



Indoor Air Quality and Construction & Renovation (C&R) Projects



Points of Action for H&S Committees and Employees

Any number of issues may arise during office renovation or construction projects. The Union and building occupants want to know what is happening around them. It is most important for labor and management to have clear two-way communication before, during and after a project is completed, and to proactively address any issues. C&R issues should be addressed by the Local H&S Committees, or if unresolved there, referred to the Agency Level H&S Committee. Here are some key points of action for H&S Committees and building occupants:

1. Identify all key personnel who can address C&R related activities and contaminant control

- From the agency, building and general contractor

2. Management should provide the following information to employees and Unions

- Is it a planned project or an emergency project?
- What activities are involved?
- What are the timelines?
- How will indoor environmental quality be maintained on a daily basis?
- Who to contact if problems arise (onsite contact, building services contact, etc.)?
- How will these problems be resolved in a timely manner?
- What fire and emergency issues may arise - exits, alarms, security, unusual materials in the building, etc.

3. Communication is KEY for C&R projects

- Communication between all parties:
 - Landlord's Rep/OGS Rep/ ↔ Management
 - Management ↔ Union
 - Management ↔ Employees
 - Union ↔ Members

- Prior to the start of construction or renovation activities
 - Scope of work, precautions and control measures for the release of any contaminants.
- During the construction or renovation project:
 - Update building occupants regarding the project's progress and other pertinent information.
 - Emergency Response or C&R IEQ Issues:
 - Promptly respond to complaints from building occupants regarding construction or renovation-related IEQ issues and specify any situations requiring an emergency response.

4. OGS may be able to provide information and assistance during the C&R projects

- In OGS buildings, the Division of Construction Management (DCM) provides architectural, engineering and construction management services for OGS and agencies throughout New York State.
- The DCM Project Manager is responsible for a project from inception (Program Phase) to construction completion. The *Project Manager serves as the client contact*.

5. What to do?

- OSHA/PESH standards RARELY useful for office building IAQ C&R problems
- ASHRAE Standards
 - Non-enforceable guidelines, but best practices and recommendations
 - Not the law – but often part of building codes or leases, as ANSI (American National Standards Institute) standards
 - Std. 62-2007: Ventilation for Acceptable IAQ and Std. 55-2004: Thermal Environmental Conditions for Human Occupancy
- Plan for coordination between construction projects and the effect on regular janitorial services and building maintenance
- A variety of methods are available for control of both indoor and outdoor generated contaminants

6. Organizational controls for C&R projects

- Schedule C&R activities during periods of low occupancy- at night, weekends, etc.
- Temporarily relocate building occupants
 - Definitely recommended during major gut/renovation projects

- Isolate work areas from occupied areas using barriers such as temporary or plastic walls, negative and positive pressurization, HEPA air cleaners, as necessary, and seal all penetrations from the work area into other areas of the building
- Maintain an unoccupied buffer area around the construction zone
- Modify HVAC operations as necessary during C & R activities to insure isolation of the work zone
 - Negatively pressurize work areas and/or positively pressurize occupied areas to prevent migration of airborne contaminants into the occupied areas
- Increase air filtration efficiency, relocate outdoor air intakes
 - Adequate ventilation usually dilutes and removes low levels of chemical contaminants
 - Use local exhaust with HEPA filtration where dust generation is anticipated
- Increase housekeeping and janitorial services in occupied areas during construction to control dust and dirt
 - Moisten, wet, or contain dust generating activities
 - Specify “green” or low emitting products for new construction- adhesives, paints, carpets, etc.
- Upgrade filter efficiency of HVAC units still operating during construction- will increase cleanliness of occupied air
- Inspect and change filters more often than normal
- Do not store construction materials or equipment in HVAC mechanical rooms, near intakes
- Identify routes for construction traffic and personnel separate from occupied areas
- Bag and promptly remove all construction and renovation debris through dedicated chutes or other separate perimeter wall penetrations
- Locate dumpsters, equipment parks, storage areas, fuel tanks, etc. well away from operating outdoor air intakes and exterior doors to occupied areas

7. Safety Data Sheets (SDS) - ask for them!

- Developed by manufacturer’s to communicate health and other hazards of products
- All products used should have SDS’s available on site, and available to building occupants
- Excludes “articles” such as furniture, rugs and tile
- However, those articles may contain and off-gas toxic substances, such as formaldehyde or ammonia - technical data sheets or manufacturers specs will list those substances
- Don’t forget about the substances used to adhere those articles (rug or tile glues)

8. Health effects of C&R projects

- C & R projects can adversely affect building occupants by the release of airborne contaminants:
 - dust, gases, organic vapors, microbiological particles, odors
- Usually, inhalation leading to respiratory and other effects are noted most
- However, irritant effects on the skin and eyes are common
- Watch for any effects that are notable and immediate (acute)
- Asthma or lung diseases may be exacerbated due to dusts or mold released into the air, or from chemical exposure
- Chronic effects should be less likely for building occupants
- If you believe that you were made ill by exposure to contaminants in a C&R project you may be entitled to Worker's Compensation. For more information on filing a Worker's Compensation Claim contact your Union representative.

9. Role of the Occupational Health Clinics

- If you are exposed to construction related materials, your family doctor may not be familiar with them
- Can assist in diagnosis, testing, and treatment if necessary
- Can assist with filing of worker's compensation claims if warranted
- All have board certified occupational health physicians
- Information on the NYS Occupational Health Clinic Network can be found at:
http://www.health.ny.gov/environmental/workplace/clinic_network.htm

10. Using PESH for IAQ C&R: contact the PESH Consultation Program

- Service is provided upon the employers request, and is free of charge
- The consultation is conducted in the same structured format as an inspection
- May allow more leeway in that non-mandatory recommendations can be included in the written narrative
- Consultant must be allowed to interview employees
- Employee representative participation is strongly encouraged
- The employer must agree to correct any serious hazards identified by the consultant by an agreed upon date.
- The Employer must certify to PESH that the serious hazards have been removed

11. Resources

- **PEF Occupational Health & Safety Department**
 - *The Department answers technical requests, conducts site, facilitates joint H&S committees, provides education and training on H&S issues.*
 - Call and ask for our IAQ for Construction and Renovations Training CD
 - 518-785-1900 ext. 254
 - <http://www.pef.org/healthandsafety/index.htm>
- CSEA Webpage www.csealocal1000.org/
- NYS DOL DOSH Webpage:
www.labor.ny.gov/workerprotection/safetyhealth/dosh_programs.shtm
- NYS DOH Occupational Health Clinic Network Webpage:
www.health.state.ny.us/environmental/workplace/clinic_network.htm
- NYS DOH Workplace Programs www.nyhealth.gov/environmental/workplace/
- OGS www.ogs.state.ny.us
- OSHA www.osha.gov

Upon request, the PEF Occupational Safety & Health Department will provide training, topical factsheets, standards, regulations, and other resources. Contact us at healthandsafety@pef.org or 518-785-1900, ext. 254 or 1-800-342-4306, ext. 254.

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