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CONNECTICUT DEPARTMENT of LABOR DIVISION of OCCUPATIONAL SAFETY and HEALTH

THINK–ACT– BE SAFE: Safe Winter Operations for Professional Snowplow Operators

As a professional snowplow operator, safety should be your #1 priority. You need to constantly think safe and act safe so that you will be safe. You know the importance of knowing your job, and the hazards associated with it. You are out in that winter storm because the roads are unsafe for driving. You are the one that is making the roads safe for all the motorists who need to get to work or carry out essential emergency operations or just need to continue on their life's journey.

Realizing the importance of your job, and your safety, let's review the many issues encountered in the job of snowplowing. Some items can be addressed prior to winter, while other items need to be dealt with during winter operations. The next page provides a checklist for ease of use since snowplowing is a complex business!

Train for Winter Operations. A well-trained snowplow operator will be a safe snowplow operator. Training is essential for the safe and proper handling of materials, maintenance of equipment, and operation of equipment. You may already know how to drive a truck, but new snowplow operators will benefit from practicing with a plow and a loaded spreader.

Drive Safely. Drive defensively, obey traffic laws, do not speed, and maintain an adequate stopping distance. The extra size and weight of your vehicle and the road conditions will necessitate a substantially greater stopping distance than you normally need.

Fatigue is a big safety factor. Long hours of plowing and spreading can be exhausting. Know your own limitations – your sleep needs may differ from your co-workers. Supervisors should recognize that all individuals are different and encourage snowplow operators to meet personal sleep requirements. Cooperation between snowplow operators and supervisors is essential to meet this safety need.

Know Your Route. "Dry runs" can be a valuable safety practice. Run your routes just prior to winter and take notice of what has changed since last winter. Make notes of locations with new obstacles, such as drainage, utilities, guardrails, curbs, medians, etc. If possible, mark these locations so you can recognize them when they are covered with snow. Remember to *always* check for overhead hazards such as low hanging wires or tree limbs.

"Wet runs" are even better than "dry runs". Running your route in the rain makes it easier to spot drainage problem and ponding. These locations are likely to be icy in winter weather.

Material Safety. Handling abrasives, salt and other chemicals need not be hazardous. Know what you are handling and follow the common sense requirements for personal protection. Refer to the Material Safety Data Sheets (MSDS) for each of the products you use. Become familiar with precautions for each material, including the use, handling, personal protective equipment, and emergency procedures in case of exposure or spill.

Crew Equipment. Adequate sleep, multi-layered clothing, hardhat with liner, safety vest, safety shoes, boots, gloves and first-aid kit equip the snowplow operator with a good start. Thermoses and lunch boxes – filled with nutritional food - provide comfort for a long shift away from convenient pit stops.

Vehicle Equipment. Every vehicle should be equipped with a flashlight and extra batteries, ice scraper/snow brush, jumper cables, a basic tool kit, flares or reflectors, flags for traffic control, shovel and sand, and a fire extinguisher.

Check to make sure vehicles are fully operational *before* the season begins. Specific items to check include: lights, back-up alarm, plow flags, warning signs, radio communications, windows, mirrors, fluid levels, tire tread and inflation, brakes, windshield wipers and wiper blades, heater, and defroster.

Operations Safety. Know your truck and equipment. Perform safety checks pre-trip and daily. With a full fuel tank and a final walk-around, your last safety practice before driving off is to buckle up. The use of your safety belt should become a habit, a natural action prior to turning the key in the ignition.

Know your safe backing rules. Do the circle of safety, back slowly, back straight, and use an outside guide if possible. If you are spreading material and running with your truck bed up, the bottom of the truck bed should not be higher than the top of the cab. Watch for overhead wires and tree limbs.

When working on or unclogging a spreader, make sure your engine and all power to the spreader is turned off. In addition, relieve all pressure in the hydraulics and then use a tool to unclog. Even though all power is off, the reserve pressure in the hydraulic lines can still turn the augur as it is freed.

As a professional snowplow operator, you provide a vital service to maintain a safe transportation system. **Remember, your winning combination to winter operation safety is to constantly think and act safe to be safe.**

Excerpted with editing from www.saltinstitute.org

Winter Operations Safety Checklist

Safe Winter Operations for Professional Snowplow operators

Crew Safety

- Adequate Sleep/Rest
- Personal Protective Equipment
- Multi-layered Warm Clothing
- Hardhat with liner
- Safety Vest
- Safety Shoes
- Boots
- Gloves
- First-Aid Kit
- Flashlight with Extra Batteries
- Ice Scraper / Snow Brush
- Jumper Cables
- Basic Tool Kit
- Flares or Reflectors
- Flags (Traffic control)
- Shovel and Traction Material (sand)
- Fire Extinguisher – check pressure
- Thermos and Lunchbox

Material Safety

- Material Safety Data Sheets (MSDS)
- Emergency Procedures

Vehicle and Equipment Safety

- Preventive Maintenance
- Daily Check/Pre-Trip Inspection
- Fluid Levels
- Tire Tread and Inflation
- Brakes
- Heater
- Defroster
- Windshield Wipers & Wiper Blades
- Clean Windows and Mirrors
- Lights
- Backup Alarm
- Plow Flags
- Warning Signs on Rear of Truck
- Radio Communications
- Full Fuel Tank

Operations Safety

- Safety Belt
- Defensive Driving
- Obey Traffic Laws
- Do Not Speed
- Safe Backing Circle-of-Safety
- Allow Sufficient Stopping Distance
- Dump Bed no higher than Cab Top when moving
- Block Plow before Changing Blade

Snow Plow Safety Tips

It's almost plowing season and time to think about what it takes to be safe while getting your job done. Driving a snow plow is hard work. It requires driving for long hours in conditions that many other drivers consider too risky for travel. While you are concerned with providing safe and clear travel for motorists, you must not overlook your own safety.

Here are a few tips to make snow plowing safer:

- Start work physically and mentally rested and properly clothed.
- Check all equipment before each use. Inspect the lights, brakes, windshield wipers, defroster, plow bolts and chains, spreader and auger, flares and other safety equipment.
- Know your route. Perform pre-storm route inspection observing landmarks and the locations of possible hazards (guardrails, curbs, railroad tracks, bridge joints, mailboxes, manhole covers, etc.) which may be hidden by falling or plowed snow.
- Choose the speed appropriate for conditions. Resist the urge to get the job done in a hurry.
- Be considerate of motorists having trouble driving in the snow. Keep your temper and patience when vehicles pass or tailgate.
- Be brief when using the radio. Report stranded motorists and other emergencies when possible.
- Observe all traffic laws and signal your intentions clearly. Always wear your seat belt.
- Before leaving the cab, set the brakes and disengage the power to the spreader and snowplow.
- Watch for signs of fatigue. Staring for hours at the driving snow can have a hypnotizing effect on drivers. The long hours and stress can take their toll as well. If you feel the onset of fatigue, take a short break – get out and walk around the truck and take some deep breaths.

Contributed by the Rhode Island Local Technical Assistance Program (LTAP), which serves as the Technology Transfer (T2) effort of the Federal Highway Administration's Office of Professional Development. In Connecticut, this program is effectively delivered by the CT Technology Transfer (T2) Center located at the UCONN School of Engineering's Transportation Institute. Visit them at www.T2Center.uconn.edu.

Carbon Monoxide-A silent killer

By: Michelle Major-Occupational Hygienist, Consultation

All people and animals are at risk for CO poisoning. Certain groups – unborn babies, infants and people with chronic heart disease, anemia, or respiratory problems – are more susceptible to its effects. Each year, more than 400 Americans die from unintentional CO poisoning, more than 20,000 visit the emergency room and more than 4,000 are hospitalized due to CO poisoning. Fatality is highest among Americans 65 and older." -Centers for Disease Control and Prevention (CDC)

What is carbon monoxide (CO) and how does it affect the body?

Carbon monoxide or CO is a colorless and odorless gas which can interfere with the oxygen-carrying capacity of the blood. Red blood cells have the ability to pick up CO faster than oxygen. If there is a significant enough concentration of CO in the air, the body may replace oxygen in the blood by forming carboxyhemoglobin, thereby inhibiting the blood's ability to carry oxygen.

What are the symptoms of CO poisoning?

The most common symptoms of CO poisoning are headaches, dizziness, drowsiness, nausea, vomiting, tightness across the chest, and confusion. Furthermore, the formation of carboxyhemoglobin in the body can cause a bright red color to the skin and mucous membranes, resulting in breathing difficulties, collapse, convulsions, neurological damage, coma, and death.

What are some common sources of CO exposure?

- Portable generators/generators in buildings
- Compressors
- Space heaters
- Floor buffers
- Concrete cutting saws
- Gasoline powered pumps
- Welding operations
- Forklifts powered with internal combustion engines when used indoors, especially during cold weather when doors and windows are closed

How can exposure to CO be prevented and/or minimized?

Never use generators indoors or in enclosed or partially enclosed spaces such as garages, crawl spaces, and basements.

Make sure that generators, when used, have 3-4 feet of clear space on all sides and above them to ensure adequate ventilation.

Do not use generators outdoors if placed near doors, windows, or vents which could allow CO to enter and accumulate in occupied spaces.

Consider using tools powered by electricity or compressed air.

Enclose work operations where feasible and use local exhaust ventilation at the site of chemical release.

Install CO alarm detection systems in work areas to warn of unhealthy and or dangerous exposure levels. Post appropriate hazard warning information in work areas and provide employees with effective hazard communication training.

If you experience symptoms of CO poisoning, get to fresh air and seek immediate medical attention.

OSHA Standards

CONN-OSHA's Air Contaminants standards require employers to ensure that no employee is exposed to an airborne concentration of CO which exceeds 35 parts per million parts of air (ppm) as an 8-hour time-weighted average known as the permissible exposure limit (PEL). In addition, employers are required to ensure that no employee is exposed to an airborne CO concentration above 200 ppm at any point during the work shift (Ceiling or "C" limit).

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To receive the *Quarterly* electronically, contact gregory.grayson@dol.gov. In the subject line type *"subscribe"* and provide your e-mail address. You may also reach us by phone at (860) 263-6900 or visit our website at http://www.ctdol.state.ct.us/osha/osha.htm

Hazard Corner...

At approximately 3:45 on a Friday afternoon late in October, in response to reports of inclement winter weather, a 32-year-old Department of Transportation Maintainer was preparing a dump truck for sand/salt dispersal. The preparation process included outfitting the truck with a plow and chains, and ensuring the sanding mechanism is free from obstructions by running the conveyor and spinner.

The employee drove the vehicle to the far end of the facility to run the conveyor. While the conveyor was running, this employee attempted to enter the dump body via a ladder mounted to the dump body on the driver's side of the vehicle. At this time, the employee's foot became lodged under the gate where the conveyor pushes the sand mixture through to the spreader chute. The trauma sustained from the running conveyor ultimately resulted in the amputation of the employee's foot.

RECOMMENDATIONS

#1 Follow all manufacturer recommendations for safe use of equipment. In addition, do not remove any factory installed placards and be sure to replace those that have become unreadable.

#2 Ensure that employees are protected from the hazard of ingoing nip points and rotating parts. According to 29CFR1910.212, the employer must ensure that machine operators and other employees in the machine area are protected from hazards including but not limited to those from ingoing nip points and rotating parts. There are multiple ways guarding can be accomplished depending on the piece of equipment. The employer should consider which method or combination of methods would be most effective.

#3 Perform a hazard analysis prior to equipment use. Once the employer has identified the potential hazards that exist through the hazard analysis, written policies and procedures should be developed that eliminate or reduce employee exposure to the hazard(s).

#4 Provide training and education for employees on the hazards and proper use of equipment at the workplace. Once the employer has identified a hazard and has put policies and procedures in place to eliminate or minimize employee exposure to the hazard, the employer should communicate this information to the affected employees through training and education. In this case, a warning placard which warned of the danger of a moving chain, was affixed to the vehicle body adjacent to the ladder. However, because it was acceptable to enter the dump body for some purposes, employees likely became indifferent to the placard and the potential hazard.

Effective policies and procedures are those which are CLEARLY communicated to EACH affected employee and are reinforced on a regular basis. It is important to remember that every employee has different levels of experience and knowledge and what seems obvious to one employee may not be as obvious to another. Training and educational materials should take all levels of experience into consideration.

CONNECTICUT-OSHA ~ Training Update...

Confined Space Safety November 18, 2009 This workshop includes the basic requirements and procedures involved with permit-required confined spaces as detailed in 29 CFR 1910.146. This class will be held from 10 am-12 noon.

OSHA Recordkeeping December 10, 2009 earn how to fill out the OSHA Log of Work-Related Injuries & Illnesses (Form 300) accurately and correctly. This class will be held from 9 am-12 noon.

Construction Site Safety December 18, 2009 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 ladders, electrical hazards, and trenching safety. This class will be held from 10:00 am—12 noon

Lockout/Tagout: Understanding & Implementing Energy Control Procedures December 17, 2009 Discussion of OSHA's 29 CFR 1910.147 standard requires the isolation of energy sources to prevent accidental re-energization. This class will be held from 10 am-12 noon.

OSHA Recordkeeping January 5, 2010 Learn how to fill out the OSHA Log of Work-Related Injuries & Illnesses (Form 300) accurately and correctly. This class will be held from ***1pm to 4 pm.***

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

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. **Pre-registration is required**. For more training information, visit the CONN-OSHA web site www.ctdol.state.ct.us/osha/osha.htm

Fatality & Casualty Reporting

State & Town: CONN-OSHA (860) 263-6946 (local) or 1-866-241-4060 (toll-free)
Private Employers: Report to Federal OSHA at 1-800-321-OSHA(6742)