

Contractor Safety

HENNEPIN COUNTY
MINNESOTA

Workplace Safety & Environmental Division

This information is designed for tradespersons and persons supervising tradespersons who are performing work at Hennepin County sites.

Who needs to know this?



- I. Work in occupied facilities
- II. Protection of people
- III. Protection of the environment

Topics

I. Work in Occupied Facilities



- The County has experienced significant unnecessary disruptions to operations and services.
- These include, but are not limited to:
 - Building evacuation due to fires and fire alarms.
 - Water damage requiring extensive repairs.
 - Noise, vibration, odors, dust and smoke.

Disruptions to Operations

Expectations

- Plan
- Communicate
- Act Responsibly
- Follow Laws, Regulations, Codes



- Fire Alarms
 - Coordinate your work with appropriate County staff (typically Security and the Facility Operations Manager) to avoid triggering fire alarms.
- Fires
 - Complete Hot Work Permits each shift and follow the permit instructions to avoid starting fires.
- Make sure you know the Facility Operation Manager's phone number and County-wide emergency number (612-348-5111) so that you can report an emergency at any time, day or night.

Alarms & Emergencies



- Fire protection system impairment may be necessary for a variety of reasons related to construction or maintenance activities. You must:
 - Avoid false alarms to fire department.
 - Avoid unintended sprinkler activation.
 - Avoid evacuation of the building due to false alarm.
- Emergency water shutoff (know location of shutoffs and have bolt cutter at job site, as needed)

Fire Protection Impairment



- Follow Fire Code for the jurisdiction you are working in.
- Plan impairment with Project Manager.
- Coordinate any impairment with Facility Operations Manager.
- May need to have fire watch for duration of impairment.
- Restore fire protection system.
- Confirm restoration with facilities staff.

Impairment of Fire Protection Systems

- Hot Work is any work that involves sparks, flame, or sufficient heat to cause smoke or fire.
- Examples of Hot Work include but are not limited to: welding, cutting, grinding, brazing, soldering, use of open flame heaters in buildings, and hot tar operations.

Hot Work

- You must complete a Hot Work Permit prior to performing Hot Work for each work shift.
- You must coordinate Hot Work with the Project Manager and the Facility Manager.
- You must read and follow the procedures on the Hot Work Permit.
- You must establish an enclosed, negative air environment for Hot Work in occupied facilities.

Hot Work Permits





Note fire extinguisher and “smoke eater” in this welding operation.



When working on or near fire suppression systems, be sure to know the location of the shutoff valves in case of accidental line breakage.

- Do not work on water pipes unless you are certain they are not pressurized and that they are empty (gravity creates pressure in vertical pipes).
- Know the location of water suppression system shut-off valves.
- Ensure you can gain access to these controls.
- Be sure to have bolt cutters or other tools necessary to operate valves in case of emergency.

Water





Water damage is very disruptive and costly.

- Noise and vibration in occupied facilities must be controlled to a degree such that County operations and services are not disrupted.
- You may need to build sound barriers such as deck to deck gypsum board walls to reduce noise in occupied areas.
- You may need to schedule work during non-business hours.
- You must inform County staff of upcoming noisy work so that affected work groups can be given advance notice.
- Where vibration might release dust into occupied areas, dust must be controlled. See Dust section.

Noise



Engines and pneumatic tools may create disruptive noise conditions for facility occupants.

- Odors must be controlled so that they do not migrate into occupied space.
- If you anticipate generating odors, plan on setting up a negative air enclosure with exhaust to the outdoors.
- Where exhaust to the outdoors is not feasible, you may need to schedule work during non-business hours.

Odors

- Dust must be controlled so that it does not migrate into occupied space.
- If you anticipate generating dust, plan on setting up a negative air enclosure with exhaust to the outdoors.
- Where exhaust to the outdoors is not feasible, you may need to filter the air using high volume HEPA filters.

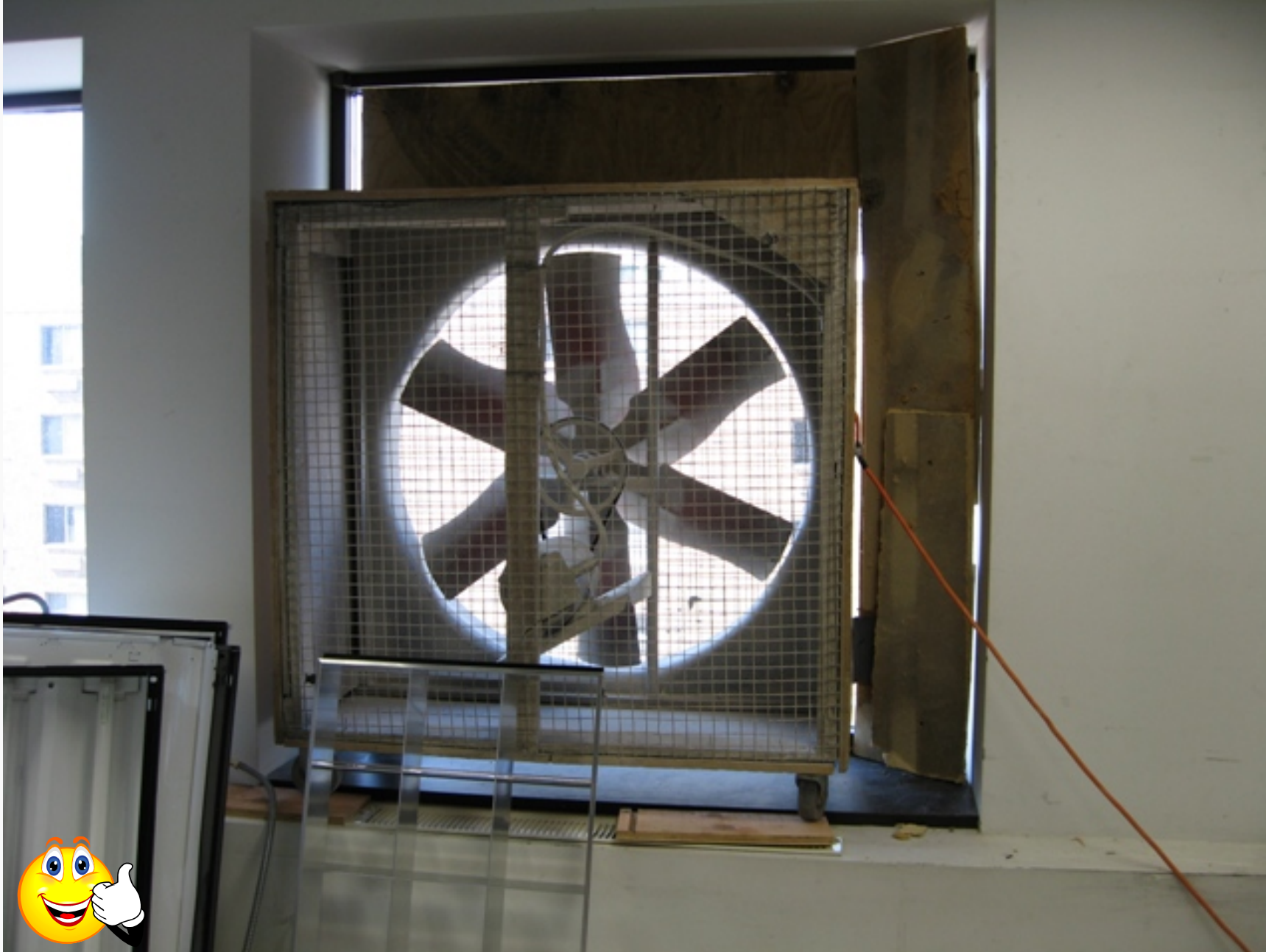
Dust



- Close all return air dampers to ensure dust does not contaminate ductwork.
- If closing return air ducts is not feasible, protect the ductwork using filtration media.
- The use of free-standing HEPA filtration is NOT considered to be an effective dust control in itself.

Dust





Use fans to control dust and odors in an enclosed work area.



Use filtering fans with exhaust tubes directed to the outdoors to control dust and odors.



Dust and odor control must be effective. Facility security must be maintained.



Air discharge must be effective.



Cover return air ducts as needed to keep dust out of ducts and off HVAC coils and other dust-sensitive equipment.

II. Protection of People

- Every person on a County job site must be protected from harm. This includes the public, county employees and trades people.

- You must maintain facility security.
- You must use signs and barriers to keep unauthorized persons out of active work zones and materials storage areas.
- Facilities must be reasonably protected from vandalism.
- Emergency signs and exits must meet code requirements.

Job Site Control



Plan site security ahead of time with the Project Manager and Facility Manager.



Use solid barricades for eminent danger conditions such as a potential fall to lower level.

- In order to protect yourself and others in active work zones from the unexpected startup of equipment or release of harmful energy, you must use effective Lockout Tagout work practices.

Energy Control





The use of tape instead of required lockout tags and locks is not acceptable.



Use locks and tags when necessary to protect yourself and others from injury due to the unexpected start-up of equipment.

- Work must comply with OSHA standards.
- Workers must:
 - Be qualified to perform the tasks they are assigned.
 - Understand the risks of the task or job.
 - Wear appropriate personal protective equipment.
 - As appropriate, warn unqualified persons of potential shock and arc flash hazards.
- Adherence to NFPA 70E, *Electrical Safety in the Workplace*, is **STRONGLY ENCOURAGED**.

Electrical Shock & Arc Flash





Use of Ground Fault Circuit Interrupters is encouraged whenever a shock hazard exists.

- OSHA requires fall protection for construction work that is more than six feet above a lower level (an exception is work from scaffolding, where the limit is ten feet).
- Arrive at the job site prepared to work safely from heights.

Fall Protection





Work may at times require temporary fall protection.



Construction worker using crane ball for fall protection anchor.

- Scaffolding must be erected under the direct supervision of a competent person.

Scaffolding



Scaffolding must be inspected by a competent person prior to use.

- Personal protective equipment must be appropriate to the hazards of the work.
- Required personal protective equipment is not optional.
- Employees must be trained on proper use of PPE.

Personal Protective Equipment





Worker wearing personal protective equipment suited to the hazards of the work.

- Know the hazards of products used on site.
- Safety Data Sheets must be available.
- Containers must be clearly labeled.
- Containers must be closed when not in use.

Hazard Communication



- Trades persons must bring the tools & equipment needed to perform work safely.
- Trades persons must be trained in the safe use of tools & equipment.

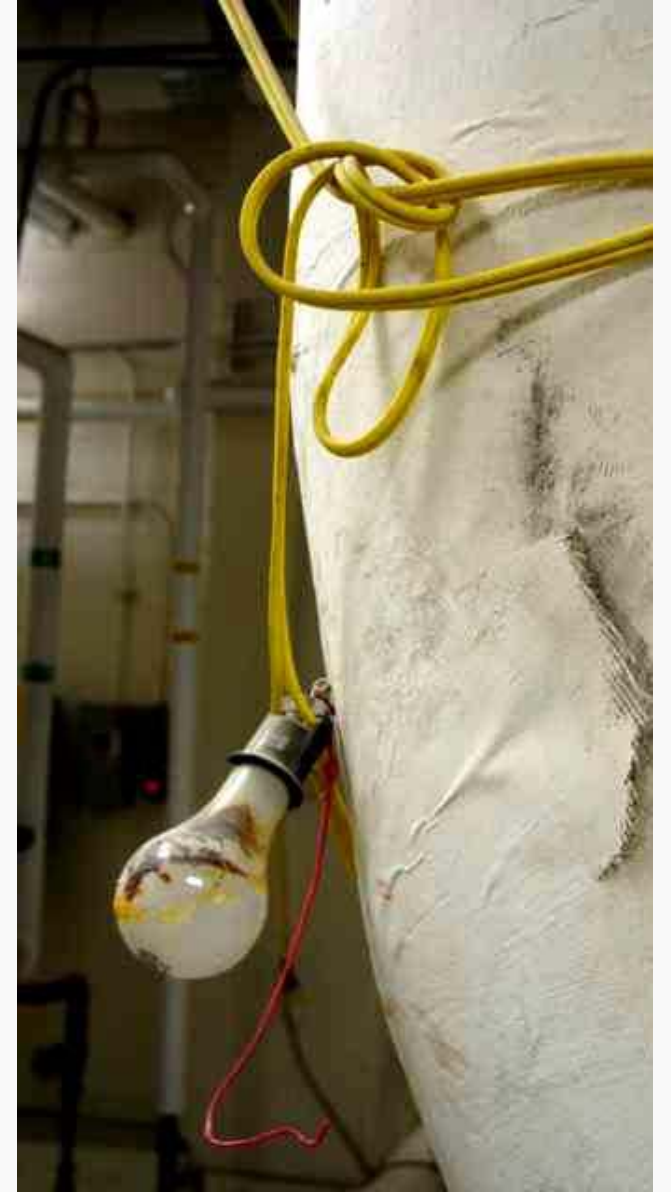
Tools & Equipment



Bring appropriate tools & equipment to the job site.



Tools and equipment must be maintained in good working order.



Use tools and equipment in a manner consistent with intended use.



Work in confined spaces requires considerable equipment and extensive worker training.

III. Environmental Protection



- Hazardous materials must be managed appropriately.
- Examples include silica dust, mercury, asbestos, lead paint, PCBs, CFCs, waste oil, etc.
- If you have any doubt about whether a material is hazardous or how to manage it, contact the Facility Manager and/or the Project Manager.

Hazardous Materials



- Respiratory hazard – dust inhalation leading to silicosis
- Reduce exposure – dust suppression, wetting, ventilation, collection
- Respiratory protection if above PEL
- Good housekeeping – use HEPA filtered vacuum
- Good housekeeping – do not use sweeping, compressed air or general vacuum because these will make the particles airborne and easier to breath

Silica

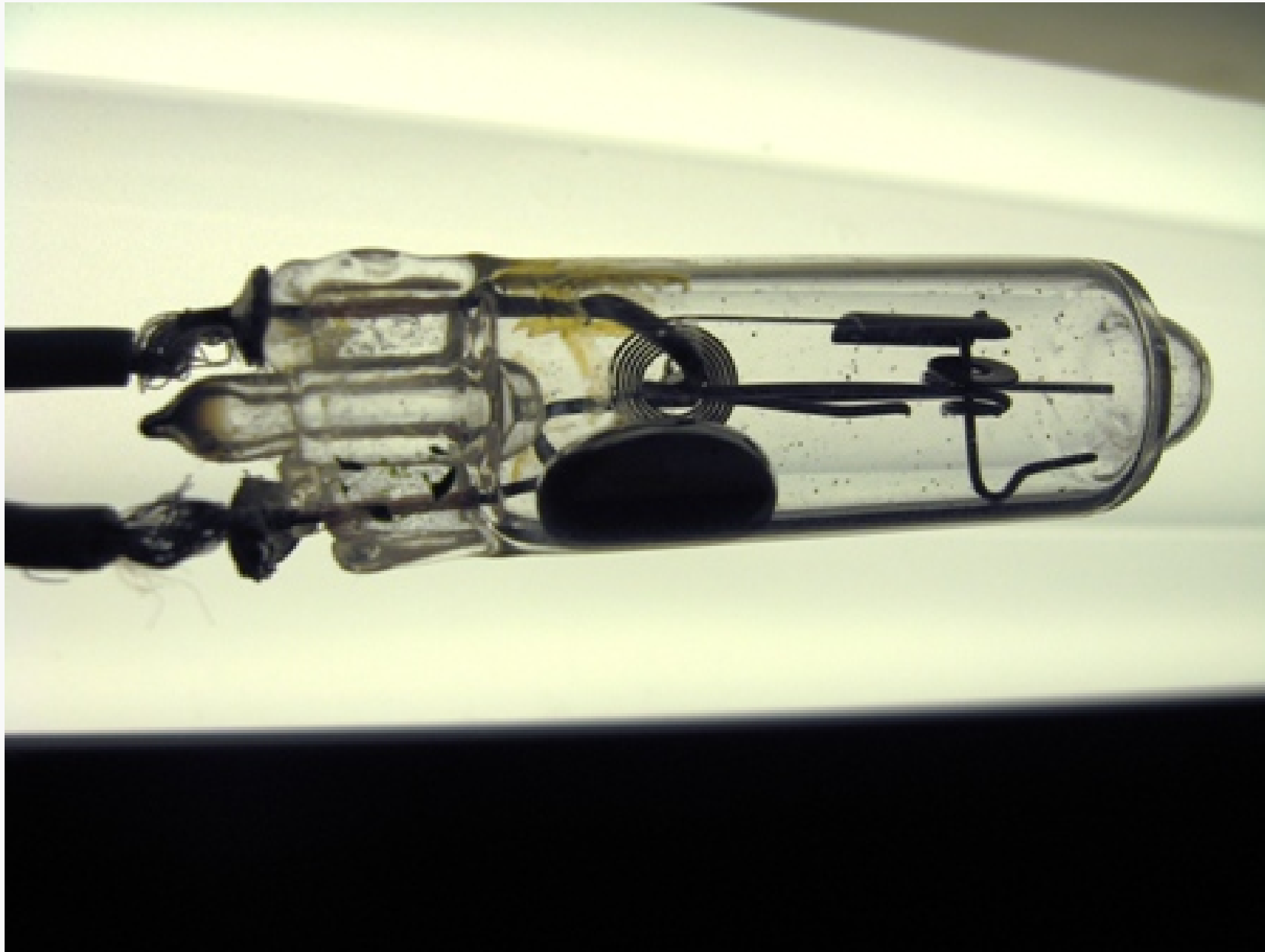
- Presumed Asbestos-Containing Materials include: spray applied insulation, thermal systems insulation, gaskets, etc.
- These materials are PACMs until testing indicates otherwise.
- Always pre-plan work by checking the building asbestos survey.
- If your work requires disturbance of ACM or PACM, contact the Project Manager.
- Asbestos-Containing Materials shall be removed only by licensed asbestos abatement contractors.

Asbestos





Do not disturb insulation unless you have confirmed it does not contain asbestos.



Be sure that items containing hazardous waste such as mercury switches are managed appropriately.

Thank You

Workplace Safety

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