University of New Haven

CALL BEFORE YOU DIG

POLICY AND PROCEDURE

Prepared By:
Triumvirate Environmental

Developed: December 2012
Updated: June 2015

Program Approval

_____	_____
Associate Vice President of Public Safety & Administrative Services	Date
_____	_____
Associate Vice President of Facilities	Date

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1.0 Policy Statement

The University of New Haven has developed a Call Before You Dig (CBYD) Policy and Procedure in accordance with CT Public Act No.87.71, CT statutes 16-345 through 16-359, and Section 16-345 of the Regulations of the Connecticut State Agencies concerning safe excavation practices and the protection of underground facilities in Connecticut.

1.1 Purpose

It is the policy of The University of New Haven and Connecticut law that at least 48 hours prior to any excavation the Call Before You Dig program be notified. The University prohibits excavations on University owned, leased or subsidiary facility property that does not follow the guidelines outlined in this policy and procedure.

1.2 Scope

This policy and procedure applies to all University employees and contractors working at University owned, leased or subsidiary facilities.

1.3 Review

The Associate Vice President of Facilities will review and update this policy whenever necessary or at least annually.

All the elements of this policy are considered University of New Haven policy and may be enforced as such. Failure on the part of University employees to follow the policies and safety requirements of this Plan may result in disciplinary action. If a contractor is found to be in non-compliance with the University of New Haven's Call Before You Dig Policy, current and future work may be jeopardized.

2.0 Definitions

Excavation - defined as any operation for the purpose of movement or removal of earth, rock or other materials in or on the ground by use of mechanized equipment, including blasting. Excavations include, but are not limited to:

- Demolition of Structures
- Cable or Pipe Plowing or Driving
- Setting Poles
- Reclamation Processes and Milling
- Installing Sign Poles
- Boring Holes for Percolation Tests
- Ditching
- Auguring
- Moving Earth
- Drilling

- Grading
- Trenching
- Digging
- Scraping
- Razing
- Dredging
- Tunneling
- Wrecking

3.0 Roles and Responsibilities

The following individuals have these responsibilities with regard to this respiratory protection program.

3.1 Associate Vice President of Public Safety & Administrative Services

- Support and assist the department managers/department chairs on the full implementation of this safety program.
- Update the program as necessary to protect employee and student safety as outlined in section 1.3.
- Assure that appropriate training has been conducted with University staff.

3.2 Director of Facilities

- Evaluate compressed gas and/or compressed air equipment at the University to assure proper working order.
- Identify department members under facility direction that perform work associated with compressed gas and/or compressed air equipment.
- Assure that those department members under facility direction that perform work associated with compressed gas and/or compressed air equipment have the appropriate training and understand all aspects of safety associated with this equipment.

3.3 Department and Lab Managers/Department Chairs

- Assure that equipment associated with the movement, storage and use of compressed gas cylinders is available and properly inspected before being used.
- Ensure department members conducting work associated with compressed gas and/or compressed air equipment have the appropriate training and understand all aspects of safety associated with this equipment.

3.4 Contractors

- Are required to review, understand and follow all University safety policies and procedures while on-site.

- Provide appropriate personal protective equipment or other hazard control measures appropriate with work being conducted.
- Ensure all hazards are appropriately communicated to his/her department members as well as sub-contractors working under their direction.

3.5 University Department Members

All University of New Haven department members working with compressed gases are required to maintain safe work practices as outlined by OSHA and this policy.

- Department members include professors, adjuncts, teaching assistants, researchers, students and volunteers.

Additional department member responsibilities as it pertains to this policy include:

- Complete the University's compressed gas training prior to working with compressed gases in their respective departments.
- Wear the appropriate personal protective equipment for the task being performed.
- Inspect hazard control measures and personal protective equipment prior to each use.
- Maintain awareness of hazards associated with the handling and use of compressed gas.

4.0 Call Before You Dig Request

The CBYD program requires that a request for a mark-out be made at least 2 full working days but not more than 30 days before any excavation starts (excluding holidays & weekends). The following steps must be followed for all excavations at all University of New Haven owned, leased or subsidiary facilities:

- A request must be made regardless of where the excavation will take place.
- A notification is still required even if mechanized equipment is being used to only excavating a few inches or just surface grading. If you move material, or plan to drill or drive anything into the ground a notification must be made.
- Those completing the excavation should not rely on old markings.
- Before calling CBYD, the person completing the excavation must mark out the area that has been identified for excavation with white paint, flags or stakes.
- The person completing the excavation must complete a mark-out request information sheet prior to calling the CBYD. This request information must be reviewed by the University of New Haven Facility department prior to a CBYD notification.

The CBYD call center operates from 7:00 AM to 5:00 PM weekdays answering calls from anyone who plans to dig in Connecticut. The CBYD call center can be reached at 800-922-4455.

After providing the CBYD call center with the requested information, the customer service representative will read all provided information back to the caller. It is imperative that the caller assure all information is accurate. The caller will be given a list of member utility owners that the CBYD will notify as well as a mark-out request number that is proof of the call and a reference should it be needed at a later date. The University of New Haven requires that the mark-out request number be available at the excavation for the duration of the excavation.

4.1 Emergency Excavations

Only emergency calls are accepted at the CBYD call center after hours, weekends and holidays. In an emergency situation, CBYD will tell the caller which utilities are in the area and it is the responsibility of the caller to call each utility directly for an emergency mark-out.

In the event of an emergency requiring an excavation, the University of New Haven will work in conjunction with the contractor to notify the CBYD call center as well as identified utilities prior to completing any excavations.

5.0 Confirming the Utilities Response

Each utility operator identified on the one call ticket is required to either mark-out the area of proposed excavation or advise the caller that the area is clear. That response will either be a facility mark-out (which could be a "Company Name - Clear") in the field, or contact from the operator that they do not have facilities in the proposed dig site area and that the area is clear.

If the excavation area is not marked, or facility operator identified on your mark-out request does not contact the caller before the stated commencement date, it is required that the person completing the excavation call the facility operator's contact number.

It is important for the caller to provide an accurate field contact phone number when calling the CBYD Call center for a mark-out request because that is the phone number the facility operators will use should they need to contact with the person completing the excavation regarding the mark-out request.

6.0 Markings

The University of New Haven is responsible for maintaining the marks set down by utility operators at the excavation site site. Should the excavation cause the removal or disturbance of markings, the person completing the excavation must establish offset marks in order to maintain a reference point for underground utilities. If offset marks are used during the excavation, everyone working on the project must be aware of any offsets that have been established, any marks that have been compromised or any other information regarding utility locations.

Before the excavation begins, the University requires that the contractor walk-through the site to familiarize themselves with the markings and the locations of buried utilities paying special attention to any changes in direction that the underground utilities take.

Should markings fade or be compromised to the point where proper and safe excavation is no longer possible, the CBYD call center must be contacted immediately and a new mark-out ticket request must be made.

In the event any markings at the site are refreshed the uniform color code and identification letters must be used to avoid any confusion during the excavation.

7.0 Digging Near Gas Lines

5.0 Personal Protective Equipment

The hazards associated with the compressed gases and equipment at the University of New Haven has been assessed and the University has taken measures to eliminate or reduce their presence with engineering and administrative controls. Where these controls were not enough for employee protection, all necessary personal protective equipment has been supplied according to the University's Personal Protective Equipment (PPE) Policy and Procedure.

General requirements for the use of personal protective equipment include wearing protective gloves when using gases that are harmful to the skin. Aprons or other protective clothing may be needed depending on the risk of skin contact. University department members are instructed to consult the material safety data sheet before handling a compressed gas for appropriate manufacturer personal protective equipment recommendations.

Eye protection must always be worn when handling and working with compressed gases. In some cases additional protection may be needed in the form of a face shield when working with compressed gases.

Respirators are not currently required by the University with any work with compressed gases due to the specific work that is being completed. Should these processes change and/or additional gases be brought on-site, department members are instructed to notify the Associate Vice President of Public Safety & Administrative Services so that a hazard analysis can be completed.

Staff is instructed to contact their department manager should there be any questions concerning appropriate personal protective equipment needed for a specific task.

6.0 Inspection Procedures

The University of New Haven's compressed gas vendor is qualified to determine that compressed gas cylinders at the campus are in a safe condition to the extent that can be determined by visual inspection. Inspections of cylinders are conducted according to the following schedule:

- Upon delivery (visual)
- Per manufactures' recommendations thereafter.

University inspections of compresses gas cylinders are conducted as prescribed by the following, as applicable:

- 49 CFR 171 - 179 and 49 CFR 103 (Hazardous Materials Regulations under the Department of Transportation).
- Compressed Gas Association (CGA) Pamphlet C-6-1968 (Standards for Visual Inspection of Steel Compressed Gas Cylinders).
- Compressed Gas Association Pamphlet C-8-1962 (Standard for Re-qualification of DOT-3HT Seamless Steel Cylinders).

If a cylinder is found unfit in its present condition, the University as per this policy requires that the vendor determine whether it can be repaired or must be scrapped. If a cylinder is repaired, it can only go back into service if the defect is corrected as specified according to the requirements listed above.

7.0 Handling Procedures

Compressed gases are considered to be handled when a department member performs any of the following activities:

- Fill, change gas service, maintain and move containers; and
- Connect containers and withdraw content.

The University follows the safe handling procedures found in the CGA pamphlet series, including the P-1-1991 pamphlet. The University's handling procedures include the following:

- Identify a gas and its dangers before using it. Look for this information on labels, MSDSs and cylinder markings. If you do not know what is in a cylinder, do not use it.
- Examine cylinders as soon as you receive them. If you detect signs of damage or leakage, move them to a safe, isolated area and return them to the supplier as soon as possible.
- Use only regulators, pressure relief devices, valves, hoses and other auxiliary equipment that is designed for the specific container and compressed gas/cryogenic liquid to be used.
- Do not interchange equipment between different types of gases.
- Make sure valves, hoses, connectors and regulators are in good condition. Do not use cylinders without them.
- Use pressure relief devices and safety devices to help maintain cylinder or system pressure at the desired levels. (Exceeding the desired pressure could damage the cylinder or system.)
- Check to see if regulators, hoses and gauges can be used with different gases. Assume they cannot.
- Never open valves until regulators are drained of gas and pressure-adjusting devices are released. When opening cylinders, point outlets away from people and sources of ignition, such as sparks or flames. Open valves slowly. On valves without hand wheels, use only supplier-recommended wrenches. On valves with hand wheels, never use wrenches.
- Do not tamper with connections and do not force connections together.
- Do not hammer valves open or closed.
- Do not drop, bang, slide, clank or roll cylinders.
- Cylinders may only be rolled along the bottom rim.
- Do not let cylinders fall or have things fall on them.
- Do not lift a cylinder by its cap unless using hand trucks so designed.
- Use carts or other material handling equipment to move cylinders. Use ropes and chains to move a cylinder only if the cylinder has special lugs to accommodate this.
- Keep cylinders secured and upright. (But never secure cylinders to conduit carrying electrical wiring.)
- When transporting compressed gas cylinders, be sure the vehicle is adequately equipped to haul

compressed gases safely.

- Know accident procedures.

8.0 Storage Procedures

The following activities are involved in safely storing compressed gases:

- Post areas where gases are present;
- Group gases;
- Separate combustibles;
- Avoid corrosives or areas where container damage can occur;
- Position containers properly; and
- Use indoor and outdoor storage appropriately.

The University follows the safe storage procedures found in the CGA pamphlet series, including the P-1-1991 pamphlet. The University's storage procedures for compressed gases include the following:

- Store cylinders upright.
- When a cylinder is in storage, keep the steel protective cap screwed on. This step reduces the chance that a blow to the valve will allow gas to escape.
- Group cylinders by types of gas.
- Store full and empty cylinders apart.
- Store gases so that old stock is removed and used first.
- To keep cylinders from falling over, secure them with chains or cables.
- Store compressed gas containers in dry, well-ventilated areas away from exits and stairways. If storing compressed gas cylinders outside, store containers off the ground and out of extremely hot or cold environments.
- Do not store compressed gas containers in high pedestrian and vehicle traffic areas. (Containers are more likely to be damaged there.)
- Store oxygen cylinders at least 20 feet from flammables or combustibles or separate them by a 5-foot, fire-resistant barrier.
- Keep oil and grease away from oxygen cylinders, valves and hoses.
- If your hands, gloves or clothing are oily, do not handle oxygen cylinders.
- Make sure fire extinguishers near the storage area are appropriate for gases stored there.

9.0 Usage Procedures

Safe use of compressed gases involves the following activities:

- Properly handle leaking containers;
- Prevent abuse;
- Identify contents;
- Properly use container and valve caps and plugs; and
- Return empty containers.

The University follows the safe usage procedures found in the CGA pamphlet series, including the P-1-1991 pamphlet. The University's procedures for using compressed gases include the following:

- Remove any leaking containers to a well-ventilated area and post a warning of the hazard.
- Shut a leaking valve and tighten the valve gland or nut. Then try opening the valve; if it still leaks, close it and tag the container unserviceable.
- Make sure labels are legible before using containers; otherwise, return the containers to the supplier.
- Do not misuse containers (i.e., using them for support); only use them as they were intended.
- Keep containers away from fire, sparks, and electricity.
- Do not smoke or allow others to smoke in the vicinity of flammable compressed gas containers.
- Do not subject containers to extreme heat or cold.
- Contact the manufacturer/supplier with questions about safe handling.
- Always keep removable caps and valve outlet caps/plugs on containers except when connecting to dispensing equipment.
- Do not use oxygen and compressed air interchangeably. They are not the same.
- Comply with American National Standard Institute (ANSI) Z49.1 when using or storing oxyfuel-gas containers for welding and cutting and other similar activities.
- When empty, close and return cylinders. Empty cylinders must be marked MT or Empty. Empty acetylene cylinders must be so labeled.
- Be sure valves are closed when not using the container and before returning containers. Properly label returning containers.
- Do not refill non-refillable containers once they are empty.

10.0 Compressed Gas Emergency Procedures

In an emergency, University personnel are instructed to call the University of New Haven Police Department at X7070 or 203.932.7070 and await further instructions.

11.0 Training Program

Each department manager/chair is responsible for assuring department personnel are who will handle, store or use a compressed gas are appropriately trained. The Associate Vice President for Public Safety & Administrative Services shall assure that department managers/department chairs are following this portion of the policy. Under no circumstances will an employee handle, store or use a compressed gas until he/she has successfully completed the University's compressed gas training program. This includes all new workers who will handle, store and use compressed gases, regardless of claimed previous experience. Individuals in the following departments will receive training:

- Facilities
- Science and Engineering Laboratories
- Shipping and Receiving as applicable

With the assistance of the University's Human Resource department, department managers/department chairs are responsible for identifying all new department members that require compressed gas training. The Associate Vice President for Public Safety & Administrative Services shall assure that department managers/department chairs are following this portion of the policy. In addition, department managers/department chairs are responsible for making arrangements with their staff to schedule the instruction for those department members previously identified in this policy as needing training. General training elements include the following:

- Compressed gases and equipment at the campus.
- Hazards of compressed gases and equipment at the campus.
- Personal protective equipment.
- Inspection procedures.
- Handling procedures.
- Storage procedures.
- Usage procedures.
- Gas-specific safety procedures.
- Compressed gas emergency procedures.

12.0 Recordkeeping

Associate Vice President for Public Safety & Administrative Services is responsible for maintaining records of individuals trained and certified for handling, storage and use of compressed gases and equipment. These records are kept in the Associate Vice President for Public Safety & Administrative Services office.