigerators, towels, linens, and curtains.
Considerations/Next Steps

- GSA: Simplified Acquisition Procedure (SAP), up to $250k no Bid
- Stafford Act (sec. 502) & FEMA
- Cooperative Purchasing, Start Now!
- Current COVID-19 Related Issues?
- Plans Relative to Our Services?
- Referral Other Stakeholders
- Site Visit to Look at Specific Need(s)
Questions & Answers

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