





Winter is a Comin' in! Be Prepared!

Work performed outdoors may expose a person to extremes of heat and cold, including exposure to the sun's radiation and wind chill. Extremes of heat and cold are also possible in indoor work environments. The effect on employees of extreme temperatures can go beyond mere discomfort and pose serious health and safety consequences including hypothermia, frostbite, heat stress and heat stroke. In the upcoming months, be prepared for cold weather hazards.

Definitions of Cold Weather Hazards

Frostbite – injury or destruction of skin and underlying tissue from prolonged exposure to freezing or subfreezing temperatures or high wind chill. It progressively results in painful loss of feeling, numbness, a white or blue appearance of the skin, firmness of the skin to the touch and loss of function.

Hypothermia - characterized by a subnormal body temperature as a result of an individual's exposure to cold environments. In mild hypothermia, body temperatures range from 90° to 95°F (below the range of many thermometers) and the person is conscious, alert, and shivering. In severe hypothermia, body temperature is below 90°F and the person usually stops shivering and may become non-responsive or unconscious. It is a serious condition that can lead to death. The early warning signs of hypothermia are:

- ✓ Numb hands
- ☑ Shivering not under voluntary control
- Loss of fine motor coordination (particularly in the hands, as evidenced by trouble with buttons, laces, zippers)
- ✓ Slurred speech
- Difficulty in thinking clearly (hypothermia can affect reasoning and judgment and thereby create additional hazardous conditions)
- ☑ Irrational behavior (sometimes a person will even begin to discard clothing)

Assessing Employee Exposure at the Worksite

Hazard assessments must be conducted in accordance with the DEP Personal Protective Equipment (PPE) procedure. Risk from work conducted in extreme ambient temperature conditions can generally be appropriately managed by applying, without formal assessment, the risk control measures in Section 5 of the PPE procedures. Should a

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formal, focused hazard assessment be warranted based on heat or cold injury experience, Bureau EHS staff should be contacted to conduct this assessment.

General Risk Management Approaches

The recommended order of actions incorporating the recognized "hierarchy of controls" is listed below. If it is not practicable to eliminate the hazard, the risk should be controlled.

- Eliminate the hazard possible activities include discontinuing, or relocating the activity or rescheduling to a moderate weather time period; using a different, less dangerous piece of equipment; repairing faulty ventilation.
- Control the risk if a hazard cannot be eliminated, consider redesigning the equipment or processes to reduce equipment hazards or modifying work practices or materials. Risk controls that address the source of a health and safety problem will always prove more effective than reliance on procedures and the use of PPE. Approaches to risk control include:
- ☑ Isolating the hazard (e.g. introducing a restricted work area)
- ☑ Engineering controls (e.g. wind breaks, shading, ventilation, exhaust ducting, thermostats)
- ☑ Administrative controls and safe work practices
- ☑ Training
- Personal protective equipment (PPE) PPE is the least favored way of dealing with hazards, including heat and cold, but should be used when other methods are not practical or feasible. Required PPE (whether provided by DEP or the employee) must be appropriate, fitted correctly, maintained in good condition and always used correctly

Risk Control Measures

Control measures should be effective and safe, and should not create additional hazards. This is especially important with respect to PPE that may hinder employees' freedom of movement. In some situations, a combination of control measures may be needed. A job safety analysis with clear safe work procedures must be developed, documented and made available to employees for high hazard environments and job tasks.

If advised that an employee has a medical condition, additional measures to assess fitness and adjust monitoring and controls may be necessary due to the increased risk that a medical condition may be present. If any worker experiences significant symptoms of heat induced illnesses, corrective action must be taken and assistance provided without delay, regardless of any control measures or temperature conditions.

Cold Environments

Warm clothing is needed for working in artificially cold worksites (e.g., refrigerated areas), outside in cold climatic conditions, or where there is a need to be protected against environmental conditions such as high wind or partial or full immersion in water.

Steps that should be taken for cold conditions:

- 1. Provide protection from cold, wind and rain a shelter, such as a hut or the cabin of a vehicle, will offer relief from extreme conditions.
- 2. Ensure that employees are suitably clothed to work in cold conditions. Clothing should be worn in light, loose fitting layers; a waterproof outer layer will provide protection from rain. A hat will significantly reduce heat loss, as will some ear protection. Slip-resistant, insulated boots are preferable to light footwear that may allow the feet to become wet. Gloves or mittens should also be worn.
- 3. Monitor environmental conditions and the physical well-being of people when work involves prolonged or repeated exposure to cold. Work in pairs in isolated areas whenever feasible.
- 4. Provide regular breaks as needed in extreme cold for shelter, intake of warm/high-caloric drinks (avoiding caffeine which can constrict circulation) and food.
- 5. Cease work if conditions become too cold to continue safely. Wind chill can create significant risk even if the air temperature is above freezing point. Workers whose clothing becomes wet at low temperatures/high winds must change into dry clothing.
- 6. Provide employees with information so they can recognize the symptoms of cold stress, frostbite and hypothermia in themselves and their co-workers.

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Additional steps to be taken for indoor cold conditions

- ☑ Isolate workers from sources of cold.
- ☑ Raise the air temperature in the workplace by providing heating.
- ✓ Insulate ceiling spaces and walls where possible to minimize heat loss.
- ☑ Eliminate drafts (though not at the expense of adequate ventilation).

If the steps taken to manage cold working conditions have not prevented the recurrence of hypothermia symptoms, then contact Bureau EHS to perform a comprehensive assessment.

Training

Employees must be trained on any PPE identified as necessary. PPE training should include how to properly don/doff/adjust/wear PPE; limitations, proper care, maintenance, useful life and disposal of the PPE; and any procedures developed for working in extremely hot and cold weather including the elements of this guideline. Refresher training is required if procedures change, if new PPE is required for use in the exposure-related tasks or if employees are improperly using PPE. Awareness of early warning signs and symptoms of cold-related illnesses, potentially harmful effects, medical conditions that can increase the risk of injury, and protective measures shall be included in yearly Hazard Communication/Right-to-Know Training and/or tailgate training sessions at the onset of seasonal extreme working conditions.

Employees should be encouraged to advise supervisors if they have medical conditions that put them at higher risk of injury and report hazards and any symptoms of illness without delay.



OEHSC Training Calendar on Pipeline

The calendar of training classes is posted monthly on *Pipeline and* updated as class information arrives.

Take Advantage of the monthly training calendar to find classes you might want to be scheduled for!

New Staff at OEHSC

The Office of Environmental, Health & Safety Compliance has increased its staff over the past months and we would like to introduce them to you.



Lois Wallace Deputy Agency Compliance Officer

Lois joined OEHSC in June 2007 after working with the federal government for 25 years. She has spent the last 20 years working with the US Department of Labor, Occupational Safety and Health Administration (OSHA) where she was a senior Compliance Safety and Health Officer in the Queens District Office. For the last 15 years, Lois has worked in the field assessing workplace hazards in construc-

tion and general industry establishments, enforcing federal safety and health regulations, as well as educating employees and employers on various safety and health topics. She has also conducted many high profile accident and fatality investigations which involved issuing penalties over \$100,000, working closely with the Department of Investigations, Department of Buildings, US Attorney's Office and the Queens District Attorney's office. Ms. Wallace participated in both The World Trade Center and Hurricane Katrina clean-up process ensuring that contractors and their employees were not exposed to hazardous conditions while working.

Her philosophy is: safety and health is a way of thinking. Safety and health is good business. Safety and health is job #1. Ms. Wallace was honorably discharged from the United States Marine Corps after serving four years and holds a Bachelor of Arts in Psychology from York College (CUNY).

Anthony Bellantoni Environmental Auditor

Anthony joined the OEHSC unit as an Environmental Auditor in late February 2007. The department was established to ensure that all DEP facilities are in compliance with federal, state, NYC, and other local regulations. Before coming to the DEP, he was employed at Danaher Corporation (a large corporation that includes Craftsman tools, Hach instruments and chemicals, medical equipment, and so forth) as an Environmental, Health, and Safety coordinator for 13 years. In addition to handling all aspects of regulatory

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compliance for more than 500 employees, he changed chemical processes to save more than \$75,000 annually, and participated in decision making committees with upper management to generate EHS programs, environmental and safety audits, and technical solutions to company wide problems. Anthony not only conducted audits for Connecticut facilities, but also for other plants in Michigan, Virginia, and North Carolina. He has extensive experience with industrial wastewater treatment plants and chemical processes such as plating and other metal finishing. Prior to Danaher, he worked for Timex and several other connector and plating businesses in a similar capacity. He graduated from the University of New Haven with a MS in Environmental Science and a Graduate certificate in Occupational Safety and Health.

Raymond Field, Jr.

Risk Management Specialist

Ray joins OEHSC as a Risk Management Specialist and is responsible for full-time oversight of Risk Management Programs/Process Safety Management (RMP/PSM) programs relating to NYC DEP's operation of reservoir chlorination systems. Ray provides technical and regulatory assistance to the bureaus for (RMP/PSM) process chemical safety and compliance with local, state and federal regulations. He also reviews, evaluates and audits bureau (RMP/PSM) covered reservoir facility operations. Ray has 15+ years of experience of working within (RMP/PSM) covered industrial chemical processes, mostly in the area of water treatment. He holds a Bachelor of Science in Chemical Engineering, and prior to coming on board with OEHSC, he worked in the private sector with companies such as W.R. Grace, Ashland, Inc., Occidental Chemical, and BETZ Laboratories.

Marylin Julmis, MPH, CHES

Health & Safety Auditor, City Research Scientist

Marylin began her professional career in Public Health with the New York City Department of Health & Mental Hygiene (NYC DOHMH) Lead Poisoning Prevention Program (LPPP) in October 1995 where she spent 11 years first as a Public Health Inspector and later on as a supervisor where she oversaw the daily activities of the program's public health inspectors. She also had the opportunity to be a part of the DOHMH special emergency response team which dealt with the aftermath of the World Trade Center events and several other projects thereafter dealing first hand with public health and public safety. She recently joined the OEHSC team at DEP as a City Research Scientist where she conducts environmental health & safety audits at DEP facilities and operations to ensure compliance with federal, state or local regulations.

She received a bachelor's degree in 1994 from the City University of New York (CUNY), York College, in Environmental Health Sciences with a minor in French literature and Francophone Studies. She completed a Master's degree in Public Health with a concentration in Community Health Education in 2000 at Hunter College and a Certification in Bioterrorism Preparedness for Laboratory and Safety Professionals at Hunter College (Continuing Education) in 2004. Marylin is a member of the American Public Health Association (APHA).

Svetlana Khomutova

Health & Safety Auditor, City Research Scientist

Svetlana comes to DEP as a Health and Safety auditor where she is conducting environmental, health, and safety audits of facilities and operations to ensure compliance with federal, state, or local regulations. Previously, she was employed by Department of Health & Mental Hygiene Bureau of Laboratories in the Virology Department where she gained extensive experience over her ten year stay there, with increasing responsibilities in public health services. She graduated as Master of Science in Chemical Engineering in 1989 and is currently pursuing her second master degree at Long Island University in Public Administration.

Reagan N. Mendoza MPH

Health & Safety Auditor, City Research Scientist

Reagan transferred to the Office of Environmental Health & Safety Compliance as a City Research Scientist to perform environmental health & safety audits at DEP facilities and operations to ensure compliance with federal, state, and local regulations. In his previous position with the Bureau of Environmental Compliance, he worked as an inspector for the Asbestos Control Program Enforcement Unit since February 2004. He has performed more than 1400 inspections at asbestos abatement projects and asbestos-related complaint sites (reported by the public via the NYC 311 complaint service) and has generated more than \$2.8 million in fines at the Environmental Control Board the last three years. He served as an Emergency Response supervisor and has also worked in collaboration with USEPA and NYSDOL regulators to oversee pre-deconstruction abatement activities at 130 Liberty Street (the Deutsche Bank) prior to transferring to OEHSC. He holds a BS degree in Community Health Education from the City University of New York at Hunter College and an MPH degree in Environmental & Occupational Health Science from the Hunter College School of Health Professions

Sancia S Simpson

Associate Safety & Health Coordinator

Sancia graduated Stony Brook University with a BA in Anthropology and Biology. She recently obtained her Master of Public Health in Epidemiology from New York Medical College in Valhalla. She was employed with the NYC department of Correction for two years where she was an environmental and health and safety inspector. Her duties included inspecting clinic, kitchen, maintenance shops, nursery, and housing areas in all the NYC prison facilities to ensure they were in compliance with all applicable federal, state, and local regulations. She was also responsible for indoor air quality tests, water sampling tests, and methane tests.

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