

# CONN-OSHA Quarterly

## OSHA'S Revised Hazard Communication Standard

New changes to the Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard are bringing the United States into alignment with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS), further improving safety and health protections for America's workers. Building on the success of OSHA's current Hazard Communication Standard, the GHS is expected to prevent injuries and illnesses, save lives and improve trade conditions for chemical manufacturers. In 1983 the Hazard Communication Standard gave the workers the 'right to know,' but the new Globally Harmonized System gives workers the 'right to understand.'

The new Hazard Communication Standard still requires chemical manufacturers and importers to evaluate the chemicals they produce or import and provide hazard information to employers and workers by putting labels on containers and preparing safety data sheets. However, the old standard allowed chemical manufacturers and importers to convey hazard information on labels and material safety data sheets in whatever format they chose. The modified standard provides a single set of harmonized criteria for classifying chemicals according to their health and physical hazards and specifies hazard communication elements for labeling and safety data sheets.

The Major changes to the Hazard Communication Standard are:

**Hazard classification:** Chemical manufacturers and importers are required to determine the hazards of the chemicals they produce or import. Hazard classification under the new, updated

standard provides specific criteria to address health and physical hazards as well as classification of chemical mixtures.

**Labels:** Chemical manufacturers and importers must provide a label that includes a signal word, pictogram, hazard statement, and precautionary statement for each hazard class and category.

**Safety Data Sheets:** The new format requires 16 specific sections, ensuring consistency in presentation of important protection information.

**Information and training:** To facilitate understanding of the new system, the new standard requires that workers be trained by December 1, 2013 on the new label elements and safety data sheet format, in addition to the current training requirements. Chemical users should continue to update safety data sheets when new ones become available, provide training on the new label elements and update hazard communication programs if new hazards are identified. Chemical producers should review hazard information for all chemicals produced or imported, classify chemicals according to the new classification criteria, and update labels and safety data sheets.

Additional information: More information on the hazard communication standard, including the link to the Federal Register notice, can be found on OSHA's hazard communication safety and health topics page at [www.osha.gov/dsg/hazcom/index.html](http://www.osha.gov/dsg/hazcom/index.html).

Over the coming months, CONN-OSHA will be scheduling training programs and breakfast roundtable discussions that focus on the revised Hazard Communication Standard. Stay tuned for dates and times.

Effective Completion Date	Requirements	Who
December 1, 2013	Train employees on the new label elements and SDS format.	Employers
June 1, 2015*	Comply with all modified provisions of this final rule, except: Distributors may ship products labeled by manufacturers under the old system until December 1, 2015.	Chemical manufacturers, importers, distributors and employers
June 1, 2016	Update alternative workplace labeling and hazard communication program as necessary, and provide additional employee training for newly identified physical or health hazards.	Employers
Transition Period	Comply with either 29 CFR 1910.1200 (this final standard), or the current standard, or both.	All chemical manufacturers, importers, distributors

\* This date coincides with the European Union implementation date for classification of mixtures.

GHS Pictograms & Hazard Classes		
 <ul style="list-style-type: none"> <li>Explosives</li> <li>Self-reactives</li> <li>Organic peroxides</li> </ul>	 <ul style="list-style-type: none"> <li>Flammables</li> <li>Self-reactives</li> <li>Pyrophorics</li> <li>Self-heating</li> <li>Emits flammable gas</li> </ul>	 <ul style="list-style-type: none"> <li>Oxidizers</li> <li>Organic peroxides</li> </ul>
 <ul style="list-style-type: none"> <li>Gases under pressure</li> </ul>	 <ul style="list-style-type: none"> <li>Acute toxicity</li> </ul>	 <ul style="list-style-type: none"> <li>Acute toxicity</li> <li>Skin irritation</li> <li>Eye irritation</li> <li>Skin sensitizers</li> </ul>
 <ul style="list-style-type: none"> <li>Carcinogens</li> <li>Respiratory sensitizers</li> <li>Reproductive toxicity</li> <li>Target organ toxicity</li> <li>Germ cell mutagens</li> </ul>	 <ul style="list-style-type: none"> <li>Eye corrosion</li> <li>Skin corrosion</li> <li>Corrosive to metal</li> </ul>	 <ul style="list-style-type: none"> <li>Aquatic toxicity</li> </ul>

## Electrical “Roll-Up” Day Wednesday May 9, 2012

On May 7<sup>th</sup>, the 16<sup>th</sup> Annual North American Occupational Safety and Health Week begins. Tim Irving, Compliance Assistance Specialist, for the Boston South Area Office and the Construction Safety Roundtable of Eastern Massachusetts have challenged all of New England to an Electrical Training/Inspection “Roll-Up” Day, May 9, 2012. A complete description of the event can be found on CONN-OSHA’s web site at:

<http://www.ctdol.state.ct.us/osha/RollUp.htm>

Electrical equipment, cords, power tools, etc. are used in all industrial, business, retail, healthcare, education and construction settings to name a few. These settings require their use and therefore employees must be trained to recognize the hazards associated with electrical equipment. We all know this yet electrical citations were two of the “OSHA top ten violations” last year. To bring these often overlooked, ignored, but very dangerous hazards to the forefront, the concept of “Roll-Up” Day was conceived.

During the allotted period of the “Roll-Up,” each participating company will conduct an employee safety-training session addressing the topic of basic electrical safety for employees at their location. The company will conduct a thorough inspection of its facility/site and track the number of extension cords, power tool cords and GFCI receptacles inspected. All employers are

asked to use this [checklist](#) to visually inspect electrical extension cords and document GFCI tests. Participating organizations will be asked to document the training via their own internal attendance sheets and complete a course evaluation to assist in determining the effectiveness of this event. Please coordinate the totals for your facility/site and have one course evaluation completed per facility/site:

<http://www.surveymonkey.com/s/WBB8XZX>

States will be compared to each other to determine the level of employer participation.

Electrical hazard training aids in the form of a power points and an OSHA fact sheet can be found on the CONN-OSHA link above and also at:

[http://www.osha.gov/OshDoc/data/Hurricane\\_Facts/elect\\_safety.pdf](http://www.osha.gov/OshDoc/data/Hurricane_Facts/elect_safety.pdf) and [www.esfi.org](http://www.esfi.org)

For more information about the Construction Safety Roundtable of Eastern Massachusetts go to:

<http://www.csr-em.org/default.aspx>



## Hazard Corner....

### Dust and Indoor Air Quality (IAQ) in Office Environments

By Brian Sauvageau, RS

When asked to make a writing contribution to the Hazard Corner of the *CONN-OSHA Quarterly* I wanted to address something that would have an immediate impact for those who work in office building environments. I wanted to write about Indoor Air Quality (IAQ) and dust.

Controlling IAQ is extremely important to both our short term and long term health. The conditions described, when found during a CONN-OSHA inspection, could be considered an apparent violation of OSHA housekeeping standard, 1910.141(a) (3). The reader is encouraged to check their workplace for the conditions described below. You may be surprised at what you find. It is not hard to recognize and correct the problem thereby immediately enhancing workplace air quality. IAQ problems in the workplace can be controlled.

Over the past fourteen months CONN-OSHA has investigated twenty workplaces with IAQ complaints where the complainant considered mold to be the source of the problem. Yet of the hundreds of indoor mold samples collected during these investigations, only one sample was considered significant.

During these investigations, it was determined that dust was a primary factor contributing to the symptoms of poor IAQ. Other causes were determined to be poor air circulation and obstructions to heating system components by office furniture, equipment, and stored materials.

When we consider IAQ and health, realize that we humans are built to exist as hunter gatherers; to be up and on our feet, moving around outside, working to sustain ourselves. That is how we are made; our basic evolutionary and physiologic makeup. Our shelters were constructed to protect us from the elements and keep us warm and dry. But that is no longer how we live.

Current research has shown that people spend approximately 90 percent of their time living and working indoors and there is growing evidence showing that the indoor environment is more polluted with air contaminants



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## Hazard Corner cont....

than the outdoors. This is particularly the case in the office setting. We have individual control over cleanliness and environmental conditions in our homes. We lack this control at work. Employers, managers, and employees should be empowered to take an active role in controlling environmental conditions in the workplace.

Dust, commonly referred to as “house dust” is produced indoors from many sources. There is the breakdown and release of plant and animal materials such as paper, cotton and wool fiber. There are disintegrated synthetic materials from upholstered furniture, stuffing materials, and carpet fibers. Human skin scales, dust mites, cobwebs, insect parts, mold spores, the dirt we track indoors off our shoes, outside dusts, and pollens carried in through windows are all elements of indoor dust. Years of this accumulation becomes actual contamination.

Just walking across the floor creates air currents, which can stir up pollutants. I use the analogy of Pigpen, the *Peanuts* character. Whenever he walked he created a cloud of dust at his feet. This concept of dust carried by indoor pedestrian air currents actually occurs albeit, less concentrated than Pigpen’s visible dust clouds.

Respirable indoor dust is a common irritant. It can cause asthmatic and allergic reactions and can exacerbate existing conditions. Interviews with employees may reveal reports of medical treatment histories for exacerbated asthmatic conditions, allergies, or sinus infections. Complaints of general malaise, headaches, dry eyes, sore throats, and lung irritations may occur. Symptoms may subside after periods away from work such as weekends, holidays and vacations, and return upon returning to work. These chronic health conditions can lead to lowered immunity and inability to fight infections. People with already weakened immune systems and allergies are especially susceptible to poor IAQ. Health effects may be immediate but more often they appear only after a person has been in the workplace for years. This is a result of a sensitization reaction from chronic exposures, which is essentially a chronic allergic immune response.

If you don’t hear about IAQ complaints at work keep in mind that some people are stoic and won’t complain about such conditions, or they are afraid to make complaints. Some people just have a sturdy constitution and can tolerate these assaults, where others will feel sick and miserable. Their prolonged exposures to polluted indoor environments may become debilitating to the point where there is no escape other than leaving the job. No one should believe that they have to sacrifice their health or sense of wellbeing in order to work. Poor IAQ also affects employee attendance, productivity and morale. Increased health care visits result in increased health insurance claims as well. This is all preventable.

Dust in the workplace can remain airborne due to the flow velocity of air handling equipment and circulating fans. Baseboard heating units create convection air currents by thermo-siphoning. The heavier, dust laden cold air is drawn across the floor and into heating elements where the dust gets trapped and accumulates within or on the heating elements or steam radiators. As the warmed air rises, dust is lifted and rides on heated air currents. This cycle carries concentrated airborne dust into the worker’s breathing zone. Baseboard heating units should be maintained by removing component panels and cleaning all visible dust accumulations. A common obstacle to maintaining baseboard and wall panel heating units is when painting seals the fasteners and seams and they can’t be opened without considerable effort.



Computers and central processing units (CPU) equipment in general are magnets for dust accumulations. Electronic equipment generates static electricity and positively charged dust particles, causing them to stick and accumulate on, and within the equipment. As dust is drawn into the equipment by their cooling fans, it becomes concentrated as it is blown back into the air. The interior and exterior components to computers and CPU equipment should be cleaned on a regular basis to prevent airborne dust discharges. Contact your IT resources for assistance.

Other common and overlooked sources of dust in the workplace are window blind louvers and horizontal surfaces, including base boards, trim work, window stoops, sashes, and window wells. Carpeted and bare floor surfaces at floor-to-wall junctures, under office furniture and directly under the heating units are usually found with heavy accumulations of dirt, dust, cobwebs and debris. Look at the fabric of upholstered office furniture and cubical partitions. How long has it been since they were cleaned? Their surfaces can become saturated with dust.

Refrigerators and refrigerated water coolers are also neglected areas as their compressor compartments and heat exchanger coils are notorious dust magnets. Also, condensation leaks and the drip pans of these units create a perfect medium for mold growth. Pull your refrigerators away from the walls in your offices and break rooms and see what you find. Look at high overhead surfaces and ask when they were last cleaned. If you go dust hunting, use a flash light and be prepared to get down on your hands and knees – you have to go to know.

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## ***Hazard Corner cont...***

Portable air conditioning units should be inspected and cleaned prior to installation and routinely maintained in a clean and sanitary manner or in accordance with manufacturers specifications.

Offices should be configured to support cleaning and maintenance. In many cases office furniture, including filing cabinets, and cubical partitions are set up against walls and worse, up against heating components. It is impossible the clean behind them without the effort of moving heavy furniture or dismantling the equipment. The result is that these areas are not being cleaned.

The sources of dust are known. Heavy and sometimes gross contamination of dust in the workplace is due to a lack of good housekeeping and custodial practices. Observations during inspections indicate that these problems are caused by a number of barriers. They are as follows:

- Lack of a routine cleaning and maintenance regime using check lists, and ineffective periodic/seasonal cleaning procedures
- Office culture – personnel assume a right to privacy and do not want their personal work spaces disturbed, or custodians are insecure about encroaching into a personal workspace.
- Lack of performance standards – Cleaning goes unsupervised, cleaning specifications are relaxed or forgotten over time and attrition, lack of follow-up, lack of expectation or knowledge of specific cleaning needs.
- Office or operation security – work areas are not routinely accessible to cleaning.

- Downsizing and/or cost saving budget reductions in custodial services means the cleaning is not getting done.
- Employee resistance or reluctance to clean their own work spaces; “it’s not my job.”
- Cluttered workspaces, and work stations – surfaces obstructed, cluttered with personal items, such as pictures and knick-knacks; inaccessible to cleaning and causing areas to become “out of sight – out of mind.”

Managers and supervisors should be empowered to dedicate time and direct personnel to clean and maintain their immediate work areas; areas outside the scope and access of custodial personnel.

To view a photo gallery of dust conditions in the work place go to the CONN-OSHA website at <http://www.ctdol.state.ct.us/oshadust/dust.htm>

CONN-OSHA offers on-site consultation services for IAQ problems and other safety and health issues. Requests for consultation can be made in writing or by calling (860) 263-6900.

More information on managing IAQ in the workplace is found in “Indoor Air Quality in Commercial and Institutional Buildings.” OSHA 3430-04 2011. Go to [www.osha.gov](http://www.osha.gov) and select OSHA’s Publications link.

Also reference U.S. EPA publication “An Office Building Occupants Guide to Indoor Air Quality,” EPA-402-k-97-003 and can be found at [www.epa.gov/iaq/pubs/occupgd.html](http://www.epa.gov/iaq/pubs/occupgd.html).

## ***Connecticut-OSHA ~ Training Update...***

**Trenching & Excavation** *May 22, 2012 from 10:00 a.m. to noon* This workshop will provide an overview of 29 CFR 1926.650-652 excavations, including the role of the competent person. The session is designed to assist participants in identifying hazards associated with excavations and related activities.

**Safe Driving – Get There Safely EVERY Time** *June 5, 2012 from 10:00 a.m. to noon* Work-related vehicle crashes are the leading cause of occupational fatalities according to the U.S. Dept. of Labor. The goal of this session is to increase awareness of the need for, and the benefits of safe driving.

**OSHA Recordkeeping** *June 6, 2012 from 8:30 a.m. to noon* At this workshop, you will learn how to fill out the OSHA 300 Log of Work-Related Injuries and Illnesses accurately and correctly.

**Construction Site Safety** *June 12, 2012 from 9:00 a.m. to noon* Construction managers, first line supervisors, and construction employees will be provided with an overview of four areas of concern on the construction site. Program contents include: fall protection, scaffolding and ladder safety, electrical hazards, and excavation & trenching safety.

**Powered Industrial Trucks** *August 28, 2012 from 10:00 a.m. to noon* This workshop includes the basic requirements of the OSHA 29 CFR 1910.178 Powered Industrial Truck Standard which affects both General Industry and Construction material handling operations.

**Breakfast Roundtable** This discussion group meets the third Tuesday of every month from 8:15 am to 9:45 am. Pre-registration is required. To be placed on the e-mail distribution list, contact John Able at [able.john@dol.gov](mailto:able.john@dol.gov)

Classes are free and held at 200 Folly Brook Boulevard, Wethersfield, CT in Conference Room A/B. To register, contact John Able at [able.john@dol.gov](mailto:able.john@dol.gov) or Catherine Zinsser at [zinsser.catherine@dol.gov](mailto:zinsser.catherine@dol.gov). Pre-registration is required. A Photo I.D. is required to allow entry into a public building. For more training information, visit the CONN-OSHA web site [www.ctdol.state.ct.us/oshadust/dust.htm](http://www.ctdol.state.ct.us/oshadust/dust.htm)