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CLEAN CONSTRUCTION PROCEDURES

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The concept of clean construction is to construct a building while implementing procedures to insure a clean and healthy environment during all stages of construction. This was important before "Green" design and construction was in vogue, but it can now facilitate getting a LEED™ point (EQ credit 3.1) if you are pursuing LEED™ certification. The idea is to protect the project components, existing or new, building occupants whether they are construction staff and/or occupants outside the scope of work or future occupants of the space being constructed, and other aspects of the project from various contaminants that could be generated during the performance of the work.

One major aspect of clean construction is a Water Intrusion Management Plan to provide guidelines for the prevention and control of moisture intrusion into a building. This plan addresses good construction practices along with good means and methods for protection of vulnerable materials and systems during the construction process. If any of these materials or systems receive moisture damage, the first part of this plan addresses proper drying and assessment to determine if the materials have deteriorated to a point of reduced integrity for their intended use. The second part of the plan establishes whether any mold growth (amplification) has occurred. If the material fails both tests then it is removed and replaced. If the material is sound, but needs to be cleaned, then measures are taken to return the material to like-new condition to the maximum extent possible.

Construction Procedures to Enhance Clean Construction

The following are suggestions for performing Clean Construction:

- Use appropriate means, methods, techniques, sequences, and procedures to protect the building components from contamination during construction.
- Properly protect the HVAC system components. If existing systems are being reused, follow acceptable cleaning procedures for those portions of the system.
- Establish protocols for protecting adjacent occupied or finished areas from dust, odors, fumes, etc. Utilize negative air containment where necessary.

- Establish protocols to eliminate haphazard use of VOC containing materials on the project site.
- Develop procedures to eliminate moisture saturation of building materials while stored and during construction.
- Standard specifications should define limitations for moisture content of materials if allowed at all.
- Prevent incorrect sequencing of construction: (Do not install moisture absorbent materials prior to drying-in the building envelope, do not install water based materials against highly permeable materials, do not install finish materials over substrates that are not sufficiently dry).
- Other construction issues: (Proper storage of materials, blind penetration of condensate or other plumbing pipes with fasteners in concealed spaces, de-humidification of ambient air during installation of waterborne materials).

Summary

It is typically easy and cost effective to apply the concept of clean construction to a project by implementing a Clean Construction Plan early into the planning process. This will insure greater success and superior construction quality as well as the advantage of a LEED™ point with little or no impact to schedule or cost.

About the Author:

Mr. Cappel oversees the daily operation of the GHP Denver office. He serves as a project manager and client contact for various asbestos, microbial, and infection control projects. Mr. Cappel teaches programs on asbestos, mold, meth lab remediation, indoor air quality, and healthcare construction infection control. He has conducted asbestos and lead paint inspections and airborne lead exposure assessments for general industry, educational facilities, state and federal governments, and healthcare facilities.

Mr. Cappel's experience in industrial hygiene and environmental health and safety includes: conducting industrial hygiene and environmental health sampling and surveys; asbestos industrial hygiene technician, instruction in general employee safety orientations; development and supervision of asbestos air sampling program; conducting surveys and sampling for ethylene oxide, formaldehyde, asbestos, noise, ventilation, radon, PCB's lighting, ergonomics, airborne pathogens and other work place hazards; conducting asbestos and hazardous chemical audits and writing management plans; managing industrial hygiene technician team. Mr. Cappel can be reached at (303) 919-7139 or pcappel@ghp1.com.

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