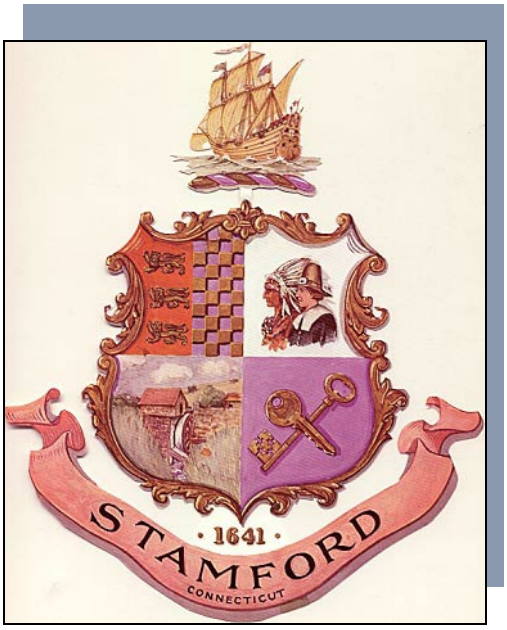
Caroline Simmons – Mayor *David Villalva - Risk Manager*



City of Stamford

Loss Control Policy & Procedures Manual

888 Washington Blvd
Stamford, CT 06904

Last Revision November 2022

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Introduction

1. **INTRODUCTION**
   The goal of this Risk Management Loss Control Manual is to provide guidelines and minimum standards to improve the safety, health, and welfare of the employees through management control of losses. The City of Stamford is self-insured for a substantial portion of their insurable values. This means that the incurred loss experience directly impacts the City as to their dollar contribution into the program. It has been necessary to increase contributions annually due to various changes in coverage's, services, increased medical costs, rising litigation, inflation, and increased frequency of claims. A critical ingredient necessary for the success of a risk management program is support, beginning at the top echelon of and working down through all levels of the City. Loss control must be considered equal to all operations and administrative functions.

2. SCOPE AND PURPOSE
The development and implementation of the City of Stamford Risk Management Health and Safety Loss Control Program and its assigned responsibilities are in accordance with the Occupational Safety and Health Act and other State and Federal regulations. The justification to these guidelines and requirements is essential for a Loss Control Program to complete its primary objective of reducing the frequency and severity of bodily injuries to employees, and the general public; damage to property; and liability losses. Inherent in the guidelines and requirements is the charge to provide a safe and healthful work environment in which to pursue. This Loss Control program adopts all required Federal, State, and local laws and regulations applicable. Your individual Department may require more detailed and specific programs then what are listed in this manual. This manual is a great tool for obtaining informational and training materials. Check with the City Safety Officer for more information.

3. OBJECTIVES
The objectives of the Health & Safety Loss Control Program are:

- REDUCE EMPLOYEE INJURIES
- REDUCE WORKER'S COMPENSATION LOSSES
- REDUCE PROPERTY LOSSES
- REDUCE SELF-INSURANCE FUNDING REQUIREMENTS
- REDUCE INSURED LOSSES AND RESULTANT INSURANCE PREMIUMS
- REDUCE THE IMPARCT OF LOSSES ON THE OPERATING BUDGET
- AVOID CIVIL AND CRIMINAL SANCTIONS RELATING TO REGULATION NON- COMPLIANCE

Risk Management

1) **INTRODUCTION:**
The Risk Management Policy encompasses the activities, policies and systems that combine to reduce the City's exposure to loss. The centralized risk management function monitors and manages the variety of insurance policies that provide specific loss protection. The risk management program is also concerned with reducing the occurrences of personal injury and property damage associated with accidents. The Risk Manager serves as the gatekeeper for the claims for and against the City. The Risk Management Program serves as a resource for information relating to risk, insurance, contracts and safety issues. Towards that end Risk Management supports and interacts with the activities and functions of the City's many departments and their Safety Committees.
The purpose of this document is to give citizens, City management and all City employees a better understanding of the City's risk program. One of the goals of risk management is to reduce or minimize the overall cost of risk. This document is intended to assist employees in the management of their individual areas of risk.

2) **MISSION:** The mission of Risk Management is to safeguard the City's property, financial and human resources from the adverse impact of loss.

3) **PHILOSOPHY**: The City of Stamford is committed to protecting the human, physical and financial resources of the City, as well as those of the general public whenever and wherever they are affected by City operations. The City recognizes the responsibility to manage its operations in such a way that these resources are conserved and utilized effectively. As part of that commitment the City strives to provide a safe work environment that protects employees and the public from injury. The success of the City's Risk Program depends on our ability to instill in each other an awareness and acceptance of his or her responsibility for creating a safe and healthy environment in which to live and work.

4) **INSURANCE COVERAGE OVERVIEW:** The City purchases a variety of insurance coverage to protect assets and exposures of operating the City. These insurance policies are reviewed annually by the Risk Manager. It is the belief and understanding that the City can self-insure specific exposures at a lower cost than it can purchase the liability insurance. With that said many risk incident costs are not covered or backed by insurance policies and can directly affect the citizen tax payers, individual departments and the employees of the City of Stamford.

5) **SAFETY POLICY STATEMENT**: At the City of Stamford, we are committed to a successful accident prevention program that includes the identification and correction of hazards and training of employees in safe work practices. We strive to comply with all safety and health standards and we expect the full cooperation of our employees so that we can be proud of our safety record.

The City of Stamford has developed a comprehensive Injury and Illness Prevention Program. The goal of this program is to minimize the frequency and severity of employee accidents and to comply with the laws and regulations that pertain to our operations. This program has been designed to eliminate physical hazards from the work environment and to train employees in safe work practices. Accident prevention is an integral part of any successful organization. We recognize that accidents not only cause physical and mental pain to employees, but are also costly in terms of dollars and lost production. Efficient accident prevention can be directly related to better application of taxpayer's money. Although the ultimate responsibility for the safety program lies with the City's managers and supervisors, the program cannot succeed without the cooperation of all our employees. Everyone must be one hundred percent safety conscious in everything he or she does while on the job. We are confident that with a sincere and concentrated effort from everyone, our safety goals can be achieved.

6) **RESPONSIBILITIES:** The Risk Manager and staff have been assigned the responsibility and authority to manage the Risk Management Program for the City of Stamford. We realize that the ultimate responsibility for safety and health in the workplace still rests with:

All Employees are responsible for the timely reporting of safety hazards in the workplace. Employees are also responsible for following general safe work practices, as well as the safe work practices specific to their jobs.

Line Supervisors are responsible for implementing and maintaining the Risk Management Program in their work areas and for answering employee's questions about the Program.

Department Heads have the ongoing responsibility to ensure departmental implementation of the Risk Management Program and insure the health and safety of our employees.

Safety Committees, every department or work unit will have a Safety Committee in place that consists of management and labor representatives. The Committees will track timely corrections of worksite hazards, receive and review reports of unsafe conditions, worksite inspections and accident or injury reports. The Committee will ensure steps or corrections are made to correct any hazards or risks.

7) **ENSURING COMPLIANCE:** Compliance with this program includes recognition of employees who follow safe and healthful work practices, training and retraining programs, disciplinary actions, or any other such means that ensures employee compliance with safe and healthful work practices. To this end the City will ensure compliance with this program by developing effective training programs and through recognizing employees who follow safe work practices. The City will provide employees with a safe and healthful place to work and employees are expected to comply with and follow "City" rules and regulations. Any employee who is discovered to be in possession of or under the influence of alcohol or controlled substances will be subject to the City's Substance Abuse Policy.

8) COMMUNICATING WITH EMPLOYEES:

Supervisors are responsible for communicating with all employees about safety and health issues in a form readily understandable by all employees. All employees are to be encouraged to communicate safety concerns to their supervisor or Safety Committee representative without fear of reprisal.

The Safety Committee is another resource for communication regarding health and safety issues for employees. Each employee has a representative on the committee that will inform him or her of hazard corrections and committee activities. Additionally, Safety Committee minutes and other safety-related items may be posted on facility bulletin boards. Employees will also be informed about safety matters by e-mail, voice mail, or by distribution of written memoranda. Supervisors are responsible for ensuring that employees are supplied access to hazard information pertinent to their work assignments. Information concerning the health and safety hazards of tasks performed by department staff is available from a number of sources. These sources include, but are not limited to, Risk Management, work area postings, equipment operating manuals, container labels and Safety Data Sheets (MSDS)

9) **IDENTIFYING UNSAFE CONDITIONS**:

The methods used to identify unsafe conditions and practices include several different techniques, including a review of pertinent safety orders, job safety analysis, self-inspection checklist, reviews of accident statistics and information. Two formal methods of hazard identification are included here:

a) JOB SAFETY ANALYSIS (JSA)

Supervisors may complete the analysis or request assistance from the City Safety & Training Officer. Using this method, the finished product can be used as an informational and training tool.

b) **PERIODIC SAFETY INSPECTIONS**:

Inspection frequency will depend on the type of inspection to be completed. Daily, weekly, monthly, and annual intervals. Supervisors can conduct the inspections themselves or assign Safety Committee members or other employees. The City Safety & Training Officer can also be asked to assist in these inspections.

i. Daily Inspections: High hazard or frequently changing operations or equipment (e.g. forklifts, vehicles, confined space equipment, trenching equipment) will be inspected daily and paperwork will be kept on the equipment or at the job site for review.

ii. Weekly Inspections: High hazard areas (e.g. flammable storage areas and construction sites) will be inspected weekly and paperwork will be kept on site for review.

iii. Monthly Inspections: Work areas (e.g. workshops, maintenance buildings, fleet services, grounds, parking lots) will be inspected monthly. All completed checklists will be forwarded to Risk Management Department for review.

10) CORRECTING HAZARDS:

Hazards discovered either as a result of a scheduled periodic inspection or during normal operations must be corrected by the supervisor in control of the work area, or by cooperation between the department in control of the work area and the supervisor of the employees working in that area. Supervisors of affected employees are expected

to correct unsafe conditions as quickly as possible after discovery of a hazard, based on the severity of the hazard.

Specific procedures that can be used to correct hazards include but are not limited to the following:

a) Tagging unsafe equipment "Do Not Use Until Repaired," and providing a list of alternatives for employees to use until the item is repaired.
b) Stopping unsafe work practices and providing retraining and documentation on proper procedures before work resumes.
c) Reinforcing and explaining the need for proper personal protective equipment and ensuring its availability.
d) Barricading areas that have chemical spills or other hazards and reporting the hazardous conditions to a supervisor.

Imminent Hazards, if the problem that poses an immediate danger of serious harm or bodily injury cannot be corrected immediately, the operation shall be stopped until the necessary changes or repairs can be made. Equipment may be physically locked or tagged out in an obvious way and employees, supervisors and managers should be notified of the situation.

If an imminent hazard exists, work in the area should cease, and the appropriate supervisor must be contacted immediately. If the hazard cannot be immediately corrected without endangering employees or property, all personnel need to be removed from the area except those qualified and necessary to correct the condition. These qualified individuals will be equipped with necessary safeguards before addressing the situation.

11) **INVESTIGATING INJURIES & ILLNESSES**:

a) Injury Reporting

Employees who are injured at work must report the injury immediately and no later than the end of their shift to their supervisor. If immediate medical treatment beyond first aid (e.g., loss of consciousness, serious bleeding, broken bones or suspected spinal injuries) is needed, call 911. The injured party will be taken to the appropriate care facility or hospital. If non-emergency medical treatment for work-related injuries or illnesses is needed escort or direct the employee to go to Concentra Urgent Care, AFC Urgent Care or Greenwich Occupation and Health.

The supervisor of the injured employee must ensure that the "Personnel Injury Report" is filled out by accessing it on Risk Management page on city INTRANET.

If the injured employee sees a physician, the City shall obtain a medical release form before allowing the employee to return to work. The health care provider may stipulate work tasks that must be avoided or work conditions that must be altered before the employee resumes his or her full duties.

Refer to the City's Worker's Compensation Claims Procedures for more detailed information at the end of this section.

b) Injury Investigation

The employee's supervisor is responsible for performing an investigation to determine and correct the cause(s) of the incident. This form should be completed within 24 hours of the occurrence. Specific procedures to be used to investigate workplace accidents and hazardous substance exposures include:

i. Interviewing injured personnel
ii. Interview all witnesses
iii. Examining the injured employee's workstation for causative factors
iv. Reviewing established procedures to ensure they are adequate and were followed
v. Reviewing training records of affected employee(s)
vi. Determining all contributing causes to the accident [equipment, material, people]
vii. Taking corrective actions to prevent the accident/exposure from reoccurring
viii. Recording all findings and actions taken

The supervisor's findings and corrective actions should be documented and presented to the Safety Committee using the "Supervisor's Action Taken Section". If the supervisor is unable to determine the cause(s) and appropriate corrective actions, other resources should be sought. Available resources include the Safety Committee, City Safety & Training Officer and Risk Manager.

The Safety Committee will review each accident or injury to ensure that all corrective actions are completed. Corrective actions that are not implemented in a reasonable period of time will be brought to the attention of the Risk Manager or City Safety & Training Officer by the Safety Committee. The Risk Manager may deem it appropriate to elevate the issue.

12) EMPLOYEE HEALTH AND SAFETY TRAINING:

Employee safety training essential to an employee's job is provided at no cost to the employee and is conducted during the employee's normal working hours on City time. Safety training will be presented by a knowledgeable supervisor, qualified outside consultant, other department personnel, or by representatives from other relevant City departments. Regardless of the instructor, all safety training must be documented and forwarded to the City Safety & Training Officer.

Personnel hired after the initial training session will be oriented on this material as soon as possible by the staff of Risk Manager's department or appropriate supervisor. These individual-training sessions will be documented. This document must also be forwarded to City Safety Officer and the Human Resources for the employee's personnel file.

Training on Specific Hazards

Supervisors are required to be trained on the hazards to which the employees under their immediate control may be exposed. This training aids a supervisor in understanding and enforcing proper protective measures.

All supervisors must ensure that the personnel they supervise receive appropriate training on the specific hazards of work they perform, and the proper precautions for protection against those hazards. Training is particularly important for new employees

and whenever a new hazard is introduced into the workplace. Such hazards may include new equipment, hazardous materials, or procedures. Health and Safety training is also required when employees are given new job assignments on which they have not previously been trained and whenever a supervisor is made aware of a new or previously unrecognized hazard. The Risk Management Department has an extensive Safety video library. The City Safety & Training Officer can also be utilized to assist in training process.

An example of Safety training that should be covered:

i. Back care, body mechanics, and proper lifting techniques
ii. Bloodborne Pathogens
iii. Confined Space
iv. Defensive Driving
v. Emergency evacuation
vi. Fire safety
vii. Fire Extinguisher use
viii. Hazard Communications (HazCom)
ix. Office or Worksite safety including Ergonomics
x. Automatic External Defibrillator and Hands only CPR
xi. Personal Protective Equipment
xii. Proper Housekeeping
xiii. Respiratory protection
xiv. Work zone safety

Many others as needed

13) GENERAL SAFETY RULES:

For the protection and safety of all employees, The City has established the following rules designed to prevent accidents and injuries. Compliance with these rules is mandatory. The Human Resources Department will distribute a copy of the rules to new employees during the orientation session and this program will be posted on the employee net page for all to view. These are just general rules your individual departments may have specific policies and procedures that need to be reviewed and followed.

a) All accidents and injuries shall be reported to the supervisor at the time of their occurrence.
b) Machines or equipment shall not be operated until proper instructions on its operation have been received.
c) Make sure all safety attachments are in place and properly adjusted before operating any machine
d) Never repair or adjust any machine or equipment unless you are specifically authorized to do so by your supervisor.
e) Use proper lock out/tag out procedures when repairing or adjusting equipment.
f) Never start on any potentially hazardous job without being completely familiar with the safety techniques that apply to it. Check with your supervisor if in doubt.
g) Do not participate in horseplay, or tease or otherwise distract fellow workers. Do not run on City premises - always walk.
h) All spilled oil, grease, water and other liquids, shall be cleaned up immediately.
i) Any defective tool or equipment shall immediately be reported to supervision.
j) Personal protection equipment shall be worn when and where required.

k) Lifting is to be done only in the approved safe manner. Do not lift items that are too bulky or too heavy to be handled by one person. Ask for assistance
l) All work areas are to be kept in a clean and orderly condition.
m) Filing cabinets, desks, storage cabinets, and other storage devices should have drawers closed when not in use to prevent tripping hazards.
n) Do not place equipment and materials so as to block emergency exit routes, fireboxes, sprinkler shutoffs, machine or electrical control panels, or fire extinguishers.
o) Smoking is allowed only in authorized areas. Smoking is not allowed in city vehicles or in city buildings at any time.
p) Failure by an employee to comply with the safety rules is grounds for corrective discipline or termination.
q) Specific Department Safety Rules, when applicable, shall be posted in appropriate work areas.
r) Never take chances. If you're unsure, you're unsafe! Ask for help. Let good common sense be your guide.

14) DISCIPLINARY ACTION

The City of Stamford seeks to accomplish compliance through education, and high standards, rather than persuasive means. However, repeated violations of procedures and/or safe work practices by employees at all levels can and shall result in disciplinary action as appropriate to the situation. All disciplinary actions are coordinated and administered through the Human Resources Department.

The Risk Management Department is here to assist you. If you have any questions regarding City insurance policies, injuries or safety please contact us immediately.

City of Stamford and Board of Education
Workers' Compensation Claims Procedures

City / Board of Education Requirements:

1) City of Stamford managers and supervisors are to immediately report all incidents and claims in which employees of the City of Stamford allege a work-related injury to Risk Management. City Of Stamford Personnel Injury Report forms can be accessed through the Risk Management Department on the City of Stamford Intranet, www.staminet.org.

2) Unless there is an emergency, employees are required to seek medical care at one of the City of Stamford's workers' compensation network primary care providers. Primary Care Facilities are: A) Greenwich Occupational and Health services 2015 West Main St. Stamford CT 203-863-2880 B) Concentra Urgent Care 15 Commerce Road (203) 324-9100 and B) AFC Urgent Care Stamford CT 3000 Summer St. 203-969-2000. These providers are available between the hours of 8AM and 5PM (8PM) for AFC, Monday through Friday. Employees ***must*** advise the providers that the injury relates to a workers' compensation claim filed against the City of Stamford.

3) In case of a medical emergency, the employee may seek medical treatment at the nearest health care facility, including emergency rooms of hospitals.

4) Employees sustaining work-related injuries / illness on and after July 1, 1997 must treat with physicians and other health care providers who participate in the City of Stamford's mandatory preferred provider network ("PPN"). The PPN is updated annually, and is posted on the City of Stamford intranet in the Risk Management Department. Copies of the PPN are also provided to participating emergency and primary care facilities for referral for follow up care and treatment.

5) Medical payments are made directly to service providers. Employees, who sustain work-related injuries, will receive pharmacy coverage, which will enable them to obtain prescribed medications relating to their work-related injury.

6) Express Scripts is the pharmacy provider for all employees on workers' compensation. If you have any questions regarding Express Scripts please call or email member of Risk Management or PMA.

PMA's Responsibilities:

1) PMA will begin an investigation of the claim as soon as the City of Stamford Personnel Injury Report is received.

    a) Investigation of a work-related claim includes, among other things, the following:

        i) Three point contact within 24 hours with the injured employee, the supervisor and the health care facility or other health care provider with whom the employee is treating if the claim results in lost time. 2 points of contact with City if it is a medical only claim.

        ii) Obtaining medical and employer authorizations signed by the employee, which enables PMA to obtain medical reports and wage verification statements.

        iii) Written statements on lost time cases, when warranted, particularly for claims whose compensability is questionable.

        iv) Index Bureau inquiries (medical only and lost work cases) are made when claims are set up. For lost time cases, additional inquiries will be made at six month intervals for as long as disability continues.

        v) Risk Manager to be contacted by PMA for approval of surveillance when lost time from work exceeds 6 months – and earlier if warranted on a case by case basis.

        vi) Voluntary agreements will be issued on all lost time claims where disability exceeds thirty days.

        vii) PMA must communicate with City department contacts to expedite employee's return to work ("RTW"), including light duty / modified duty capacity.

2) Claim denials (Form 43) will be completed by PMA's adjuster and copies facsimiled to the City department where employee works and Risk Management.

3) 30C's may be filed with the City of Stamford's Risk Manager, who will in turn provide a copy to PMA. A 30C must be turned into the Town Clerks office in hand by Employee.

4) Investigation of lost time workers' compensation cases.

5) PMA will endeavor to notify the City department, which employs the worker and Payroll of the determination of the compensability of a claim by voucher or e-mail within ten (10) business days of receipt of report of workers' compensation claim.

Lost Time Claims

1) With the exception of the Police Department, City departments should charge sick time to employees until PMA makes a determination that the injury / illness is work-related and covered / ***is compensable*** under workers' compensation. For the Police Department there is a separate IOD policy which applies regarding IOD time/sick time charges.

   a) When a claim is determined by PMA to be covered / compensable under workers' compensation, the department should reverse sick time charge to "Pending Workers' Compensation". Supervisors / managers should check with the Payroll Department or Human Resources for proper procedure for reversing sick time charges.

   b) Most City employees are entitled to salary continuation benefits in coordination with workers' compensation. Managers and supervisors should review their labor contracts to verify time limitations of salary continuation benefits. Supervisors / managers should notify PMA and Payroll prior to expiration of salary continuation benefits so that PMA may assume direct payment of lost wages.[1]

2) Permanent Partial Payments ("PPD") will be made directly by PMA to employees.

3) Vouchers or e-mails from PMA should be reviewed carefully by the department to determine the status of compensability of a claim. If a workers' compensation claim is denied, the employee should be instructed to file a claim under the City's or BOE's group medical plan for his medical expenses and (continue to) be charged sick time from work because of his/her alleged work-related injury or illness.

4) All notices, vouchers, denials and other documents from PMA regarding workers' compensation claims will be forwarded by PMA to the department's workers' compensation coordinator for your department. Copies of these documents are to be forwarded to the Risk Management Department. Copies of all vouchers should be forwarded to the Payroll Department on the 10th floor of the Government Center.

5) Employees who incur intermittent lost time from work must obtain a physician's note verifying and documenting each episode of lost time. Employees must be seen by the treating physician for each period of lost time and must be medically taken out of work that particular time period by the treating physician. ***All employees must consult contemporaneously with their medical provider if they miss work due to a work related injury and they must obtain a contemporaneous out of work note. Network providers have been made aware of this policy and are to decline to provide an after the fact out of work note if/when asked by a Stamford employee.***

   a) Following are the steps in this process:

      i) Employee notifies supervisor at City of Stamford;
      ii) Supervisor notifies PMA adjuster;
      iii) Employee obtains treatment at in-network health provider, including one of the primary occupational health facilities or with treating physician who is a member

[1] Refer to Appendix I attached, which contains salary continuation limitations by labor union.

of the PMA physicians' network. If employee is unable to obtain healthcare with in-network health care provider, he / she should go to nearest health care facility, e.g., hospital;

iv) Employee obtains clearance note from healthcare provider confirming disability and forwards to supervisor;

v) Supervisor facsimiles or sends clearance note to PMA adjuster.

vi) No vouchers will be issued by PMA without clearance note from healthcare provider.

Claim Review

1) Risk Management will conduct monthly meetings with departments who need to resolve specific workers' compensation claims issues with PMA.

2) PMA will provide monthly reports to the City of Stamford, which contains status reports of pending workers' compensation lost time claims.

3) PMA will reserve each claim based on expected exposure, reassess the initial reserve estimate 60 days after receipt of a claim, and review reserves thereafter for appropriate adjustments. [Employees with access to the PMA database may review reserves and claim evaluations from PMA or outside defense counsel. Only employees of the City of Stamford, who sustain work-related injuries, shall receive any assistance from the workers' compensation coordinators.]

Legal Process

1) The law firm Attorney Williams will defend informal and formal hearings on behalf of the City of the Stamford.

2) Subrogation:

   a) PMA to place third party on notice within 30 days of accident after approval by the City's Risk Management and / or Legal Department.

3) Reductions of liens must be approved by Risk Management and Legal Department.

4) Writ summons and complaints are to be sent to City's Legal Department for lien recoveries at least 30 days in advance of expiration of Statute of Limitations.

5) PMA has no "stipulated" settlement authority and the adjuster and / or defense counsel must provide written file summary for all settlement requests to Risk Management.

6) PMA will file claims with the State of Connecticut's Second Injury Fund to recover amounts paid on behalf of the City of Stamford. Of particular interest are claims in which employees have concurrent wages / salaries.

1.1 Appendix I

1.2 Salary Continuation Benefits and Sick Leave

1. **Stamford Police Association** – Unlimited salary continuation, including shift differential, limited duty and heart and hypertension.
2. **IAFF Local #786 Stamford Fire Department** – Unlimited salary continuation, heart and hypertension, respiratory ailments and cancer, limited (light) duty.
3. **AFSCME Local #2657 (Supervisors) –** No salary continuation, light duty.
4. **AFSCME # 465 (Nurses) –** 90 days salary continuation, light duty.
5. **AFSCME #1303-273 (Hygienists)** – 90 days salary continuation, light duty.
6. **NECEU District 1199 (Smith House)** – 90 days salary continuation, light duty.
7. **Teamster's Local #145** – 45 days salary continuation, including shift differential, light duty.
8. **UAW Local # 2377** – 60 days salary continuation, modified/light duty.
9. **BOE Custodians Maintenance Employees Union** – 6 months salary continuation, modified/light duty.
10. **AFSCME Local 1303-191 (Attorneys)** – Unlimited salary continuation
11. **UE Local # 82 –** Salary continuation, minus workers' compensation benefits.
12. **Educational Assistants of Stamford Association –** 12 months salary continuation.
13. **Stamford Administrative Unit** – May supplement workers' compensation payments with accumulated sick time to bring to full pay.
14. **Stamford BOE Association (Security Workers & Community Liaison Employees** – 12 months salary continuation.
15. **Stamford Education Association** – Unlimited salary continuation.

1.3 Appendix II

Workers' Compensation Managed Care Program

2 Treatment Authorization Policy and Procedures

Employees are often referred to physical therapy as part of their recovery. When physical therapy or chiropractic care is the recommended treatment, the employee must select providers from the City of Stamford's workers' compensation provider network. The employee or his/her doctor may schedule the first visit for treatment and provide a referral slip to PMA. Network providers of physical therapy and chiropractic services are permitted to perform an initial evaluation and schedule two treatments prior to obtaining authorization from PMA. IT IS THE RESPONSIBILITY OF THE ***HEATH CARE (SERVICE) PROVIDER*** TO OBTAIN PRIOR AUTHORIZATION for additional treatments by calling PMA at (203) 679-3400 and speaking with the adjuster administering the relevant claim.

Additional treatment procedures that require prior authorizations include, but are not limited to the following:

- Arthroscopic procedures
- Pain Management Programs
- Diagnostic Imaging
- Functional Capacity Examinations
- Home Health Care
- Injection Therapy
- Psychiatric Therapy
- Work Conditioning/Hardening Programs
- Hospital Admissions

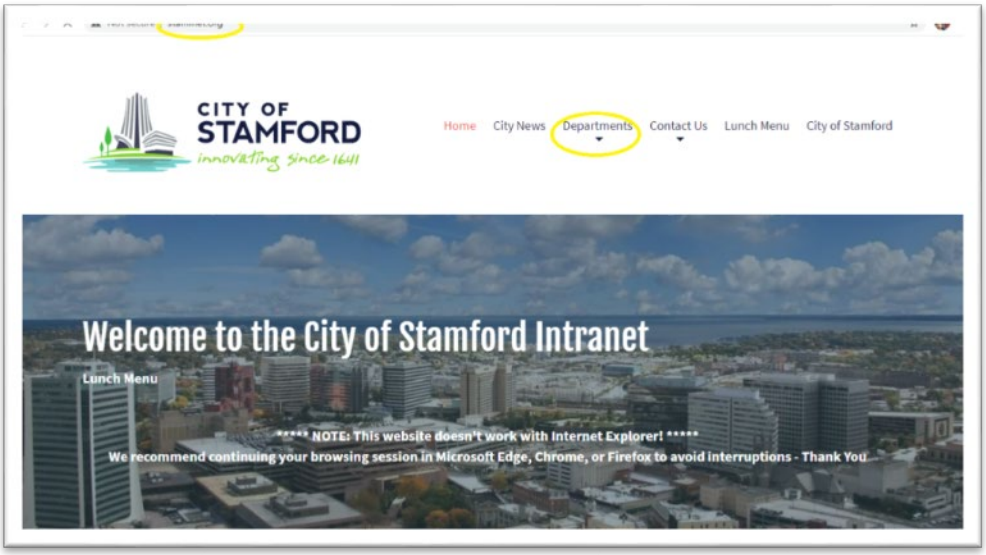
Injury Reporting Directions ALL City and BOE

1. Injury MUST be reported to Supervisor/Admin/Foreman.

2. Supervisor/Admin/Foreman MUST fill out injury report online under below website. You MUST have updated Chrome, Microsoft Edge, or Firefox web browser for access to the injury report. (*If you are not sure how to download an updated web browser, please contact Help Desk @ 203-977-4396*) or HelpDesk@StamfordCT.gov

   FAILURE TO SUBMIT A REPORT, OR FAILURE TO SUBMIT A REPORT IN A TIMELY FASHION AFTER THE INJURY MAY RESULT IN DELAYS IN APPROVAL OF THE CLAIM AND PAYMENT OF ANY EXISTING MEDICAL BILLS.

3. Go to city intranet. Website - http://staminet.org/ place mouse over departments (circled in yellow) and scroll down to Risk Management. Select Risk Management.



a) Once you select Risk Management, this screen appears. Select Personnel Injury Report Form, (circled in yellow below) under Resource Links:

b) Click on next after accessing the injury report.

c) Fill out the injury form in its entirety. NOTHING CAN BE LEFT BLANK.

d) Print the form by selecting the print icon , and submit the injury report by clicking the "Submit & Sign" button.

e) For more information on all workers' comp, medical care policy, adjusters please go to next page.

If the employee would like to be seen by a doctor's office, they may go to one of the following locations listed below.

First Treatment Centers

- **For work injuries, employees MUST treat in-network.**

- Employees have 3 options for First Treatment Centers: (IF EMERGENCY PLEASE SEE BELOW IN RED)

  Greenwich Hospital Occupational Health Service
  260 Long Ridge Road, Stamford, CT 06902
  (203) 863-3483
  M-F 8am-5pm.

  Concentra
  15 Commerce Rd. 3rd Floor, Stamford, CT 06902
  (203) 324-9100
  M – F 8am – 5pm

  AFC Urgent Care. (Formerly Doctors Express)
  3000 Summer St. Stamford Ct. 06905
  (203) 969-2000
  M-F 8am-6pm Sat 9am-1pm.

- **In true MEDICAL EMERGENCIES, please send the employee by ambulance to the nearest EMERGENCY ROOM.**

City of Stamford Assistance

David Villalva –Risk Manager (203) 977 4317 *DVillalva@stamfordct.gov*

Matthew Stuhlman – Safety Officer (203) 977 4908 *Mstuhlman@stamfordct.gov*

Nancy Barton – Safety Officer (203) 977-4129 *Nbarton@stamfordct.gov*

Sandy Jenkins – Office Support Specialist (203)977-4928 *Sjenkins@stamfordct.gov*

If you or the injured employee has any further questions related to workers' compensation, please contact one of our Safety Officers, or you may contact your Adjuster directly.

SAFETY PROGRAM RESPONSIBILITY

1) **City Risk Manager & City Safety & Training Officer**
The City Risk Manager and/or the City Safety Officer is responsible for the administration of the Health & Safety Loss Control Program, and will take action deemed necessary to produce a positive reduction in accidents and their causes.
The City Risk Manager and or the City Safety & Training Officer will:
   a) Provide technical guidance and direction to personnel in all levels of management in the implementation of the safety program.
   b) Consult with departments and department's personnel on design and use of equipment and safety standards.
   c) Inspect (with assistance of department personnel) the facilities to detect existing or potential accident and health hazards, and recommend corrective or preventative measures where indicated.
   d) Participate in the investigation of accidents and injuries.
   e) Provide to management accident data for use in promoting accident and property damage prevention programs.
   f) Evaluate and assist in recommending adequate protective clothing and equipment for use by personnel requiring such items.
   g) Attend the monthly/quarterly Safety Committee meeting.
   h) Conduct annual inspections (with assistance of the department personnel) of each department to evaluate compliance with the safety program.
   i) Stop hazardous jobs when safety precautions are not being enforced.
   j) Distribute current publications and reports to all departments promoting the prevention of injuries, occupational disease, vehicular collisions, liabilities, and damage to equipment and materials.
   k) Work with department heads and establish annual safety goals.
   l) With the assistance of department personnel, will track department activities and safety results on an annual basis.
   m) Work with department personnel to establish and maintain safety program's meeting the department's needs and requirements.
   n) Stay current on laws and regulations and attend continuing education courses in safety, as necessary to apply defined functions.

3) **Department Heads**
Each Department Head has the full authority and responsibility for maintaining safe and healthful working conditions whether it is in the field or in the office. Although personnel exposure to hazards varies widely from department to department, it is expected that an unrelenting effort will be directed toward controlling injuries, liabilities, and waste of material.
Each Department Head will:
   a) Provide leadership and positive direction essential in maintaining firm Health and Safety policies as a prime consideration in all operations.
   b) Hold each manager under their supervision fully accountable for an explanation of the preventable injuries that occur to his/her employees.
   c) Call upon the Safety Officer for any assistance needed in promoting an effective Health and Safety program.

d) Ensure that all safety policies and procedures are complied with by all personnel at all times under his/her direction.
e) Demonstrate a personal concern in departmental losses for each worker who has been involved in a job related injury or a vehicular collision.
f) Ensure that personnel are trained and fully understand safe work procedures and existing policies.
g) Ensure that all employees, new and old, are trained and retrained, when necessary, in safety procedures for each job they must perform.
h) Ensure all employees are instructed and understand the use and need for protective equipment.
i) Ensure all necessary safety equipment and protective devices are available and used properly.
j) Encourage employees to make safety suggestions and written comments, and follow-up as appropriate.
k) Ensure that all accidents are thoroughly investigated, recorded, and promptly reported.
l) Ensure prompt corrective action is taken whenever hazards are recognized or unsafe acts are observed.
m) Ensure that all equipment, materials, and work conditions are satisfactory from an accident prevention stand point.
n) Establish annual departmental safety goals with the department and City Safety Officer and work with managers and supervisors under his/her supervision in achieving these goals.
o) Set an example of safe working habits, and follow all safety regulations.

3) **Supervisor Personnel**

A supervisor has full responsibility for the safe actions of his/her employees in the safe performance of the jobs within his/her operating area. The supervisor must enforce the provisions of this safety program.

Each supervisor will:

a) Assume full responsibility for safe working areas for his/her employees while they are under his/her supervision.
b) Be fully accountable for injuries regarding his/her employees.
c) Ensure that all safety policies and regulations are fully implemented.
d) Take the initiative in recommending corrections of deficiencies noted in the facilities, work procedures, employee job knowledge, or attitudes that adversely effect loss control activities.
e) Enforce all work policies and procedures, being impartial, and take disciplinary action against those who fail to conform and give prompt recognition to those who perform well.
f) Ensure that each employee is fully trained for the job that he/she is assigned to and that he/she is familiar with published work rules.
g) Inspect all work areas, tools, and equipment on a regular basis. Correct unsafe acts and unsafe conditions immediately when noted.
h) Ensure that untrained employees are not permitted to operate any mechanical or electrical equipment involved in operations.

i) Instruct all employees on reporting all accidents and the necessity of receiving first aid treatment.
j) Conduct thorough accident investigations of all accidents, injuries, and liabilities regarding his/her employees. Offer corrective suggestions and follow-up on all corrections and changes made.
k) Ensure thorough employee orientations for all new employees and document all orientations.
l) Set an example of safe working habits and follow all safety regulations.

3) **Employee**

Employees are required, as a condition of employment, to exercise due care in the course of their work to prevent injury to themselves and to their fellow workers. Each employee will:

a) Report all unsafe conditions and or acts that they observe to their supervisor.
b) Be individually responsible to keep themselves, fellow employees, equipment and the general public free from incident.
c) Keep work areas clean and orderly at all times.
d) Follow prescribed procedures during an emergency.
e) Report all accidents immediately to their supervisor.
f) Be certain that they understand instructions completely before starting work.
g) Learn to lift and handle materials properly.
h) Avoid engaging in any horseplay and avoid distracting others.
i) Review the educational materials posted on bulletin boards or distributed in their work areas.
j) Know how and where needed medical help may be obtained.
k) Refrain from damaging or destroying any warning or safety device or interfering in any way with another employee's use of them.
l) Operate only machines and equipment authorized by their supervisor.
m) Use only the prescribed equipment for the job and handle it properly.
n) Wear required protective equipment when performing their job duties. Dress safely and sensibly.
o) Set an example of safe working habits and follow all safety regulations.

FLEET SAFETY PROGRAM

1) **SCOPE**
These guidelines apply to all locations in the City/Board of Education of Stamford and to City employees authorized to operate City vehicles.

2) **PURPOSE**
This standard establishes uniform procedures for the safe operation of City vehicles by authorized vehicle operators. Government sector vehicles are easily identified as such and thus constitute a traveling billboard seen by many citizens. Relationships with other motorists and pedestrians while operating these vehicles control an important influence on good or bad relations with the public. With courteous, considerate driving habits good public relations can be developed. The following procedures are established to help make our employees safe and defensive drivers.

3) **AUTHORIZATION GUIDELINES**
Only City employees are authorized to operate City vehicles. Volunteer employees are considered employees of the City and may operate City vehicles when their duties require travel, if such travel is under the approval or direction of the Department Head. Intentional abuse or reckless and/or negligent operation of any City vehicle may result in the suspension of that employee's vehicle privileges and is grounds for further disciplinary action.

4) **RESPONSIBILITIES**
   a) Management
      a) Implement this program in their areas of responsibility
      b) Establish measurement objectives to ensure compliance with the program.
      c) Provide assistance and the resources necessary to implement and maintain the program.
   b) Supervisors
      a) Investigate and report all accident involving a motor vehicle used in performing City business and forward all accident reports to the City Risk Manager's Office.
      b) Insure effective application of this program by seeing that the following programs are carried out;
         (1) Regular equipment safety inspections are completed.
         (2) Appropriate driver selection procedures are followed.
         (3) Insure that the employees receive vehicle and equipment training and instructions prior to the assignment of duties.
         (4) Enforce all disciplinary guidelines for at fault accident, safety rules, regulations and standards.
         (5) Insure proper maintenance of City vehicles.
   c) Risk Management Department
      a) Review and log all vehicle incident reports and investigations.
      b) Oversee that quality and accuracy is maintained and proper disciplinary and corrective action has been taken.

c) Revise and distribute changes to the Fleet Safety Program.

d) Fleet Maintenance Supervisor
   a) Insure that all vehicles and equipment are maintained to safety standards.
   b) Report and document all signs of vehicle or equipment abuse or miss-use to the Department Heads, Supervisors and the Risk Manager's Office.

e) Human Resources Department
   a) Insure all employees who are hired as drivers, vehicle and equipment maintenance or persons whose job function falls under the Federal Motor Carriers Safety Administration's (DOT) safety sensitive positions have their driving records examined at the time of hire and annually as per the regulations.
   b) Insure FMCSA DOT new hires, just cause and random drug testing protocols are in place.

5) **RESPONSIBILITY OF CITY/BOE DRIVERS**

Regardless of the employee classification and whether or not a city employee drives a city-owned vehicle eight hours a day or just occasionally, employees are responsible for the proper care and operation of that vehicle. Every employee who operates a city owned vehicle is responsible for obeying all traffic laws and for compliance with the rules set forth in this section.

6) **OPERATOR'S LICENSE**

A current operator's license must be in an employee's possession at all times while operating a city-owned vehicle. In the case of commercially rated vehicles, the proper license (CDL) for weight and class must be valid and in the possession of the driver.

An employee whose position requires them to operate motor vehicles and whose driving privileges are suspended or revoked by a court of law must report this fact to their immediate supervisor within the next business day. Failure to report the loss, suspension, or change in license status will result in disciplinary action.

7) **PRE-OPERATION**

Before operation, the driver will check the vehicle for any damage to the body or interior that may have occurred since the last period of operation. Particular attention should be given the following items, parts and accessories to determine that they are in satisfactory conditions and good working order:

a) Brakes, including parking brake;
b) Headlights, rear lights, brake lights, turn signals;
c) Horn and windshield wipers;
d) Steering mechanism and fluid level
e) Mirrors – side view and rear;
f) Tires;
g) Motor Oil and Transmission Fluid Levels;
h) Seat belts;
i) Clutch Travel (if applicable);
j) Emergency Equipment (i.e. flares cones, fire extinguisher, etc).

A Vehicle Safety Checklist (Attachment Vehicle Inspection Form, found at the end of this section) will be completed to document this activity. The driver is also responsible for assuring that the proper oil level is maintained and that proper fluids are added whenever needed. These items should be checked each time fuel is added to the tank.

Any defects noted, which would affect safe operation of the vehicle, will be promptly reported to the driver's supervisor. No employee shall be asked to operate or shall operate a city-owned vehicle that is unsafe for off-road or on-road operations, or does not meet the minimum standards of State Statutes.

8) **GENERAL GUIDELINES**

a) Use of City Vehicles

a) City-owned vehicles are to be used for official city business only. They will not be used by employees for personal reasons, except as provided for under the Vehicle Assignment Policy.

b) All persons driving a City owned vehicle/equipment must be at least 18 years old.

c) Cell phones and or other hand held devices are not permitted to be used while operating a City vehicle on the road way.

(1) Pull off to side of the roadway or use hands free devices.

d) Out of Town Travel/Meeting Attendance

(1) All use of city vehicles for out of town or late evening trips must be approved by the department head or division head responsible for the vehicle involved. The department head or division head should keep a dated record of exceptional uses, including justification of each use.

e) Transporting Persons in City Vehicles

(1) Professional associates and private citizens will not be transported in city vehicles unless such persons are being transported on official business, law enforcement matters, or as approved by the department head. Persons transported as such should have the same destination as the city employee and such use should not require other city employees with the same destination to drive additional vehicles. Family members (unless employed by the city/BOE) may not be transported in a city vehicle, except as authorized by the city manager.

f) Transporting Equipment or Property

(1) When items of equipment, property, supplies, etc. are being transported, the driver will assure that all items are properly secured or tied in place to prevent them from shifting or falling from the vehicle.

g) Riding on Fenders, Hoods or Running Boards

(1) No person shall be allowed to ride on running boards, fenders, hoods, tailgates, dump beds, flat beds or roof racks of vehicles, when the vehicle is operating.

h) Obstruction to Driver's View
   (1) No driver shall drive any vehicle when it is so loaded that the load obstructs their view ahead, to the right or to the side, or interferes with their control of the vehicle. No more passengers will right in a seat location that is not equipped with a seat beat.

i) Striking Unattended Vehicles
   (1) If a moving city vehicle strikes a vehicle standing or unattended or other property, the driver shall immediately stop and endeavor to locate the owner. If the driver is unable to do so, the driver shall call 9-1-1 in order for a police report to be completed.

j) Flags on Projected Loads
   (1) Any vehicle having a load, which extends more than four (4) feet beyond the rear, shall have the end of the load marked with a red flag which shall be at least twelve (12) inch square.

k) Coupling Devices
   (1) A driver whose vehicle is towing a trailer, dolly, or other equipment will assure that the trailer hitch is securely latched and that safety chains are properly attached.

l) Alcoholic Beverages or Narcotic Drugs
   (1) No person shall drive or be required or permitted to drive a city-owned vehicle while in the possession of, or under the influence of, any alcoholic beverage or non-prescription controlled substance. Employees who take prescribed medication or over-the-counter medications that will affect their driving abilities will report the use of that medication to their immediate supervisor.

m) Operations in Public Way
   (1) Whenever work requirements make it necessary for a city-owned vehicle to block or obstruct traffic, the driver will place warning devices and/or traffic cones to warn oncoming motorists of the obstruction. Warning devices/cones will be placed far enough from the standing vehicle to give oncoming motorists adequate time in which to stop safely. Distance should be determined by:
      (a) Street and weather conditions;
      (b) Speed limit in area;
      (c) Whether the vehicle is standing on a straight or curved roadway;
      (d) Vehicles so equipped will use revolving yellow lights or blinkers as additional warning devices.

n) Vehicle Parking
   (1) The driver of city vehicles must visually check the vehicle before it is entered and moved. By inspecting around the vehicle, the driver will be aware of all hazards and will take the necessary action to prevent an accident.
   (2) Vehicles are not to park in "No Parking" zones except in an emergency situation or in required performance of official duties. At those

times a vehicle is parked in a "No Parking Zone", emergency blinkers will be on.

(3) No vehicle is to be left unattended with ignition key left in the ignition.

(4) All vehicles will be locked when not in use.

(5) Except when working conditions require otherwise, parked vehicles must have motor stopped, emergency brakes set, and left in gear or park for automatic transmissions.

o) Use of Safety Restraints

(1) The state law and city policy requires that all city vehicles must be equipped with seat belts and all occupants of city vehicles must properly wear seat belts.

p) Backing of Vehicles

(1) Whenever possible, the driver will position his/her vehicle so as to avoid the necessity of backing later. Before entering the vehicle, the driver shall check the rear clearance of the vehicle. The driver shall not back the vehicle unless such movement can be made with reasonable safety and without interfering with other traffic.

(2) The driver of a large truck or similar large vehicle with an obstructed view to the rear shall not back such vehicle unless an observer signals that it is safe to do so.

(3) Before and during backing movements, the driver will: (1) check blind zones for objects not visible in rear-view mirrors; (2) watch both sides for proper clearance; and (3) back very slowly.

q) Rental Cars

(1) When it is necessary for a city employee to use a rental car on a short-term basis, such as during out-of-town travel for business purposes, the city's automobile liability and physical damage insurance coverage will be applicable. If the employee also uses the rented automobile for personal purposes, the employee should review his/her personal automobile insurance to confirm coverage for short-term or incidental rental. In the absence of such personal coverage, the employee should consider the purchase of insurance through the rental agreement.

(2) Special equipment such as tractors, Hi-Lifts, graders, plows, cranes, or any unit which has special devices added for specific types of work will require formal instructions prior to use by a driver. This special training will include the following:

(a) Explanation and demonstration of all the equipment’s control devices.

(b) Explanation and demonstration of all the safety equipment.

(c) Knowledge of maintenance items such as fuel, water, oil, or other minimum operating needs of the unit.

(d) Demonstration of operation.

(e) New driver operation under supervision with testing.

(f) Instruction in driving to and from, or on and off a trailer, parking procedures and method for securing. A report of this training is to be submitted to the Risk Management Department.

(g) Passengers will ride only in seats so designed for passengers and special equipment.

(h) Operators will always look around and have a person guiding them when backing.

(i) Construction-type equipment will travel at less than 20 miles an hour without exception. This equipment will use the right lane except when a left turn is required. Right-of-way will be given to all other motor vehicles. Headlights will be on at all times when driving. Triangular orange colored slow moving vehicle signs will be displayed on the rear of the vehicle.

(j) Use of special equipment without training on record and authorization will result in disciplinary action.

9) **ACCIDENT CONTROL**

a) Vehicular collisions are potentially the most costly losses that can incur when one considers the cost of property damage, bodily injury, fatalities, and liability lawsuits. Unless perfect driving is the rule, the cost of insurance can amount to proportions that will adversely affect every department in efforts to accomplish its mission and maintain good public relations.

b) Responsibilities

a) Supervisors having drivers working for them will assume the following responsibilities:

(1) Full responsibility for the driving record of their employees.

(2) Establish a firm requirement for personnel to fully adhere to established policies.

(3) Enforce firm policies on disciplinary actions to be taken against employees who show a disregard for good driving practices and ensure that it is applied consistently.

(4) Insist that all assigned vehicles are maintained and inspected for safe operations.

(5) Perform a periodic inspection of assigned vehicles for safety discrepancies, malfunction, signs of abuse, unreported damage, and cleanliness and have these repairs made as soon as possible.

(6) Review each vehicle collision and unsafe driving report with the employee and emphasize management's intolerance of irresponsibility behind the wheel.

(7) Enforce the wearing of seat belts for all drivers and their passengers.

(8) Ensure that only authorized personnel are allowed to operate all vehicles.

c) Employee Responsibility

a) Employees are required to follow all defensive driving practices at all times.

b) Maintain a current valid and proper Drivers License and report any change in license status.

c) Conduct a daily check of their vehicle for operation of lights, directional signals, brakes and brake fluid, motor oil, windshield wipers and washers, tires, power steering, hydraulic systems, clutch, seat belts, etc.

(1) Report all accidents immediately.

(2) Follow all laws and safe driving rules established.

10) **PROCEDURES FOR REPORTING ACCIDENTS/BREAKDOWNS OF VEHICLES**

a) In the event that an operator of a vehicle is involved in a collision, regardless of the severity, the law enforcement agency must be called to the scene and required to prepare a report. The operator of the vehicle involved in the accident should provide all the necessary identification and insurance information to the other party involved.

b) If the vehicle is disabled as the result of a collision, or if a vehicle breaks down and becomes inoperable, the responsible department head/supervisor is to be notified.

c) Operators of vehicles should be sure that whenever a serious incident occurs, whether a break down, traffic collision, or vandalism, the department head/supervisor is to be notified immediately.

d) Any time a City vehicle is involved in an accident the Vehicle Maintenance Department is to be notified. Vehicle Maintenance will coordinate all repairs to City vehicles and provide the Risk Manager with costs documentation as a result of any vehicle damaged in an accident. This ensures the tracking of costs and cost information necessary to submit claims for any reimbursements due the City.

11) **RISK MANAGEMENT PROCEDURE**

a) All accidents must be reported in writing to Risk Management. The City of Stamford Accident Report and Police Report are to be included in reporting of these accidents to Risk Management.

b) Please ensure that the activity code, telephone number and contact person of the City department to which the damaged vehicle is assigned are included in all documents and correspondence provide to Risk Management.

12) **ACCIDENT REVIEW PROCEDURES**

Because of the liability associated with motor vehicle accidents, city drivers must understand the consequences for involvement in accidents. Every motor vehicle accident involving a city driver while operating a city-owned or leased vehicle will be reviewed by the City Risk Manager's Office including: a review of the law enforcement officer's traffic accident investigation report, possible interviews with the driver(s) and witnesses, if any, the supervisor's accident investigation report, and possibly visit to the accident site.

a) If a vehicle is involved in an accident, the driver's driving privileges may be restricted at the supervisor's discretion, pending investigation.

13) **DISCIPLANARY GUIDELINES FOR AT FAULT ACCIDENTS**

a) First at fault accident will result in a verbal warning and at the discretion of the supervisor, manager, foreman or Risk Manager, refresher driver's training will be required.
b) Second at fault accident within three (3) years will result in a written disciplinary notice and the driver's driving privileges suspended for three (3) months.
c) Third at fault accident within three (3) years will result in a written disciplinary notice, a one-day employment suspension and the driver's driving privileges will be suspended for six (6) months
d) Fourth at fault accident within three (3) year will result in the driver being termination from employment.
e) All employees involved in a motor vehicle accident with a city vehicle and are found at fault will have to submit to a drug and alcohol screening. This also applies to driver's who have licenses that fall under DOT standards. If the accident does not meet the requirements listed under DOT for drug and alcohol testing, the driver will still be tested under this policy but the results will not be recorded as a DOT drug and alcohol test.

14) **SAFETY EQUIPMENT IN VEHICLES**

Each service vehicle of the City of Stamford shall carry the following safety equipment:

a) Class II reflective vest
b) Fire extinguisher
c) First aid kit
d) The driver of each service vehicle shall be responsible for checking the service vehicle to make sure that the items are on the vehicle.

15) **DRIVER SELECTION PROCEDURES**

The objective of this standard is to provide comprehensive guidance in the selection of qualified, dependable and safe drivers, in order to minimize accidents/injuries and the liability exposure to the city.

a) Pre-application Screening
    a) Major emphasis should be placed on finding out the applicant's previous experience while also observing the applicant's general demeanor and manner of answering questions.
    b) Applicant's not meeting minimum qualifications can be eliminated from further consideration at this time. For example:
        (1) Lack of an appropriate type driver's license classification (i.e., Class A or B, Commercial Driver License (CDL)).
        (2) Lack of experience in a specific vehicle type.
        (3) Excessive violations on driving record.

16) Driver Applicant's Past Record
    a) All of the applicant's past employers should be contacted, at least within the past three (3) years.
        (1) NOTE: Employment checks with previous employers may be made in writing, by telephone, or other appropriate means.

17) Driving Record

a) A check of an applicant's driving record will be conducted and all applicants must authorize the release of this information by signing the top half of the form, "REQUEST FOR CHECK OF DRIVING RECORD"

b) Information obtained from the MVR's should be cross-checked against the employment application to determine whether or not there are inconsistencies or whether the applicant should be dropped as a candidate.

c) All MVR's will be reviewed with notations on each MVR; the date of the review initials and comments. The comments would include requests to gather further information from the applicant or previous employers on the type of vehicle driven, the circumstances surrounding any incidents, and the disposition of any violations on the MVR.

d) Driver applicants will be automatically eliminated from consideration if the MVR reveals a DUI conviction or two (2) or more moving violation convictions within the past twelve (12) months. Furthermore, excessive speeding, moving violations, excessive points, etc., in a three (3) years period will also be scrutinized strictly and handled on a case by case basis.

e) An applicant must also certify that they are in possession of only one license, and produce a current CDL. A copy of the current driver's license should be made for the files.

APPENDICES

A – DAILY VEHICLE INSPECTION SHEET

B - VEHICLE / EQUIPMENT ASSIGNMENT AGREEMENT

C – APLLICATION ADDENDUM FOR EMPLOYMENT REQUIRING DRIVING

DAILY VEHICLE INSPECTION SHEET

Driver_____ **Date**_____

_____

Vehicle_____ Mileage_____

The items on this inspection sheet should be checked daily. Place an X by any item that needs attention. Place a check mark by the rest. Any discrepancies should detail on the bottom of this sheet.

____Ignition Key
____Fuel Key
____Check Radio (Two way check)
____Visual Inspection for Exterior Damage/Leaks under vehicle (page 2)
____Check inside Engine compartment for Leaks/loose items
____Oil Level
____Washer Fluid Level
____Coolant Level
____Power Steering Fluid Level
____Start Engine and check Transmission Fluid Level (Fluid should be hot)
____Check for Air Gauge
____Check Tires for wear and pressure **LF**_____LR_____RF_____RR_____
____Check Horn
____Check Heater/Defroster/AC
____Check Windshield Wipers/Washers
____Check High beams/Signal lights/4way flashes/Tail lights/Backup lights/Horn
____Check Interior lights
____Check Mirrors for damage and adjustments
____Check fuel level (**Should not be Less Than ½ Tank)**
____Check First Aide Kit on Board and full
____Check Fire Extinguisher on board/Gauge showing charged, sealed & pin
As you drive, continually check for any strange smells, sounds, vibrations, or anything that does not feel right.

*Form to be completed and turned in to Supervisor DAILY.

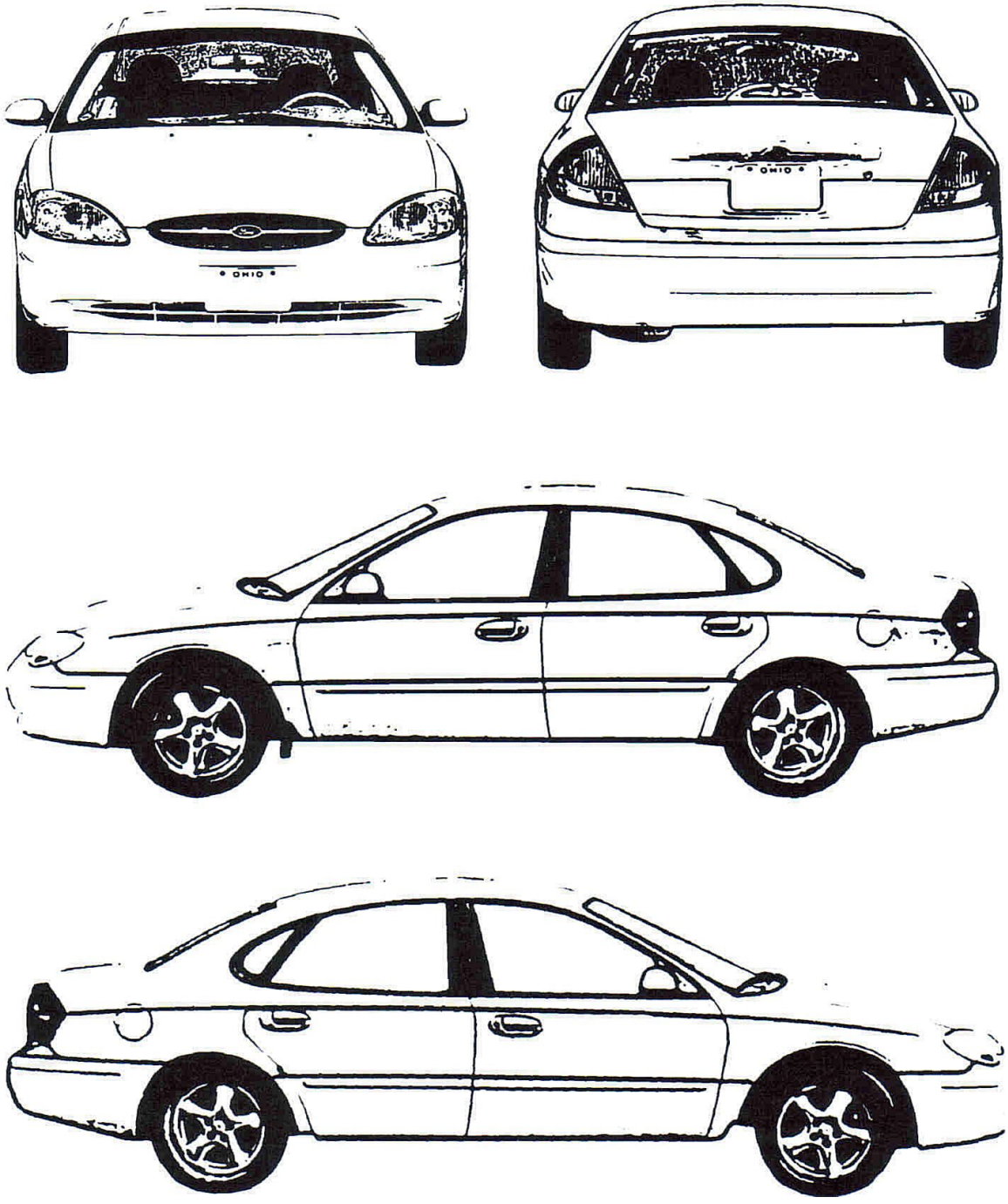
The following discrepancies were noted:_____

_____

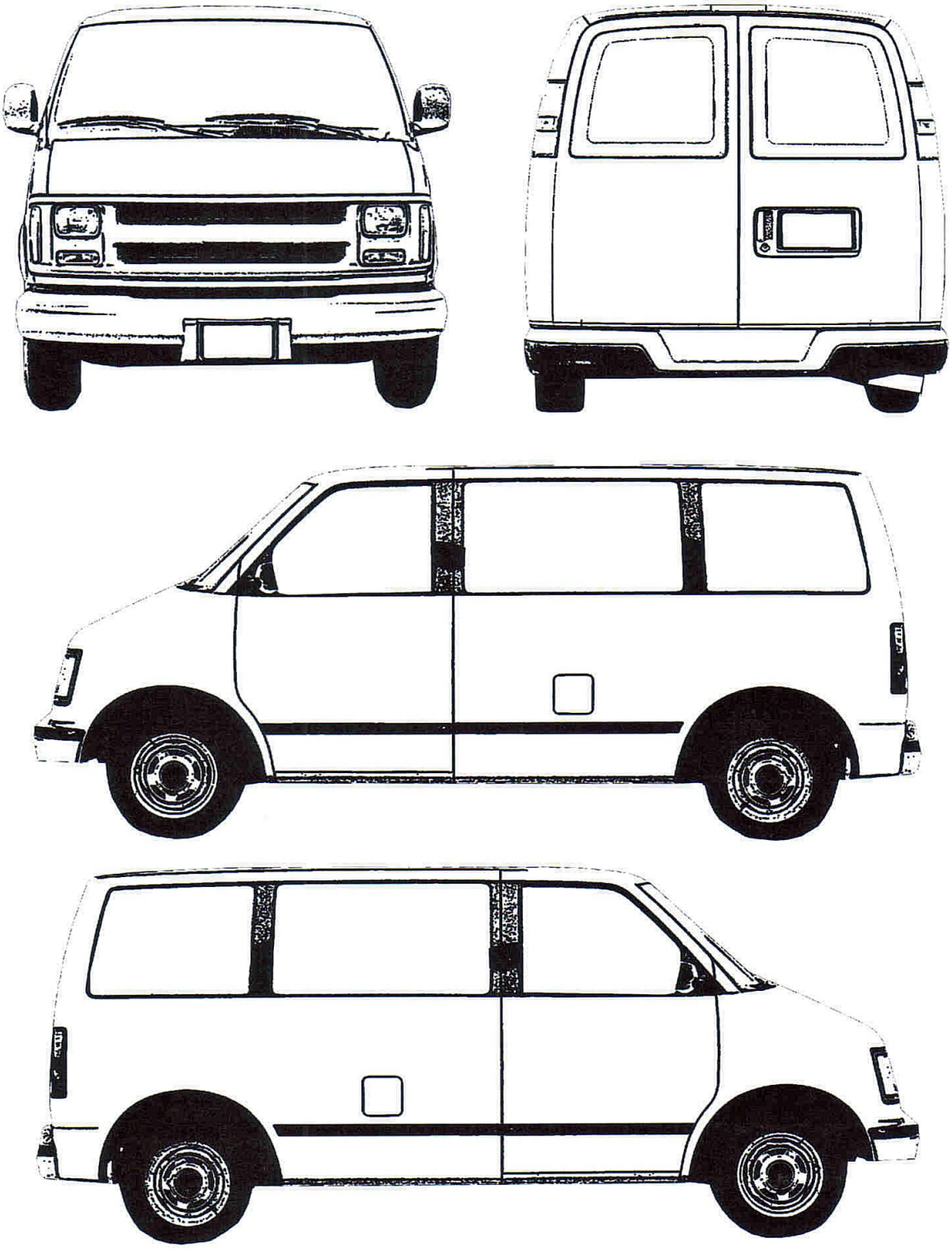
_____

Driver's Signature:_____

Please note if any body damage is present and unaccounted for below.



Please note if any body damage is present and unaccounted for below.



Caroline Simmons
Mayor

David Villalva
Risk Manager

CITY OF STAMFORD
Risk Management Department
888 Washington Boulevard
P.O. Box 10152
Stamford, CT 06904-2152

City of Stamford Fleet Safety Acknowledgment Form

I hereby acknowledge that I have received and read a copy of the City of Stamford Fleet Safety Program. I agree to comply with the policies and procedures contained in the program.

_____ _____
Driver's Signature Date

_____
Driver's Name (Print)

DEPARTMENT HEALTH AND SAFETY COMMITTEE'S

1) **Purpose**

The primary purpose of the Health and Safety Committee of each department will be to review and evaluate matters in Workers' Compensation injuries, motor vehicle accidents, and damage to public and private property. The Committee will determine the cause of accidents, injuries, and damages, and formulate suggestions to avoid such incidents. The Committee will review safety suggestions and problems which are related to safety such as those received from reports of unsafe acts and unsafe conditions. The committee shall be formed for every department, in some cases multiple departments in operations can form joint safety committees.

It must be understood that the Committee will discuss only those items related to safety.

2) **Safety Meetings**

Departments will be required to conduct safety meetings at a minimum of once a quarter. The meetings are to provide employees with up-to-date safety information. Supervisors will discuss various aspects of job safety and health as it pertains to the work to be performed. In addition to this, accidents that have occurred within the department during the previous month will be reviewed, and a discussion will follow with regard to corrective action that must be taken to prevent recurrence. Regularly scheduled training sessions or debriefings in which safety issues are discussed will suffice. Safety issues to be discussed will include:

a) Unsafe conditions and outstanding deficiencies noted in safety inspections.
b) Any accidents and or incidents that have occurred since the last meeting, including their causes and corrective actions taken.
c) Site audits that have taken place and the results.
d) The discussion of upcoming activity and safety issues to be addressed.
e) Monthly safety objective is to be reviewed.
f) An attendance log will be maintained to include the date, names of employees in attendance, topics discussed, and length of the meetings. Each employee will sign the attendance log and a copy of the log will be sent to the Safety Officer for record retention, and the original will remain with the department.

EMPLOYEE HEALTH & SAFETY TRAINING

Each employee who reports to work will be given a safety orientation as part of the general hiring practices prior to being allowed to actually go to work. During this orientation, our positive attitude toward working safely will be stressed, and the employee will be advised that safety is a condition of employment. The safety program will be explained and safety responsibilities will be clearly defined. Each supervisor conducting the orientation will complete the new employee checklist and maintain a copy of this checklist in the employee personnel file.

INSPECTIONS AND AUDITS

1) **Inspections by Federal or State Regulatory Agencies**
   If a member of a Federal or State regulatory agency (i.e. Conn-OSHA, EPA, etc.) arrives at your facility to conduct an inspection or to conduct an investigation the following should happen;
   a) Ask to see the Inspector's identification
   b) Ask him/her what the inspection or investigating is regarding.
   c) Notify the City Risk Manager's Office IMMEDIATELY.
   d) Only provide that information that is requested by the Inspector.
   e) Only allow the Inspector to visit the areas of the facility that pertain to his/her inspection/investigation.
   f) Take notes and record statements made by the Inspector, employees and facility areas visited.
   g) Take photos or samples of everything that the Inspector takes photos and samples of.
   h) At end of Inspection write a detailed report on visit and forward to the Risk Manager's Office.
   i) Whenever possible the Risk Manager or City Safety Officer will attend these visits.

GENERAL HEALTH & SAFETY RULES (ALL AREAS)

1) General Health & Safety Rules

a) Constantly observe work conditions, equipment, and tools for the purpose of preventing accidents.
b) Comply with all job safety instructions. Request help when unsure how to perform task safely.
c) Use all safety equipment that is required on the job.
d) Correct unsafe acts or conditions within the scope of your immediate work. Report any unsafe acts to your supervisor.
e) Advise supervisor of any faulty tools or equipment.
f) Stop work if conditions are such that there is immediate danger to life, limb or property.
g) The safe way to do a job must always be found before going ahead. Contact your supervisor when in doubt.
h) Practice good housekeeping in your work area. Pick up your tools. Do not leave materials and scrap where they will be hazardous to others.
i) For your protection, obey all warning signs.
j) Report any unsafe conditions to your immediate supervisor at once.
k) Fighting or horseplay will not be tolerated.
l) Reporting to work under the influence of intoxicants, tranquilizers, narcotics, or other dangerous drugs, or possession of such, not prescribed by a doctor is prohibited. Report all medications prescribed by your doctor to your supervisor.
m) Whenever you are involved with any accident that results in personal injury or damage to property, no matter how small, the accident must be reported to the immediate supervisor. Get first aid promptly.
n) All prescribed safety and personal protective equipment should be used when required, and maintained in working condition.
o) When lifting, use the approved lifting technique.
p) Defective machines, tools, etc. will be reported and taken out of service at once.
q) Know the location, type, and how to use all fire extinguishers at your job location. Know the locations and how to use the nearest means of reporting a fire.
r) No employee shall remove, displace damage, destroy, or alter any safety device or safeguard furnished or provided for use in any place of employment, nor shall anyone interfere in any way with use thereof.

VIOLATIONS OF SAFETY RULES OR SAFETY STANDARDS WILL RESULT IN DISCIPLINARY ACTION.

2) **Housekeeping**

a) General
   i) Good housekeeping is an important element of accident prevention and must be a primary concern.
   ii) Good housekeeping must be planned and carefully supervised.

iii) A clean and orderly work place will not only contribute greatly to the prevention of accidents and injuries, but will also lend itself to proper utilization of available facility space.

b) Storage Areas
   i) All materials shall be maintained in neat, stocked piles for easy access. Aisle ways and walkways must be kept clear and free of all materials and tools.

c) Work Areas
   i) All loose material and waste must be cleaned up immediately. The work area must remain free and clear of debris build up so as to provide easy walking areas for all employees.
   ii) Spills of oil, grease or other liquids must be removed immediately or sprinkled with sand or oil dry.
   iii) Combustible waste, such as oily rags, paper, etc. must be stored in a safe place, such as a covered metal container and disposed of regularly.
   iv) Adequate lighting must be provided in and around all work areas, passage ways, stairs, ladders and other areas used by personnel.
   v) There must be free and clear access at all times to such areas as electrical panels, safety disconnect switches, fire extinguishers, emergency exits, eye wash stations, safety showers, etc.

3) Office Safety

a) Machines
   i) Machines should not be placed near the edge of tables or desks.
   ii) Machines that creep or vibrate during operation should be secured in a manner to prevent movement.
   iii) Machines and power tools used in classroom settings should adhere to safety procedures provided under that topic.

b) File Cabinets
   i) File cabinets should be placed against walls or columns.
   ii) Do not overload drawers. Open only one drawer at a time to prevent the cabinet from tipping over.
   iii) Do not leave file drawers open.

c) Floors
   i) Floor finishes and/or carpet should be selected for anti-slip qualities. Well maintained floors/carpets will provide protection against slips and falls.
   ii) Defective tile or carpet should be reported for immediate repair.

d) Passageways/Aisles
   i) A minimum width of four (4) feet should be established for aisles. Obstructions such as waste baskets, telephone and electrical outlets, low tables, and office equipment must be kept where they do not present tripping hazards.
   ii) Stairways should be protected with anti-slip materials.
   iii) Doors should not open into the path of employee travel.
   iv) Rooms should contain at least two exits that are clear of obstructions and usable in an emergency situation.

4) Electrical

a) Electrically operated machines and extension cords require that the outlets and extension cords be arranged to avoid tripping hazards. If extension cords are required, they must be secured and covered to eliminate tripping hazards.
b) Circuits providing power must be adequately sized and covered so that no wires are exposed.
c) Do not overload wall outlets.

5) Material Storage

a) Material should be stored so that in gaining access to these materials, normal traffic does not have to be crossed.
b) Materials should be stored neatly so that they will not fall or cause a tripping hazard.
c) Flammable or hazardous liquids used in offices must be stored and dispensed from approved safety containers. Bulk storage must be in a properly constructed fireproof room or cabinet.

6) Lighting and Ventilation

a) Adequate lighting and ventilation must be provided in accordance with applicable standards. If in doubt, contact your supervisor.

7) Ladders/Stools

a) Ladders and stools used for reaching high storage should have non-skid safety feet attached, or be equipped with brakes that automatically lock when weight is applied.
b) Desk or chairs should not be used as stools for reaching high storage objects.

8) Fire Protection, Prevention and Emergencies

a) Good housekeeping is essential in preventing fires.
b) Portable fire extinguishers must be conspicuously located and labeled. Extinguishers must be inspected and tagged annually, and maintained in a fully charge condition.
c) Smoke detectors and/or alarm systems should be checked. Any malfunction should be reported immediately to the building supervisor.
d) A fire emergency procedure and a basic emergency plan must be developed. An emergency evacuation route should be posted within each room. Evacuation must be practiced in accordance with current requirements.
e) Emergency telephone numbers for fire, police or medical emergencies must be posted at each telephone.

9) Lifting Safety

a) To handle materials safely, lift everything <u>TWICE.</u>
    i) Mental Lifting
        (1) Lift the load mentally and plan every step before physically lifting the load.
        (2) Size up the load:

(3) How much does the load weigh?
(4) How high is the load?
(5) Will it obstruct your view?
(6) Are there any sharp edges or slippery surfaces on the object to be carried?
(7) If the object is too heavy or bulky
(8) GET HELP OR FIND A BETTER WAY
(9) Check your travel pathway:
(10) How far do you have to carry the load?
(11) Check the path for:
(12) Obstacles underfoot or overhead; spills; lighting; traffic; (vehicles and people); changes in elevation;
(13) Prepare the pathway and always choose a clear route over the flattest surface.

ii) Physical Lifting
(1) Place your feet close to the object to be lifted, 8-12 inches apart for good balance.
(2) Bend your knees to a comfortable level.
(3) Using your whole hand, grasp the object firmly. Hug it to your body!
(4) Keep your back upright and use your leg muscles to lift the load.
(5) Lift the load straight up, smoothly and evenly into the carrying position. DO NOT TWIST OR TURN WHILE LIFTING!
(6) Once in the carrying position, to turn your body, change the position of your feet in the direction you want to go.
(7) Setting the load down is just as important as picking it up. Using your leg muscles comfortably lower the load by bending at your knees. Remember to keep the load close to your body. When the load is securely positioned, release your grasp.

PERSONAL PROTECTIVE EQUIPMENT

1) General

a) Each employee will wear suitable clothing for the job they are performing at all times. Suitable clothing means clothing that will minimize danger from moving machinery, hot or cold substances, sudden burns, etc.
b) When the use of personal protective equipment has been specified for hazardous work, its use will be mandatory as a condition of employment.

2) Hard Hats

a) Hard hats are required to be worn when employees are exposed to falling objects and overhead hazards. Hard hats that have been altered by drilling or cutting will not be permitted. The hard hat will be worn with the brim facing forward at all times.

3) Gloves

a) Where needed, you will be required to wear work gloves. These gloves are expected to be in good condition and suited for the type of work involved. If you

are required to operate or work around drill presses, power saws and similar rotating machinery, you should not wear gloves. Use of special type gloves such as neoprene or rubber gloves will be required when handling chemicals.

4) Shoes and Boots

a) The wearing of canvas sneakers, sandals and shoes that have been slit or have holes or cuts in them are not permitted unless approved appropriate by the Department Head.
b) A leather work shoe or boot or safety shoe is recommended for use. These shoes or boots provide support for the foot and ankle and also protection. Shoes and boots must be kept in good repair and those with worn heels or thin worn soles should be repaired or replaced.
c) The requirement of safety shoes/boots will be determined at the discretion of the Department Head.

5) Eye and Face Protection

a) Approved eye and face protection must be worn wherever warranted by the work exposure.
b) Full face shields must also be worn when doing such work as grinding or chipping.
c) Welders must wear a welder's hood with lenses which have the correct color density for the type of welding involved. Welder's helpers must wear the same, or at the minimum wear burning goggles with the correct color density lens.

6) Hearing Protection

a) When subject to sound levels exceeding the standard permissible exposure limit, hearing protection will be provided and used to reduce sound levels.

7) Protective Equipment for Specific Use

a) Respirators
    i) Respirators will be provided for appropriate hazards and will be worn when there is an exposure to airborne contaminates such as fibers, dust, smoke, vapors, mist with levels exceeding the standard permissible exposure limit. The wearing of respiratory protection must be in compliance with OSHA Standard 29CFR1910.134.
b) Safety Belts/Harnesses and Lanyards
    i) Safety Belts/Harnesses with Lanyards must be worn when working at elevated levels over six (6) feet which are not protected by standard handrails or when working from suspended scaffolds.
c) Floatation Vest
    i) United States Coast Guard approved floatation vests must be worn when required to perform work over water.
d) Hi-Visibility Traffic Vests
    i) When required to work in the immediate vicinity of moving traffic, as a minimum you will be required to wear a fluorescent orange or red traffic class II safety vest.

HAND TOOL SAFETY

1) General

a) Use hand tools only for the purpose for which they were designed.
b) Use tools that are in good condition. Worn or broken tools must be repaired or replaced.
c) Always use appropriate safety equipment.
d) Store all tools that are not in use. Proper storage includes tool boxes, tool racks, and cabinets.
e) Do not leave tools on overhead work areas where they may fall and strike someone below.
f) Do not carry a sharp or pointed tool in pockets or belts unless the point or edge is protected with a cover.

2) Hammers and Sledges

a) Always wear appropriate eye protection.
b) Check behind you before swinging a hammer or sledge.
c) Keep your eyes on the object to be hit.
d) Never use a damaged hammer or sledge.

3) Chisels and Punches

a) Always wear appropriate eye protection.
b) Use a hammer or mallet with a striking face at least 3/8" larger than the punch or chisel face.
c) Keep chisels sharp and in good condition. Repair or replace dull or damaged tools.
d) Strike blows squarely; aim chisel/punch away from your body.
e) All mushroom heads of chisels and punches shall be ground down to prevent spalling.

4) Wrenches

a) Never use a "cheater" to increase leverage.
b) Whenever possible, pull on the wrench handle rather than push. Adjust your stance to avoid a fall if the wrench slips.
c) Repair or discard any worn or damaged wrenches.
d) Never use a hammer on a wrench unless it is the striking face type.

5) Pliers

a) Do not use pliers for cutting hardened wires unless specifically made to do so.
b) Never use pliers as a striking tool.
c) Use dielectric pliers and shut off power when working with electricity.

6) Screwdrivers

a) Use a screwdriver with the right type of blade, and one that properly fits the size screw.
b) Never use a bent or damaged screwdriver.

c) Do not use a screwdriver as a pry bar or a chisel.
d) Keep handles free of grease and oil.

7) Hand Saws
a) Always wear appropriate eye protection.
b) Keep saw blades sharp; re-sharpen, or replace blades that have lost good cutting teeth.
c) Lubricate hacksaw blades with light machine oil to prevent heat build-up which can cause the blade to break.
d) Store saws so that there is no chance for someone to fall onto or bump into the blade.

POWER TOOL SAFETY

1) General
a) Follow all manufacturers' instructions regarding the safe storage, operation, and maintenance of power tools.
b) Do not use a power tool unless you have been trained on how to use it properly and safely.
c) All guards must be in place before operating the tool.
d) Appropriate eye protection must be worn when operating or working near power tools.
e) Do not wear loose fitting clothing or jewelry when using power tools.
f) Disconnect the tool before changing blades, bits, etc.
g) Remove chuck keys, etc. before using a power tool.
h) Disconnect power tools from the power source by pulling out the plug - do not pull on the power cord.
i) Make sure that tools are either double-insulated, or have three (3) prong plugs with grounded extension cords and receptacles.
j) Keep your finger off the trigger and make sure the switch is "off" before plugging in a tool.
k) Do not use electric tools that have worn or damaged plugs or cords.
l) Secure small pieces of work with a clamp, or in a vise.
m) When using power tools keep the work area free of any trip or slip hazards.
n) Never use compressed air to blow off equipment or clothing; use a brush.

2) Saws
a) Do not jam or force saws into the work.
b) Portable saws should have a spring loaded operating switch.
c) Stay out of the saw's line of cutting.
d) Start and stop the saw outside the work piece.
e) Wear appropriate eye and ear protection.

3) Circular Saws
a) Wear appropriate eye and hearing protection.
b) Do not retract the lower guard while the blade is moving.
c) Use the retracting handle or safety lift lever to move the lower guard.

d) Do not clamp or tie the guard open.
e) Do not operate the saw if the guard is not working properly.
f) Keep your hand away from the blade while using the saw.
g) Keep the power cord out of the line of the saw cut.

4) Drills

a) Wear appropriate eye and hearing protection.
b) Do not use dull or chipped bits.
c) Let the bit cool down before changing or adjusting.
d) Do not force the drill into the work.

5) Pneumatic Tools

a) Wear appropriate eye and hearing protection.
b) Pneumatic power tools must be securely attached to the compressed air hose.
c) Do not make adjustments to pneumatic tools until you are sure that no air pressure is being supplied to the hose or tool.
d) Do not hoist, lower, or carry a tool by the hose.
e) Pneumatic impact tools must have safety clips or retainers to retain tool bits.
f) Follow the manufacturer's guidelines for safe operating pressures.
g) Locate all air hoses so they do not present a tripping hazard.

6) Grinders

a) Wear appropriate eye protection.
b) Grinding wheels must be covered with a safety guard.
c) Tool rests must be well supported and be no more than 1/8" from the wheel. Never adjust a tool rest while the wheel is in motion.
d) Do not grind on the side of the wheel unless it is designed to be used as a side grinder.
e) Never leave a running grinder unattended.
f) Make sure the work area around the grinder is clear before starting it up.
g) Stand off to one side of the grinder to start-up.

LADDER SAFETY

1) General

Great care should be taken in the selection of the proper size and design of the ladder for the use intended.

a) Straight Ladders
   i) Ladders must be selected to be of sufficient length to extend not less than thirty-six inches (36") above any platform or landing which they serve.
   ii) All portable straight ladders must be equipped with approved safety shoes.
   iii) Metal ladders should be marked with signs reading "CAUTION: DO NOT USE AROUND ELECTRICAL EQUIPMENT."

b) Step Ladders
   i) Step ladders must have positive locking spreaders that will be fully spread and locked when the ladder is in use.

ii) Step ladders are not to be used as straight ladders. Workers are not allowed to work from the top two steps of a step ladder.

2) Ladder Usage

a) The feet of the ladder shall be placed approximately one-quarter (1/4) of its supported length away from the vertical plane of its top support.
b) Only light, temporary work should be performed from ladders.
c) Ladders shall not be placed in front of doors which open toward the ladder unless the door is locked or otherwise guarded.
d) Ladder feet shall be placed on a firm base, and the area in the vicinity of the bottom of the ladder shall be kept clear.
e) When using straight ladders, both the top and bottom of the ladder shall be secured to prevent displacement. Use ladder shoes, stakes, or other means of securing the ladder.
f) Ladders leading to landings, walkways, platforms, etc. must extend thirty-six inches (36") above this point and must be securely fastened to prevent moving.
g) Long ladders must be braced at intermediate points as necessary to prevent springing.
h) When ascending or descending ladders, face the ladder and use both hands to hold onto the side rails. If material must be moved from one level to another, a rope, block and tackle or other means must be used. Materials are not to be hand carried on ladders.

3) Ladder Inspection

a) All ladders must be inspected frequently for deterioration and damage. Close visual inspection is recommended.

4) Ladder Maintenance

a) Wood ladders should be periodically treated with clear preservative such as varnish, shellac, or linseed oil. Ladders must not be painted as painting covers up structural defects. All metal fittings on wood ladders should be carefully checked for rusting or corrosion.
b) Metal ladders should have the rungs cleaned to prevent accumulation of materials that might destroy their non-slipping properties, and all metal fittings should be carefully checked for rusting or corrosion.
c) When not in use, all types of ladders shall be stored under suitable cover protected from the weather. Ladders stored horizontally should be supported at both ends and at intermediate points to prevent sagging of the middle section which tends to loosen the rungs and warp the rails.

WELDING AND CUTTING

1) General

a) Never use oil or grease on any fittings or apparatus in contact with oxygen.
b) Blow out the cylinder valves before attaching the regulators to the cylinders. Release the adjusting screw prior to opening the cylinder valves.

c) Never stand directly in front or in back of a regulator when opening the cylinder valve; stand so that the cylinder valve is between you and the regulator.
d) Always open the cylinder valves slowly. If a wrench is used, keep it on the valve.
e) An acetylene cylinder should never be opened more than one full turn.
f) Always purge the oxygen and fuel passages individually before lighting the torch.
g) Light the fuel gas first before opening the oxygen valve on the torch.
h) Follow the procedures as outlined. Do not take short cuts or use defective equipment.
i) Never begin any welding or cutting without removing all flammable and combustible materials from the area and using flush curtains where appropriate.
j) Always check to see that you have appropriate fire protection equipment immediately available before doing any welding or cutting.
k) Do not wear flammable or disposable type clothing.

2) Protective Clothing

a) Wear appropriate welding helmets, long sleeve shirts, leathers and welder's gloves.
b) If grinding, chipping or buffing is done, a face shield must be worn.

3) Equipment and Inspection

a) Equipment must be industrial rated, in good condition and conforming to OSHA requirements governing application, installation and operation of arc welding and cutting equipment.
b) Before each use, the following items must be inspected:
c) All leads for broken or cut insulation;
d) Electrode holders for broken insulators or worn holders;
e) Oil and fuels on gas or diesel powered units; and
f) Both power and return leads to ensure they are the same lengths so that the return lead can be attached as close as possible to the work.

4) Storage of Compressed Gas Cylinders

a) Inside of buildings, cylinders shall be stored in a dry, well-ventilated, well protected location at least twenty (20) feet from highly combustible materials such as oil, solvents, etc.
b) Assigned storage spaces shall be located where cylinders will not be knocked over or damaged by passing or falling objects, or be subject to tampering by unauthorized persons.
c) Cylinders shall not be kept in unventilated enclosures such as lockers and cupboards.
d) Empty cylinders shall have their valves closed.
e) Storage of empty cylinders shall be separated from charged cylinders. Storage racks shall be identified as to compressed gas cylinder content and condition ("Full," "Empty").
f) Valve protection caps, where cylinder is designed to accept a cap, shall always be in place, hand tight (except when cylinders are in use or connected for use).

g) Protection from solar radiant heat shall be provided where cylinders are directly exposed to sunlight.
h) Compressed gas cylinders shall be secured in an upright position at all times, including when being hoisted or transported.
i) Retention chains or straps will be provided on storage racks and carts so that compressed gas cylinders will be secured against falling.
j) Small, hand held compressed gas cylinders used for propane torches, gas detector test cylinders, etc. may be stored without use of retention chains or straps. However, attention should be given to storing these cylinders away from open flames or sources of heat, and in a manner that will protect the cylinder from being knocked over or damaged by work activities.

5) Compressed Gas Cylinder Storage Area

a) A 20-pound ABC rated fire extinguisher (minimum) shall be placed no closer than 25 feet, but not further than 75 feet to fuel gas storage areas.
b) Warning signs shall be conspicuously placed and shall read, "Danger - No Smoking, Matches or Open Lights or Flames," or other equivalent wording.
c) Inside buildings, cylinders (except those in actual use or attached for use) shall be limited to a total gas capacity of 2,000 cubic feet or 300 pounds of liquefied petroleum gas.
d) Oxygen cylinders in storage shall be separated from fuel-gas cylinders or combustible materials (especially oil or grease) a minimum of 20 feet, or by a noncombustible barrier at least five feet high having a fire resistant rating of at least one-half (1/2) hour.

GROUNDS EQUIPMENT SAFETY

1) General

a) Do not operate equipment until operator is trained and documentation is on file.
b) Equipment shall never be left unattended with motors running.
   i) Whenever a machine is left unattended, make sure the key is removed from the ignition switch and the parking brake is set.
c) Areas to be mowed must be inspected for foreign objects. Wires, stones, bottle caps, sticks, etc. should be removed before mowing.
d) If a cutting unit strikes a solid object or vibrates abnormally, stop immediately, turn engine off, wait for all motion to stop, remove spark plug wire, and inspect for damage. A damaged reel or bed knife must be repaired or replaced before operation is continued.
e) Do not run the engine in a confined area without adequate ventilation. Exhaust fumes are hazardous and could be deadly.
f) Bystanders should be warned by the operator of the danger of flying objects. EXTREME PRECAUTION MUST BE TAKEN WHEN THERE ARE CHILDREN IN THE IMMEDIATE AREA.
g) Become familiar with the controls and know how to stop the engine quickly.
h) Keep all shields, safety devices, and decals in place. If a shield, safety device or decal is defective or damaged, repair or replace it before operating the machine.

i) Do not carry passengers on the machine, and keep everyone away from the areas of operation.
j) Keep hands and feet away from the undercarriage of the mower.
k) Always wear substantial shoes. Do not operate machine while wearing sandals, tennis shoes, or sneakers. Do not wear loose fitting clothing because it could get caught in moving parts and possibly cause personal injury.
l) Always wear safety glasses, hearing protection, work boots, long sleeve shirt, and long pants when operating equipment.
m) Mow only in daylight or when there is good artificial lighting.
n) Check the safety interlock switches daily for proper operation. If a switch should fail, replace the switch before operating the machine.
o) All mowers must be equipped with approved hand and foot guards when in use.

p) Raise the cutting units when driving from one work area to another.
q) Do not touch engine, muffler, or exhaust pipe while engine is running or soon after it is stopped because these areas could be hot enough to cause burns.
r) Before servicing or making adjustments to the equipment, stop the engine, remove key from switch, and pull high tension wire off spark plug to prevent accidental starting of the engine.
s) To assure entire machine is in good operating condition, keep all nuts, bolts, screws, and hydraulic fittings tight.
t) To reduce potential fire hazard, keep the engine area free of excessive grease, grass, leaves, and accumulation of dirt.
u) If the engine must be running to perform a maintenance adjustment, keep hands, feet, clothing, and any other parts of the body away from the cutting units and any moving parts, especially the screen at side of the engine. Keep everyone away.
v) Engine must be shut off before checking oil or adding oil to the crankcase.
w) After mowing is completed, disconnect spark plug wire from the spark plug; remove dirt, grass, etc. from the top of the mower; place the mower in a dry location undercover.
x) Never refuel equipment while it is running.
    i) Use an approved gasoline container.
    ii) Do no remove cap from fuel tank when engine is hot or running?
    iii) Do not smoke while handling gasoline.
    iv) Fill fuel tank outdoors and not over one inch from the top of the tank, or filler neck.
    v) Wipe up any spilled gasoline.
y) Never attempt to lift or load a mower by yourself.

TREE TRIMMING AND CHAIN SAW SAFETY

1) General
    a) Before starting any tree operations, time should be taken to check the trees in the surrounding area for any dangerous conditions.
    b) Except in case of emergency, tree work should be avoided when trees are wet, during high winds, or storm situations.
    c) Ask for assistance only from employees on the crew, never from bystanders.
    d) Only physically fit persons should be allowed to climb.
    e) Ropes shall be used for raising and lowering tools.
    f) Ropes of suitable length should be used for lowering limbs.
    g) Safety or climbing ropes should not be used for lowering limbs.
    h) Ladders should not be used unless they can be set on a firm foundation.
    i) Ladders should be inspected frequently for damage.
    j) Always call a warning before lowering limbs.
    k) Never leave tools in trees during breaks, lunch hour, or overnight.
    l) Special precautions should be taken when working around live wires.
    m) All wires broken during tree work should be reported to the proper utility company.
    n) Fallen wires should be guarded until servicemen arrive.

o) In case of contact with live wires, do not touch the victim. Separate the victim from the wire by use of non-conductive materials. Call the Fire Department (Rescue) 9-1-1 (9-9-1-1- within City phone system).
p) Never walk with a chain saw running.
q) Always stand at the end of the saw when cutting never at the side.
r) Avoid using the tip of the saw for cutting.
s) Never replace chain on guide rail groove while motor is running.
t) Clean and check saw thoroughly and lubricate daily as required. Maintain a proper tension on the chain. Always inspect the saw for sharpness, as a sharp saw will reduce maintenance cost, and result in faster, safer, and easier cutting.
u) Gloves, chaps, hard hats and safety glasses (goggles) and hearing protection are mandatory when using chain saws.
v) Never refuel chain saws while they are running.

ELECTRICAL SAFETY

1) General

a) Make sure all electrical tools and equipment are properly grounded or double insulated. Visually inspect daily for kinks, cuts, and cracked jackets.
b) If an electrical tool sparks or tingles, take it out of service and tag for repair.
c) Always disconnect tools from power source before making adjustments or attachment changes. Follow lock-out, tag-out procedures.
d) Use three wire conductor ground receptacles and extension cords. Do not use cords with ground pins missing.
e) Protect cords from damage caused by traffic, sharp corners and pinching.
f) Do not use electrical power tools or equipment while standing in water.
g) Keep cords out of puddles.
h) Do not splice or repair cords.
i) Temporary lighting must have guards over the bulbs.
j) Do not use metal ladders near high powered electricity (assume all wires are "live" even when you have been told they are not).
k) Place cords so that they will not trip the operator or other personnel.
l) Disconnect by pulling the plug, not the cord.
m) Never use water to extinguish an electrical fire. Use a multipurpose dry chemical fire extinguisher or one with a "C" rating on the label.

EMERGENCY ACTION PLAN

1) **OVERVIEW**
   a) Research indicates that less than fifty percent (50%) of U.S. organizations hit by a disaster recover fully; and as a public entity it is vital, that our recovery be swift and immediate.
   b) No entity is immune from disaster, and emergencies can arise at any time and from any causes; but the potential loss is the same - people and property.
   c) An emergency refers to an event of catastrophic nature that adversely affects the entire entity and has possible consequences for persons or property within the City.

2) **SCOPE**
   a) This plan applies to all departments and employees within the City, and covers those designated actions the City and employees will take to ensure employee safety during an emergency stated within the plan.
   b) This plan is in compliance with 29 CFR 1910.38 - Employee Emergency Plans and Fire Prevention Plans.

3) ***PURPOSE***
   a) To assure that on-site emergencies are pre-planned and drilled to minimize the impact of those emergencies to the community, environment and City employees and property.

4) **PRE-PLANNING**
   a) Pre-planning will be conducted for emergencies that can adversely affect the City. The items that will be included in the pre-planning are:
      i) ∗ Fires and Explosions
      ii) ∗ Chemical Leaks or Spills
      iii) ∗ Natural Disasters - Hurricanes, Tornadoes, Floods
      iv) ∗ Bomb Threats
      v) ∗ Nuclear Power Plant Incident

5) **EMERGENCY NOTIFICATION - (NON-OPERATING HOURS)**
   a) During non-operating hours, the supervisor will notify the police and/or fire departments via 9-1-1 of the emergency and then notify the Department Head. Notification listings shall be maintained.
   b) The Department Head (or his/her designee) will respond and promptly report to the location and initiate the following:
   c) Contact the appropriate personnel needed to handle the emergency (Public Works, Central Services, etc.)
   d) Initiate the portions of the Emergency Action Plan appropriate to handle the emergency in progress.

6) **FIRE ALARMS**
   a) When the fire alarms sounds in the Government Center, Security is to notify the Police and Fire Departments by dialing 9-1-1. Do not hang up until told to do so unless you are in danger. Advise:
      i) Your name, your location and address;
         (1) I.e. Government Center 888 Washington Blvd
      ii) Status of evacuation: building is being evacuated/has been evacuated.
      iii) Advise 9-1-1 dispatcher whether or not there is visible smoke or fire. If there is smoke or fire, advise whether entire building, or what quadrant of building (i.e. northeast, northwest, southeast, southwest).
      iv) If it is positively known to be a "false" alarm, advise the 9-1-1 dispatcher of this and advise how or why it is known to be false.
      v) Initiate Evacuation following evacuation procedures.

7) **FIRES AND EXPLOSIONS**
   a) Certain actions must be undertaken promptly to minimize the adverse affect of a fire or explosion. Usually, destructive fires originate as "small fires", the types that can be positively controlled by in-house personnel.
   b) However, once the fire begins growing beyond the "small fire" stage or when the fire is involved from the start; it is time to activate the Emergency Action Plan as follows:
   c) Notify the Fire and Police Department by dialing 9-1-1 (do not hang up until instructed to do so unless you are in danger) and/or pull the manual fire alarm.
   d) Evacuate Building (see Evacuation Procedures)

8) **Emergency Evacuation Procedures**
   a) All staff will leave their offices, close (NOT LOCK) their office doors behind them, and follow the specific escape route diagrammed at the office exit and in this plan.
   b) Exit the building using the closest exit, as diagrammed at office exit. No one is to remain in the building.
   c) When outside the building, all personnel will meet (at a pre-designated location) and report to a pre-designated Floor Warden.
   d) The Fire Warden will account for all personnel within their perspective area in the event of a building evacuation.
   e) The Fire Warden will ensure all visitors/customers evacuate the building.
   f) The Fire Warden will assign personnel to assist disabled individuals to evacuate.
   g) Prior to exit and only as conditions permit, the Fire Warden will verify all offices and restroom facilities in their area have been evacuated.
   h) The Fire Warden will report to command post (Fire and/or Police) with the location of each disabled person who was evacuated and any injured personnel and accountability of all personnel with their perspective areas.
   i) Do no re-enter the building until cleared by the Fire Rescue or Police Officer in Charge.

9) **Bomb Threats**
   a) Although many bomb threats turn out to be hoaxes, the small percentage that are not, could have disastrous results. Therefore, all bomb threats received will be taken seriously and handled in the following manner:
      i) The receiver of the bomb threat should obtain as much information as possible from the caller, keep the caller on the line as long as possible and inform caller that many innocent people may be injured. (See the Bomb Threat Caller Checklist).
      ii) The Department Head will initiate an orderly evacuation of the area. (See the Bomb Threat Search and Evacuation).
      iii) All traffic should be routed away from the premises to ensure that emergency vehicles have access.
      iv) Designate an individual to meet the police department.
      v) Resume normal operations after an "All Clear" is given.

10) **Bomb Threat Search and Evacuation**
   a) The evacuation procedure for a bomb threat is slightly different than the evacuation procedure for other emergencies.
      i) Personnel will look around the office area for anything looking abnormal.
      ii) If anything is found, DO NOT TOUCH IT. Report immediately what has been found and its location to the Evacuation Leader.
      iii) Once you have observed your office and the surrounding area, proceed in the same manner as a fire drill except:
         (1) Doors should be left as they are,
         (2) Leave all lights on,
         (3) Leave all electrical and computer equipment in the same mode as when the evacuation was announced,
         (4) Take purses, coats, and personal belongings with you,
         (5) Do not open any recently delivered parcels,
         (6) NO TWO-WAY RADIO TRANSMISSIONS – INCLUDING CELLULAR PHONES, WALKIE TALKIES, CB RADIOS.

11) **Bomb threat Caller Checklist**
   a) All personnel, especially the switchboard operators will be instructed in what to do if a bomb threat is received.
      i) Remain calm; it could result in obtaining additional information. The caller could be your best source of information about the bomb.
      ii) Keep the caller on line as long as possible, asking him or her to repeat the message. Record every word.
      iii) If not already provided, ask the caller the time of possible detonation and location of the bomb.
      iv) Let the caller know that the building is occupied and detonation could result in death to innocent people.
      v) Pay particular attention to background noises that may give a clue to caller location.

vi) Listen closely to the voice (male/female), voice quality (calm/excited), accents, and any speech impediments. Did the caller sound technically knowledgeable regarding explosives.
vii) Immediately after caller hangs up, report the threat to Police by dialing 9-1-1.
viii) Report the threat to your immediate supervisor. The supervisor will immediately initiate evacuation procedures.
ix) NO TWO WAY RADIO TRANSMISSIONS INCLUDING CELLULAR PHONES, WALKIE TALKIES, AND CB RADIOS.

12) **Emergency Management Coordinator**
a) The City Emergency Management Coordinator duties in the event of an emergency will be:
i) Coordinating the City's actions before, during and post emergency periods.
ii) Reports directly to the Mayor.
iii) Ensures that the Emergency Operations Center is properly equipped and staffed.
iv) Coordinates the activities of City groups such as:
(1) Fire Rescue
(2) Law Enforcement
(3) Public Works/Utilities
(4) Central Services
(5) Coordinates the activities with outside agencies such as:
(6) Law Enforcement and Fire Rescue
(7) Medical Services
(8) Volunteers
(9) Utilities (Phone, Electric, Cable)
(10) Contractors
(11) State (SERC, National Guard)
(12) Federal (FEMA, Military)
(13) Civil Defense, Red Cross
v) Maintains a record of the activities during all the stages of the emergency.

13) **Natural Disasters**
a) DEFINITIONS:
i) Tropical Depression - A disturbance that has developed a rotary circulation at the surface and a constant wind speed of 38 mph or less.
ii) Tropical Storm - Distinct rotary circulation with a constant wind speed ranging from 39 to 73 mph.
iii) Tornado - A wind spout spawned by severe thunderstorms or hurricanes. Winds within the spout may approach 300 mph, with a ground speed of 35 mph.
iv) Hurricane - Pronounced rotary circulation, constant wind speed of 74 mph or more. The National Weather Service rates hurricanes on the basis of wind speed and intensity, using the Saffir-Simpson Scale of Category 1 being the weakest and Category 5 the strongest.
(1) Category 1: Maximum winds of 74 to 95 mph.

(2) Category 2: Maximum winds of 96 to 110 mph.
(3) Category 3: Maximum winds of 111 to 130 mph.
(4) Category 4: Maximum winds of 131 to 155 mph.
(5) Category 5: Maximum winds of greater than 155 mph.

v) Hurricane season starts June 1st and ends on November 30th, but can theoretically strike at any time. The following terms are useful in preparing for a hurricane:

vi) Tropical Storm Watch - An announcement for specific areas that a tropical storm poses a possible threat to coastal areas generally within 36 hours.

vii) Hurricane Watch - An announcement issued when there is a threat of hurricane conditions within 24 - 36 hours.

viii) Hurricane Warning - Issued when hurricane conditions, winds stronger than 73 mph are expected in 24 hours or less.

ix) Tornado Warning - Issued when a tornado has been sighted in the area.

x) Hurricanes, Tornadoes and Flooding:
(1) At the start of hurricane season, the Emergency Management Coordinator will begin tracking tropical activities as announced by the National Weather Service.
(2) When a Tropical Storm Watch Advisory is issued, the following will be initiated:
(3) Department Heads will organize an emergency action team.
(4) A premises inspection will be conducted for any loose items, unsecured windows/doors, latches, dead tree limbs, etc.
(5) All fuel tanks will be topped off.
(6) Exposed electrical panels will be covered and protected from the rain.

xi) When a Hurricane Watch Advisory is issued for a Category 2 or lower, the following will be initiated:
(1) Department Heads will start emergency procedures for securing area with a reasonable cut-off time, in order to give ample time for the employees to prepare their families and homes for the potential hurricane.
(2) Windows and openings will be covered with plywood or hurricane shutters.
(3) Equipment near the water edge will be moved away from the edge/and or moved inland.
(4) Trucks & trailers should be parked as close together as possible and with their rear doors closed to avoid being overturned by high winds.

xii) If the hurricane is upgraded to a Category 3 or higher, with imminent flooding, the following will be initiated:
(1) Designated personnel will report to the Emergency Operations Center.
(2) As many trucks and/or trailers as possible will be brought inland to staging area.
(3) All forklifts and other equipment will be placed in a secured building, if possible.
(4) Fire extinguishers and sprinkler valves will be secured.
(a) Important tools, equipment, machinery, etc., will be moved to higher elevations.

(b) Section Fires and Explosions will be reviewed, for additional information.
(c) Two sets of current computer back-up tapes will be made and all original network programs will be sent off-site.
(d) Disconnect all computer equipment and data machines, cover with plastic and place elevated in a secured windowless room.

(5) If a Tornado Warning is issued, Emergency Management Coordinator will notify all departments and the Department Head will:
(a) Assemble an Action Team, equipped with two-way radios, to watch for the formation of funnel clouds.
(b) If funnel clouds are reported, the Department Head will initiate an orderly evacuation of personnel.
(c) NOTE: There is usually little time to prepare for an approaching tornado.

14) **Natural Disaster Restoration:**

a) An immediate damage assessment should be made by all department heads and reported to the Emergency Management Coordinator.
b) Emergency Action Teams and Salvage Crews will be organized to assist in repairs and restoration.
c) If the electrical power is out, contact will be maintained with FPL and length of the power outage determined. If the outage will last for several days, arrangements for the delivery and hook-up of emergency generators will be made.
d) All employees will be recalled as soon as possible to assist in the repair and restoration of services.
e) Temporary repairs will be made on structures to minimize rain damage.
f) CL&P will be contacted to handle downed electrical lines.
g) Roof drains will be cleared of debris to prevent water from ponding and causing the roof to collapse.
h) Emergency Action Teams and Salvage Crews will be cautioned to avoid live wires.

HAZARD COMMUNICATION/RIGHT-TO-KNOW

1) Scope

a) The City of Stamford is formally committed to providing each of its employees a safe and healthy work environment. It is a matter of City policy, as well as an important regulation under OSHA Hazard Communication Standard, 29CFR, 1910.1200.

b) These standards were designed to provide employees with information about hazardous chemicals in the workplace and to inform employees that they have the Right-To-Know about the nature and hazard of these chemicals.

2) Training Program

a) The City of Stamford has developed a Hazard Communication/Right-To-Know Training Summary for employees and a Training Outline for supervisory personnel in order to facilitate the dissemination of information to City employees.

b) Everyone who works with, or is potentially exposed to hazardous chemicals, will receive initial training on the Hazard Communication Standard and the safe use of those hazardous chemicals. Whenever a new hazard is introduced, additional training will be provided. Regular safety meetings will also be used to review the information presented in the initial training. Supervisors will be trained regarding hazards and appropriate protective measures so they will be available to answer questions from employees and provide daily monitoring of safe work practices.

c) Retraining is required when the hazard changes or when a new hazard is introduced into the workplace, but it will be City policy to provide training regularly in safety meetings to ensure the effectiveness of the program. As part of the assessment of the training program, the Safety Officer will obtain input from employees regarding the training they have received and their suggestions for improving it.

3) Contractor Employees

a) Each contractor bringing chemicals on City property must provide the City with the appropriate hazard information on these substances, including the labels used and the precautionary measures to be taken in working with these chemicals.

4) List of Hazardous Chemicals

a) The Department Head/Supervisor will assure that each department develop an inventory list of all hazardous chemicals and related work practices used in City facilities and keep the list updated, as necessary. The inventory will identify all of the chemicals used in our work process areas. Each list will also identify the corresponding SDS for each chemical, trade name, chemical hazard, storage location, and storage quantity.

5) Definition of Hazardous Chemicals

a) A Hazardous Chemical is any chemical that poses a significant physical or health hazard. This would include: combustible liquid, compressed gas, explosives,

flammables, organic peroxide, oxidizer, pyrophoric, reactive (air or water), carcinogen, toxic, reproductive toxin, irritant, corrosive, sensitizer, hepatoxin (liver), nephrotoxin (kidney), neurotoxin, hematopoietic (blood) toxin, cutaneous (dermal) toxin, pulmonary (lungs) toxin, etc.... (This list is not intended to be all-inclusive).

6) Hazard Determination

a) The initial hazard determination is coordinated by the Supervisor and Department Head.
b) Any substance that poses a physical or health hazard will be included in the Hazard Communication Program.
c) Every hazardous substance known to be present in the work place will be listed on the "Hazardous Chemicals Inventory". A department supervisor/training officer or Department Head designee is responsible for coordinating the update of the list with the assistance of the Safety representative.
d) The identity of the substance appearing on the "Hazardous Chemicals Inventory" will be the same name that appears on the manufacturer's label, in-house label, and the Safety Data Sheets (MSDS) for that substance.
e) The "Hazardous Chemicals Inventory" will be filed with and will serve as an index to the SDS files. The "Hazardous Chemicals Inventory" will be available for employee's review at all times.

7) Labeling

a) No hazardous chemicals will be accepted for use in the facility, or shipped to any outside location, unless labeled with at least the following information:
    (1) Identity of the hazardous chemical(s)
    (2) Appropriate hazard warnings
    (3) Name and address of the chemical manufacturer, importer, or other responsible party
b) The Department Head will assure compliance and maintenance of this labeling requirement.
c) All containers of hazardous chemicals will be labeled with at least the following information:
    (1) Identity of the hazardous chemical(s)
    (2) Appropriate hazard warnings
    (3) No label is to be defaced or removed when a material is received or in use.

2) **Safety Date Sheets**

a) A Material Safety Data Sheet (SDS) containing the information required by the OSHA Hazard Communication Standards will be kept for each substance listed on the "Hazardous Chemicals Inventory". The SDS will be the most current one available by the chemical manufacturer, importer, or distributor. Every employee has the right to view the SDS's. Department Supervisor's or Department Head's designated representative are responsible for maintaining the file of SDS's.

b) The SDS's and the Hazardous Chemical Inventory should be filed in the work and office area, and should be readily accessible to employees in the work area during each work shift.

3) **Information on the Material Safety Data Sheet (SDS)**
   a) Section I: Manufacturer's Data - Product and manufacturer's names, emergency telephone numbers and date prepared.
   b) Section II: Hazardous Ingredients - Name of hazardous chemicals and safe exposure limits.
   c) Section III: Physical/Chemical Characteristics - Physical properties such as odor, color, taste, boiling and melting points; chemical properties or how the chemical reacts with water, air, and other materials.
   d) Section IV: Fire and Explosive Hazard Data - Flammability and explosion data; fire extinguishing media and special fire fighting procedures.
   e) Section V: Reactivity Data - Conditions and materials to avoid.
   f) Section VI: Health Hazard Data - Ways substances enter the body and adverse effects; signs and symptoms of exposure and first aid procedures.
   g) Section VII: Precautionary Data - Precautions to be taken during handling, use, and storage of a spill. How to dispose of wastes.
   h) Section VIII: Control Measures - Type of breathing, eye and skin protection to be used. Ventilation requirements for use.

4) **Definitions of Material Safety Data Sheet Terms**
   a) Carcinogen: Capable of causing cancer.
   b) Catalyst: A chemical which changes the rate of the chemical reaction between chemicals without being affected itself.
   c) Ceiling Limit: The amount of a toxic substance in air that is not to be exceeded for any length of time.
   d) Chronic Effect: An effect which generally occurs as a result of long term exposure, and is of long duration.
   e) Combustible: A substance with a flash point at or above 100 degrees F., but below 200 degrees F.
   f) Corrosive: A chemical which cause destruction or severe damage to living tissue at the point of contact.
   g) E.P.A.: Environmental Protection Agency (Federal).
   h) Explosive Limits: The range of vapor concentrations in air that will burn upon contact with an ignition source.
   i) Flammable Liquid: A substance with a flash point below 100 degrees F.
   j) Flash Point: The lowest temperature at which a liquid will produce enough vapor to be ignitable in air.
   k) Incompatible: Materials that could cause dangerous reactions and conditions if allowed to come in contact with one another.
   l) Ingestion: The intake of materials through the mouth.
   m) Irritant: A material that causes inflammation and/or irritation upon contact.
   n) LD 50: The dose of a substance that causes death in 50% of the animals exposed. A measure of acute toxicity.

o) Mutagenic: Capable of causing change in the genetic material of a cell in such a way that future generations are affected.
p) Occupational Exposure Limit: The maximum allowable concentration of a toxic substance in air to which the employee may be exposed without adverse effect.
q) Odor Threshold: The lowest concentration of a substance that can be smelled.
r) PEL: (Permissible Exposure Limit) A set standard set by OSHA to limit the concentration of a chemical to which the employee may be exposed.
s) Sensitizer: A chemical substance capable of causing an allergic reaction after repeated exposures.
t) STEL: (Short-Term Exposure Limit) ACGIH (American Conference of Governmental Industrial Hygienists) recommended exposure limit. Maximum concentration to which workers can be exposed for a short period of time (15 minutes) for only four times throughout the day with at least one hour between exposures.
u) Teratogenic: Capable of causing birth defects.
v) TLV-TWA: (Threshold Limit Value - Time Weighted Average) A time- weighted average concentration under which most people can work consistently for eight (8) hours a day, day after day, with no harmful effects.
w) Vapor Density: The density of a chemical vapor in air, compared to the density of air.

5) **Employee Rights**
a) The right to know of the listed toxic substances in the workplace.
b) The right to obtain a copy of the SDS for each toxic substance present.
c) The right to refuse to work under specified circumstances if not provided a copy of the SDS within five (5) of the employee's working days.
d) The right to instruction within thirty (30) days of employment and annually thereafter.
e) The right to obtain further information.
f) The right to protection against discharge, discipline, or discrimination for having exercised any of these rights.

6) **Proper and Safe Handling Procedures for Hazardous Material**
a) Do no enter areas where hazardous materials are used or stored unless you must work there.
b) Do not allow hazardous materials to come into contact with your skin or eyes.
c) Do not breathe hazardous vapors, fumes, mists or smoke.
d) Do not attempt to clean spilled hazardous materials alone - always get help.
e) Do not mix hazardous materials except as directed on the label.
f) Do not dispose of unusable hazardous materials in dumpsters, sewers, canals, or the ground.
g) Do not mishandle or break hazardous materials containers.
h) Do not overfill hazardous materials containers.
i) Do not put hazardous materials into containers which may break, dissolve, or leak.

j) Do not fight chemical fires without fully protective apparel, including Self-Contained Breathing Apparatus.
k) Frequently check tanks and containers for leaks and corrosion.
l) Use eye protection to prevent hazardous dusts, mists, and gases from entering your eyes.
m) Use breathing protection (respirators and gas masks) when safe limits of exposure are exceeded.
n) Remove contaminated clothing and shoes before eating, smoking, drinking, or taking medications.
o) Immediately bathe at the end of each work shift after using or handling hazardous materials.
p) Thoroughly familiarize yourself with emergency response, first aid, and small spill clean up procedures.
q) Learn the location and proper use of safety showers, eye washes, fire extinguishers, first aid kits, and absorbent materials in your work areas.

7) **General safety Rules for Gases and Pressurized Gas Containers**
a) Do not drop, puncture, or burn compressed gas containers.
b) Store gases in a secure, dry, well ventilated area away from sparks, heat, and flames.
c) Always use safety chains to prevent compressed gas containers from being accidentally knocked over.
d) Keep protective covers in place when gas is not being used or when moving compressed gas containers.
e) Use hand carts to move compressed gas containers.
f) Wear safety shoes and use appropriate personal protective equipment around compressed gases.
g) Frequently check for leaks and material failures.
h) Read the labels and Safety Data Sheets for each gas you use at work.

8) **Personal Protective Equipment**
a) Safety goggles protect eyes from splashes and vapors.
b) Face shields protect eyes and faces from splashes, but not from fumes, vapors, and mists.
c) Cartridge-type respirators provide short-term (15 minutes) protection against breathing harmful vapors, fumes, and mists. Be sure the respirator is properly fit to your face and that it contains the proper cartridge.
d) Self Contained Breathing Apparatus protect eyes and against breathing harmful vapors, fumes, and mists. Be sure the SCBA mask is properly fit to your face and you are using the proper canister.
e) Aprons protect the front of the body from spills and splashes.
f) Gloves protect the hands from hazardous materials.
g) Protective suits protect arms, legs, and body from spills, splashes, and vapors.
h) Fully protective apparel with Self-Contained Breathing Apparatus protects the entire body from hazardous materials.

i) SAFETY DATA SHEETS TELL YOU THE PROPER PROTECTIVE EQUIPMENT TO USE FOR EACH HAZARDOUS PRODUCT OR MATERIAL. ALWAYS READ SAFETY DATA SHEETS (SDS) AND LABELS BEFORE USING OR HANDLING HAZARDOUS MATERIALS. BE SURE YOU UNDERSTAND HOW TO PROPERLY USE EACH TYPE OF PERSONAL PROTECTIVE EQUIPMENT. FOLLOW SAFETY PROCEDURES CAREFULLY.

9) **Emergency Equipment**
   a) Emergency showers are used to wash gross contamination from the body.
   b) Eye washes are used to wash contamination from eyes and under eyelids.
   c) Fire extinguishers (type ABC) are used to put out small paper, wood, liquid, or electrical fires.
   d) First aid kits contain emergency medical supplies.
   e) Absorbent materials (kitty litter, vermiculite, oil dry or sand) are used to pick up spilled hazardous substances.
   f) LEARN THE LOCATION AND PROPER USE OF ALL EMERGENCY EQUIPMENT IN YOUR WORK AREAS.

10) **General First Aid Procedures for Hazardous Materials**
   a) Move victim to fresh air and call for ambulance (9-1-1) (9-9-1-1 in City system).
   b) Remove contaminated shoes and clothing.
   c) Administer Cardio-pulmonary resuscitation (CPR) if victim has no pulse or heartbeat.
   d) Administer artificial respiration if victim is not breathing. Make sure victim's mouth, nose, and throat are clear of obstructions.
   e) Use direct pressure bandages to stop bleeding - Do not use tourniquets except when limbs are severely mangled or amputated.
   f) Flush eyes, including under the eyelids with water for at least fifteen (15) minutes - call for medical assistance (9-1-1) (9-9-1-1 in City system).
   g) Flush skin with water for at least fifteen (15) minutes. Wash with soap and water and dry. Call for medical assistance if irritation or blistering occurs.
   h) Read labels or SDS and determine whether or not to give milk or water or to make the victim vomit if poison is swallowed. Do not force unconscious victims to drink anything.
      i) Keep victim warm and quiet until medical help arrives.
      ii) Monitor victim for delayed reactions.
      iii) SDS should accompany victim during medical treatment.
      iv) ALWAYS REFER TO LABELS AND SAFETY DATA SHEETS FOR SPECIFIC FIRST AID INSTRUCTIONS.

Emergency Response Procedures for Hazardous Mater*ials*

1) IN THE EVENT OF A SPILL OR RELEASE OF A HAZARDOUS MATERIAL, WHICH CAN BE HARMFUL TO PEOPLE OR THE ENVIRONMENT?
   a) Evacuate all persons from the spill and affected areas.

b) Secure the spill and affected areas from accidental entry and disconnect ignition sources at the main panel.
c) Determine first aid needs to exposed personnel. (Refer to labels and SDS for first aid procedures).
d) Call for medical assistance (9-1-1).
e) Provide the following information:
  i) Your name, your employer's name, address, and location of the emergency.
  ii) Provide telephone number from which you are calling.
  iii) Provide the trade name and chemical name of substance (and CAS number, if known).
  iv) Provide volume of spill or release (i.e., one gallon, five gallons, drum, tank, etc.)
  v) Provide known hazards of substance(s) (i.e., flammable, corrosive, toxic or reactive with water).
f) Contact your supervisor
g) Identify other chemicals in spill or affected areas.
h) Report if spill or leak is near a ditch, canal, or storm sewer.
i) Report injuries, fire, and damages.
j) Assist your supervisor and authorities if your help is summoned.
k) DO NOT re-enter evacuated areas until they are declared safe.
l) Refer all questions from news reporters and regulatory agency representatives to the City Risk Manager's Office.

Small Spill Clean up Procedures for Hazardous Materials

1) IN THE EVENT OF A SMALL SPILL OF A HAZARDOUS MATERIAL, WHICH IS NOT DANGEROUS TO PEOPLE OR THE ENVIRONMENT?
   a) Clear work area where spill or leak has occurred and get help. Do not try to clean up a hazardous material or spill alone.
   b) Call your supervisor.
   c) Put on appropriate protective equipment.
   d) Absorb liquids with kitty litter, sand, clay, oil dry.
   e) Pick up materials with a non-sparking (plastic or brass) tool.
   f) Place material in a suitable storage container and label container.
   g) Dispose of as per SDS instructions, State and Federal Regulations.

2) Employee Responsibilities
   a) Always read the label and Material Safety Data Sheet for each material and product you use or handle at work.
   b) Request a Material Safety Data Sheet (SDS) whenever you are not completely familiar with the proper (and safe) procedures for using or handling hazardous materials.
   c) If you do not understand label and SDS information, ask your supervisor for help before using or handling hazardous materials.
   d) Immediately report all chemical exposures to your supervisor.
   e) Immediately report all safety violations to your supervisor.
   f) Immediately report all spills and leaks of hazardous materials to your supervisor.

g) Learn the location and proper use of personal protective equipment and emergency equipment in your work area.

3) Responsibilities of Supervisory Personnel for Inspecting Hazardous Materials Containers and Facilities

a) Each supervisory level employee or a department head designated employee will be responsible for inspecting all hazardous material containers and facilities under his/her supervision. All leaks or releases, material faults and failures, and other deficiencies are to be reported immediately to the Safety Officer. A log of inspections performed must be maintained. Routine logs which identify functions performed will suffice. Guidelines for performing the inspections follow:

b) On a regular basis:

i) All containers must be inspected for leaks, damage, corrosion or deterioration. Make sure containers are tightly closed and that flammable containers are properly grounded.

ii) All containers must be inspected to assure each is properly labeled with the name of its contents.

iii) All storage areas must be inspected to insure that incompatible materials (particularly reactive and flammable) are not stored in close proximity to each other or the property line.

iv) All tanks, which contain hazardous substances must be inspected to insure that there are no visible signs of leaks or evidence of overflow conditions.

(1) All storage facilities and surrounding areas must be inspected for signs or evidence of leaks or releases of materials.

c) On a monthly basis:

i) All storage facilities and associated structures and plumbing must be inspected for signs of leaks, damage or corrosion.

ii) All storage facilities must be inspected to assure that emergency equipment (alarms, absorbent materials, overpacks, fire extinguishers, emergency eyewashes, etc.) and personal protective equipment (goggles, face shields, respirators, etc.) are available and in proper working order.

iii) All tanks, associated plumbing, valves and monitoring equipment, and surrounding areas must be inspected for signs of leaks, contamination, deterioration or mechanical failures.

(HazCom Policy given to all departments)

PROCEDURE CATEGORY: Safety

PURPOSE:

- To define the Department Hazard Communication Program which includes
    - Department policy
    - communications to employees concerning hazards and protective measures
    - container labeling and SDSs
    - employee training

APPLICABLE LOCATION(S): Entire Department area of responsibility

PERSONNEL RESPONSIBLE:

- Supervisor of Department: overall responsibility for program
- Department Senior Staff: evaluate/review chemicals in-use, define protective equipment/systems
- Foreman: prepare/lead communications, arrange training
- Foreman: maintain inventory list and obtain SDSs for Plant Operations chemicals
- Foreman or designate: maintain inventory list and obtain SDSs for Maintenance chemicals
- All Department employees: awareness and compliance

FREQUENCY: all days, all shifts

ASSOCIATED DOCUMENTS:

- Department site Chemicals, Department Chemicals Inventories
- Plan Department Chemicals Material Safety Data Sheets (SDSs)
- Maintenance Chemicals Material Safety Data Sheets (SDSs)
- Department Procedure hazard Communication
- OSHA Standards 29 CFR: Hazard Communication – 1910.1200

DOCUMENT RETENTION PERIOD: NA

PROCEDURE

1. Department Policy
    a) In order to assure that all employees know information about the dangers of all hazardous chemicals used by Department, the following hazard information communication program has been established.
    b) Under this program, employees will be informed of
        i) the contents of the OSHA Hazard Communication standard,
        ii) the hazardous properties of the chemicals with which they work,
        iii) safe handling procedures,
        iv) and measures employees are to take to protect themselves from the chemicals.
    c) This program applies to all operation and maintenance activities at Department facilities or sites where employees may be exposed to hazardous chemicals under normal working conditions or during an emergency situation.
    d) This program applies to all Department employees.
    e) A copy of the Hazard Communication Program will be given to each employee and will also be available in the ” Department Policies & Procedures” binder located in the Supervisor’s Office and Safety Bulletin board.
    f) The Supervisor of Department is the program coordinator, with overall responsibility for the program, including reviewing and updating this plan as necessary.
2. Definitions:
    a) “chemical” means any element, chemical compound or mixture of elements and/or compounds

b) "container" means any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical; for purposes of this section, pipes or piping systems, and engines, fuel tanks, or other operating systems in a vehicle, are not considered to be containers
c) "employee" means a worker who may be exposed to hazardous chemicals under normal operating conditions or in foreseeable emergencies
d) "employer" means a person engaged in a business where chemicals are either used, distributed, or produced for use or distribution, including a contractor or subcontractor
e) "exposure or exposed" means that an employee is subjected in the course of employment to a chemical that is a physical or health hazard, and includes potential (e.g. accidental or possible) exposure; "subjected" in terms of health hazards includes any route of entry (e.g. inhalation, ingestion, skin contact or absorption)
f) "hazardous chemical" means any chemical which is a physical or a health hazard
g) "health hazard" means a chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established principles that acute or chronic health effects may occur in exposed employees; the term "health hazard" includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic system, and agents which damage the lungs, skin, eyes, or mucous membranes
h) "immediate use" means that the hazardous chemical will be under the control and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred
i) "label" means any written, printed, or graphic material displayed on or affixed to containers of hazardous chemicals
j) "physical hazard" means a chemical for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, and organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive
k) "use" means to package, handle, react, emit, extract, generate as a byproduct, or transfer

3. Inventory Lists
   a) Department shall create and maintain lists of the chemicals in-use and/or stored on-site. These lists are to include all materials purchased for and/or used by employees at the Magee View Avenue site or in fieldwork. The lists are to contain, but are not limited to:
      i) all Department Operations chemicals and treatments
      ii) all supplies associated with Department activities
   b) The Foreman or designee are responsible for creating and updating the Department Chemicals.
   c) Inventory list locations:
      i) The inventory lists for the Department Chemicals and the Department maintenance Chemicals will be kept as hardcopies at the front of the respective MSDS binders in the Hazard Communication board.
4. Material Safety Data Sheets
   a) Department shall maintain current Material Safety Data Sheets (SDSs) for all items on the Department Operations Chemicals and Department maintenance chemicals Inventory Lists.
   b) Any individual placing an order for "chemical" supplies is responsible for obtaining a current MSDS for the item(s) ordered. This may be accomplished by either requesting a current MSDS for the item(s) at the time of ordering OR for accessing and printing on-line SDSs available from many suppliers. The associated inventory list must also be updated with the new chemical purchase.
   c) SDSs for items that are first-time purchases are to be forwarded to the Foreman for review/evaluation and filing into the appropriate MSDS binder(s). If new hazards are identified, the MSDS reviewer is responsible for assuring that the new information is communicated to affected employees.
   d) Current SDSs for repeat-purchase items are to be reviewed by the individual referred to in 4.b) above for issue date relative to the existing MSDS on file at Department. The most current copy is to be filed into the appropriate binder(s) and, unless previous versions are required for some specific reason (such as existing inventory of a discontinued version of the chemical), previous versions of the MSDS should be discarded.
   e) Current SDSs are to be filed into the designated Operation Chemical or Maintenance Chemical SDS binders.

i) In the event that an MSDS is found to be missing from any binder, the employee should notify the designated responsible person or the Foreman who will see to its replacement.

5. Hazard Assessments
   a) All chemicals in-use at Department sites are to be evaluated by the representative(s) of Department Senior Staff and/or the City Safety Officer (i.e. the "employer"). Those evaluating the chemicals shall consult the following sources, as needed, for appropriate information concerning hazards:
      i) Safety Data Sheets (SDS) provided by the manufacturers
      ii) 29 CFR part 1910, subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA)
      iii) "Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment", American Conference of Governmental Industrial Hygienists (ACGIH) – latest edition
   b) The inventory lists of chemicals described previously in Item #2 are used along with the SDSs and other resources noted above to assess the hazards associated with the chemicals used in the Department workplace and fieldwork.
   c) Department management will assure that appropriate engineering controls and/or personal protective equipment (PPE) are installed and/or made available to all employees exposed to hazardous chemicals in the Department workplace and fieldwork.
6. Labels and other forms of warning
   a) All chemicals purchased for use at the Department site and fieldwork are to be inspected at time of receipt by the person ordering/receiving it for proper labeling; each individual container must include:
      i) the identity of hazardous chemical(s)
      ii) appropriate hazard warnings
      iii) the name and address of the manufacturer or other responsible party
      iv) as previously discussed, an MSDS for each chemical is also required
   b) Appropriate container label warnings must provide at least general information regarding the hazard and must include:
      i) words
      ii) pictures
      iii) symbols
      iv) or combinations of the above
   c) Label warnings in conjunction with other information immediately available to employees (i.e. SDSs) shall provide specific information regarding the physical and health hazards of the hazardous chemicals.
   d) Chemicals which are transferred from the original labeled container for storage and/or use in another container must be labeled to indicate at least the identity and appropriate hazard(s) warnings. It is the responsibility of the individual performing the transfer to label the new container.
      i) Appropriate labels include signs, placards, or operating procedures.
      ii) It is not required to label portable containers into which hazardous chemicals are transferred from labeled containers and which are intended only for the <u>immediate</u> use of the employee who performs the transfer.
   e) Additional signage may be posted in areas where chemicals are used or where employees may expect exposures; these indicate potential general hazards associated with the use of the materials and required PPE to insure employee safety.
   f) The Foreman and/or City Safety Officer will review the Department labeling procedures annually and will update labels as required.
7. Training
   a) All employees who work with, or are potentially exposed to, hazardous chemicals will receive initial training on the Hazard Communication Standard and the City of Stamford Hazard Communication Program before commencing work.
   b) The training will include:
      i) overview and requirements of the OSHA Hazard Communication Standard, 1910.1200
      ii) the Department Hazard Communication Program, including locations of the written program, inventory lists of chemicals, and SDSs
      iii) identification of hazardous chemicals present in the employee's work areas
      iv) physical and health risks of the hazardous chemicals, including symptoms of overexposure

v) how to determine the presence or release of hazardous chemicals in the workplace
vi) means of reducing or preventing exposures to hazardous chemicals though use of control procedures, work practices, and personal protective equipment (PPE)
vii) steps Department has taken to reduce or prevent employee exposures
viii) how to read labels and SDSs to obtain hazard information

c) Employees will receive information and training whenever a new physical or health hazard is introduced into their work area.
d) Employees will receive information and training on non-routine hazardous tasks prior to their executing the activity. An example of a non-routine hazardous task is “Confined Space Entry”.
e) It is the responsibility of the Supervisor of Department and the City Safety & Training Officer to arrange for and/or provide all appropriate safety training.
f) Training records (agenda, sign-in sheets and copy of material covered) are to be kept by the Foreman, filed in the Safety Training Records binder.

8. Hazard communication to contractors working on-site
   a) It is the responsibility of the Supervisor of Department (or her/his designee) to provide to contractors working on-site information concerning hazardous chemicals that their employees may be exposed to and suggested safety precautions.
   b) The contractor shall be provided access to and copies of pertinent SDSs and PPE Hazard Assessments.

REVISION HISTORY: Original, March 2009 revised document: March 13, 2014

WRITTEN BY: Matt Stuhlman _____ DATE: _____

REVIEWED/APPROVED BY: Supervisor of Dept. _____DATE: _____

1) Purpose:

The City of Stamford is committed to providing a safe and healthful work environment for our employees. In pursuit of this endeavor, the following Occupational Exposure to Bloodborne & Airborne Pathogens Procedure is provided to eliminate or minimize occupational exposure to bloodborne & Airborne pathogens in accordance with OSHA standard CFR 1910.1030, "Occupational Exposure to Bloodborne Pathogens".

2) Authority:

OSHA standard 29 Code of Federal Regulations, Part 1910.1030.

3) Plan Statement

The City of Stamford has established a written Exposure Control Plan that is available to all employees. The City of Stamford is committed to full compliance with applicable laws and regulations dealing with infectious disease control. The City will develop plans leading to compliance for any deficient areas identified by this program.

a) Each employee is directly responsible for following the policies and procedures outlined in the Occupational Exposure to Bloodborne & Airborne Pathogens plan. The Occupational Exposure to Bloodborne & Airborne Pathogens plan contains guidelines for the following areas:
   i) Overview
   ii) Definition of Terms
   iii) Measures for Prevention
   iv) Care and Cleaning
   v) Housekeeping
   vi) Occupational Exposure Determination
   vii) Post-Exposure Evaluation and Follow up
   viii) Confidentiality of patient Information
   viiii) Health maintenance System
   i) Training

The Occupational Exposure to Bloodborne & Airborne Pathogens plan will be reviewed and updated at least annually (every 12 months) and whenever necessary to reflect new or modified procedures that affect occupational exposure, and to reflect new or revised employee positions with occupational exposure. Training will be conducted annually for all applicable city employees following OSHA guidelines.

4) **Overview**

a) Exposure Determination
   i) The Exposure Control Program is applicable to all employees of the City of Stamford whose position has been identified in the Exposure Control Program as being covered by this procedure. It is effective immediately.
   ii) The following tasks are reasonably anticipated to involve exposure to blood, body fluids, or other potentially infectious materials:
   iii) Provision of emergency medical care to injured or ill victims, patients or suspects

iv) Rescue from hostile environments including burning structures, motor vehicle accidents, water contaminated areas, or oxygen deficient atmospheres;
v) Recovery and/or removal of bodies from any situation cited above; and
vi) Response to hazardous material emergencies, both transportation and fixed site, involving potentially infectious substances.
vii) Clean up activities following a medical emergency and the decontamination of equipment or surfaces.

b) The following job titles within the following City departments are reasonably anticipated to involve exposure to blood, body fluids, or other potentially infectious substances in the performance of their duties:

(1) Operations
- (a) Water Pollution Control Authority Operations
  - *(i) Chemist*
  - *(ii) Laboratory Technician (STP)*
  - *(iii) Pollution Control Field Operator*
  - *(iv) Sewage Plant Operator I*
  - *(v) Sewage Plant Operator II*
  - *(vi) Supervisor of Liquid Waste*
  - *(vii) Shift Foreman*
  - *(viii) Plant Operator*
  - *(ix) Operator in Training*

(2) Collections Bureau
- *(a) Laborer*
- *(b) Collection Driver*
- *(c) Refuse Collection Foreman*

(3) Department of Park & Facility Maintenance
- *(a) Parks Security Officer*
- *(b) Chief Lifeguard*
- *(c) Public Beach & Pool Lifeguards*
- *(d) Recreation Supervisor*
- *(e) Recreation Worker*
- *(f) Maintenance and Custodial Staff*
- *(g) All full/part time park employees*
- *(h) Arborist & Tree cutting employees*

(4) Road & Vehicle Maintenance
- *(a) Heavy Equipment Operators*
- *(b) Equipment Mechanics*

(5) Public Safety Health & Welfare
- (a) Stamford Health Department
  - *(i) Public Health Nursing*
  - *(ii) Public Health Nurse I*
  - *(iii) Public Health Dental Hygienist*
  - *(iv) Director of Nursing Services*
  - *(v) AIDs Counselor*
  - *(vi) Laboratory Director*

Public Safety Health
- *(vii) Laboratory Technician*
- *(viii) Public School Nurse*
- *(ix) Custodial Staff from Facilities Maint.*

(6) Stamford Police Department
- *(a) Police Officer*
- *(b) Police Sergeant*
- *(c) Police Detective*
- *(d) Police Marine Supervisor*
- *(e) Police Lieutenant*
- *(f) Police Captain*
- *(g) Police Matron*
- *(h) Deputy Chief*

(i) Custodial Staff

(7) Stamford Fire Department
- *(a) Fire Fighter*
- *(b) Fire Lieutenant*
- *(c) Fire Captain*
- *(d) Fire Marshal*
- *(e) Deputy Fire Marshal*
- *(f) Deputy Fire Chief*
- *(g) Personal Protective Equipment Mechanics*

(8) Smith House Skilled Nursing Facility
- *(a) Director of Nursing Services*
- *(b) Unit Coordinator*
- *(c) Nursing Staff*
- *(d) Licensed Practical Nurse*
- *(e) Nursing Assistant I & II*
- *(f) Director of Maintenance*
- *(g) Custodian Staff*
- *(h) Maintenance Worker (seasonal)*
- *(i) Laundry Aide*
- *(j) Housekeeping Aide*
- *(k) Physical Therapist*

(9) Office of Administration
- *(a) Safety & Training Officer*
- *(b) Health & Social Services*
- *(c) Public Nursing Staff*

(10) Stamford Board of Education
- *(a) Head Custodian*
- *(b) Custodian*
- *(c) Plumbers*
- *(d) Physical Education Teacher*
- *(e) Athletic Team Coach*
- *(f) School Nurse/Dental Hygienist*
- *(g) First Aid providers (see note below)*
- *(h) Special Education Teachers (see note)*
- *(i) Kindergarten Teacher and Aide*
- *(j) Pre School Teacher*
- *(k) Security Personnel (daytime)*

c) First Aid providers, employees assigned the duties to administer first aid in the event of a medical emergency.

d) Special Education Teacher (Special Education and teachers of those students with known physical conditions which could put the teacher at risk of exposure).

5) Employer Responsibilities

The City of Stamford provides procedures that exist to:

a) Departments should designate an Infection Control Coordinator.
b) Teach all "at risk" Department personnel in its employ about the epidemiology, modes of transmission, and prevention of HIV, Hepatitis and other bloodborne and airborne diseases.
c) Emphasize the need for routine use of standard blood and body fluid precautions for all patients.
d) Provide personal protective equipment (PPE) and supplies necessary to minimize the risk of infection with HIV, Hepatitis and other bloodborne and airborne pathogens.
e) Monitor employee adherence to recommended protective measures. When monitoring reveals a failure to follow recommended precautions, appropriate counseling, education, or retaining will be provided. If these measures are unsuccessful, appropriate disciplinary action will be considered.

6) Employee Responsibilities

a) The employee must learn the basics of infection control, including modes of disease transmission and exposure risks.
b) Each employee is responsible for ensuring compliance with the procedures outlined in the Occupational Exposure to Bloodborne & Airborne Pathogens plan and must recognize that they have the responsibility for their own health and safety and encourage other employees to work in a safe manner.
c) Consistent with the circumstances presenting themselves, employees shall use the appropriate personal protective equipment.

7) Definition of Terms

a) *Blood*: human blood, human blood components, and products made from human blood.
b) *Bloodborne Pathogens*: pathogenic microorganisms that are present in the human blood and can cause disease in humans. Those most commonly found include HIV/Aids, Hepatitis B & C.
c) *Bodily fluids*: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids.

d) *Communicable Disease:* A communicable disease is a disease that can be transmitted from one person to another. It is also known to be a contagious disease.
e) *Contaminated*: the presence or reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.
f) *Contaminated Sharps*: any contaminated object that can penetrate the skin including, but not limited to needles, scalpels, and broken glass.
g) *Decontamination*: the use of physical or chemical means to remove, inactivate or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particle and the surface or item is rendered safe for handling, use or disposal.
h) *Engineering controls*: Controls (i.e. sharps disposal containers, self sheathing needles) that isolate or remove the bloodborne pathogens hazard from the workplace.
i) *Exposure Incident*: a specific eye, mouth, other mucous membrane, non-intact skin r parenteral contract with blood or other potentially infectious materials that results from the performance of an employee's duties.
j) *HBV*: Hepatitis B Virus
k) *HIV*: Human Immunodeficiency Virus
l) *Infectious Disease:* An infectious disease is an illness or disease resulting from invasion of a host by disease producing organisms such as bacteria, viruses, fungi, or parasites.
m) *Licensed Healthcare Professional:* A person whose legally permitted scope of practice allows them to independently perform the activities required in Hepatitis B vaccination and post exposure follow-up.
n) *Occupational Risk*: Occupational exposure may occur in many ways, including needle stick, cut injuries, or aerosols of body fluids. Emergency response personnel are at high risk for bloodborne infections due to routinely increased exposure to body fluids from potentially infected patients. Any exposure to a communicable disease carries a certain amount of risk. Emergency response personnel are in an occupation that directly exposes them to body fluids and must be considered at substantial risk of occupational exposures.
o) *Other potentially infectious materials(OPIM)*: means any unfixed tissue or organ (other than intact skin) from a human (living or dead), and human immunodeficiency virus (HIV)-containing cell or tissue cultures, organ cultures, and HIV- or hepatitis B virus (HBV)-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.
p) *Parenteral*: piercing mucous membranes or skin barrier through such events as a needle sticks, human bites, cuts and abrasions.
q) *Particulate Mask (Respirator)*: Also known as a surgical mask. An approved device Nose and mouth cover used to keep exhaled pathogens from being spread around the surrounding area.
r) *Personal protective equipment*: Specialized clothing or equipment worn by an employee for the protection against a hazard. General work clothes (i.e. uniforms, pants, shirts) are not intended to function as PPE.

s) *Regulated waste*: Liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps and pathological and micro biological wastes containing blood or other potentially infectious materials
t) *Source Individual*: Any individual, living or dead, whose blood or other potentially infectious materials may be a source of an occupational exposure to the employee.
u) *Sterilize*: The use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.
v) *Tuberculosis (TB)*: A systematic disease most commonly affecting the lungs
w) *Universal Precautions (Standard Precautions):* the Center for Disease Control (CDC) recommends the use of "Universal Precautions" when emergency response personnel work with blood or body fluids from any patient. This precaution says that emergency response personnel must consider all blood and body fluids from patients as potentially infectious.
x) *Workplace controls:* Controls that reduce the likelihood of exposure by altering the manner in which a task is performed.

8) Measures for Prevention

a) Health History
   i) A complete and detailed health history for each employee is a critical preventive measure. An individual's health history helps to identify potential high risk areas that may require special attention. All emergency response personnel will participate in a pre-employment physical. Emergency response personnel will receive periodic examinations as recommended in post exposure situations.
b) Immunizations – Vaccinations
   i) Immunizations reduce the risk of contracting a communicable disease. This protects the health of the workers and their families. Due to the nature of emergency services the CDC highly recommends that all personnel maintain immunizations against Hepatitis B, measles, mumps and rubella (MMR), diphtheria, polio, tetanus (DPT), varicella (Chickenpox) and influenza (yearly). The City of Stamford makes available the Hepatitis B vaccination at no cost to the employee. PPD screening for Tuberculosis is recommended by the CDC and is offered initially upon hire and then annually. The employee is responsible for ensuring that all recommended immunizations and vaccinations are up to date.
c) Hepatitis B Vaccination Program
   i) The City of Stamford complies with the OSHA mandate by providing the Hepatitis B vaccination free of charge to all employees classified "at risk" for exposures and it will be provided after the member receives the Bloodborne Pathogens training. In all cases, vaccinations will be provided <u>within 10 days</u> of assignment to a position, which will involve potential exposures.

ii) All employees classified "at risk" as outline in the Employee Exposure Determination section of this procedure are required to do ONE of the following:
   (1) Accept the FREE Hepatitis B vaccination series as provided by the City of Stamford.
   (2) Sign a refusal indicating that the FREE vaccination series is declined. (refer appendix A)
   (3) The employee may change their mind and receive the inoculation at any time.
   (4) Provide medical documentation that the vaccination series is not required due to the immunity from previous vaccination or exposure to Hepatitis.

d) TB testing for those employees who are first responders
   i) PPD Skin testing
   ii) SPD & SFR personnel will be offered a baseline PPD test.
   iii) In case of an on-duty TB exposure a follow up PPD test will be provided (according to medical guidelines).
   iv) If a PPD test is positive, further follow up will be offered (as medically directed)

9) Compliance Methods/Workplace Practice Controls

a) Universal Precautions shall be used at the Stamford Police Department to prevent contact with blood or OPIM. All blood or OPIM shall be considered infectious regardless of the perceived status of the source individual.
b) Engineering Controls and work place practice controls (10) listed below shall be used to minimize or eliminate exposure to employees.
c) No eating, drinking, smoking, application of cosmetics or lip balm or handling of contact lenses will be allowed in areas where there is a risk of occupational exposure.
d) No food/beverages shall be kept in refrigerators or other locations where blood or other potentially infectious materials (OPIM) are present.
e) If contact with blood or OPIM is expected, employees are to examine themselves for cuts, sores, hangnails, abrasions and cover them with a sterile bandage.
f) After the removal of gloves or other personal protective equipment, employees shall wash their hands immediately (or as soon as possible).
g) Employees shall wash exposed skin with soap and warm water immediately after a contact with blood or OPIM. If water is not readily available use a germicidal hand cleaner and paper towel, then soap and warm water as soon as possible. Should any blood or OPIM enter the eyes, nose or mouth, these areas should be flushed with water immediately.
h) Contaminated needles and other sharps shall not be bent, recapped or removed. Shearing or breaking of sharps is prohibited.
i) SHARPS CONTAINERS or SHARPS/NEEDLE KEEPRS are located at many areas within the city, most notably Youth Bureau, NOC Office, in the jail area and the Police Garage. These are puncture resistant, labeled/color coded as BIOHAZARD and leak proof.

j) Evidence or impounded items which are contaminated with blood or OPIM shall be packaged in appropriate leak proof containers and labeled BIOHAZARD. Any item collected which may puncture the first bag shall be double-bagged so as to prevent puncturing/leaking.
k) BIOHAZARD waste (gloves, masks, boxes, etc.) that is contaminated with blood or OPIM shall be appropriately packaged and disposed of in the red plastic biohazard bags, then placed in evidence for disposal.
l) Reusable items/equipment (handcuffs, pens, etc.) which are contaminated with blood or OPIM shall be decontaminated as soon as possible.
m) Hand Washing
    i) Hand washing is the single most important means of preventing the spread of infection. After exposure or the removal of gloves, hands and other skin surfaces will be washed thoroughly. Personnel should scrub hands briskly for 1 minute with soap or anti-bacterial cleaners and warm water. **DO NOT USE BAR SOAP**. Bar soap easily transmits disease through direct contact. Hands shall be washed:
    ii) After each exposure incident or as soon as feasibly possible after the removal of gloves and personal protective equipment.
    iii) After cleaning and disinfecting of contaminated equipment.
    iv) After cleaning personal protective equipment.
    v) After using the restroom.
    vi) Before and after the handling of food or food utensils.
n) Hand Washing Facilities
    i) Hand washing facilities shall be made available and readily accessible to all employees who may incur exposure to blood or other potentially infectious materials. Where hand washing facilities are not feasible, *City of Stamford Department will provide an antiseptic cleanser*. When these alternatives are used, employees shall still wash their hands with soap and running water as soon as feasible.

10) Personal Protective Equipment (PPE)

a) The Department shall ensure that the provisions regarding personal protective equipment described in this plan are met and maintained.
b) Personal protective equipment shall be chosen based on the anticipated exposure to blood or other potentially infectious materials. Protective equipment shall be considered appropriate only if it does not permit blood or other potentially infectious materials to pass through or reach an employees' clothing, skin, eyes, mouth, or other mucous membranes under normal and proper conditions of use and for the duration of time that the equipment will be used.
c) Supervisors shall ensure that employees use appropriate PPE. In cases where an employee temporarily and briefly declines to use PPE because, in the employee's professional judgment, its use may prevent delivery of healthcare or pose an increased hazard to the safety of the worker or co-worker, then the supervisor shall investigate and document the situation to determine whether changes can be instituted to prevent such occurrences in the future.

d) Supervisor shall ensure that appropriate PPE in the necessary sizes is readily accessible at the work site or is issued at no cost to employees. Hypoallergenic gloves, glove liners, powderless gloves, or other similar alternatives shall be readily accessible to those employees who are allergic to the gloves normally provided.
e) Types of PPE
    i) Gloves – Disposable gloves are a standard component of emergency response equipment. All personnel should don gloves before initiating any emergency care task or engaging in any activity which could involve exposure to blood or OPIM. Gloves must be of appropriate materials,
    ii) Usually intact latex or intact vinyl of appropriate quality for the procedures done, and of appropriate size for each emergency response personnel.
    iii) Disposable gloves are not to be washed or decontaminated for re-use, and are to be replaced as soon as possible when they become contaminated. Gloves that become torn or punctured (or their ability to function as a barrier is otherwise compromised) shall be replaced immediately or as soon as feasible. Approved method for checking holes/leaks/punctures in gloves is to inflate and close glove to ensure air remains trapped.
    iv) Utility gloves may be decontaminated for re-use if the integrity of the glove is uncompromised. Utility gloves shall be disposed of properly if they are cracked, peeling, torn, punctured, or they exhibit other signs of deterioration or inability to function as a barrier without compromise.
    v) Eye and Face Protection – personnel are required to use mask and protective eyewear, or face shield, when there exists a possibility for exposure to blood or OPIM.
        (1) Masks worn in combination with eye protection devices (such as goggles or glasses with solid side shield, or chin-length face shields) are required when the occurrence of splashes, splatters, or droplets of blood or other potentially infectious materials can reasonably be anticipated to contaminate an employee's eye, nose, or mouth.
f) Other PPE
    i) Additional protective clothing (such as lab coats, gowns, aprons, clinic jackets, or similar outer garments) shall be worn in instances when gross contamination can reasonably be expected.

11) Guidelines for the Prevention of Occupational Transmission of Tuberculosis

Employees will be alert to persons with noticeable cough and or other signs of TB, and will instruct them to cover their mouth with arm (hand) or Kleenex during all encounters. Open air encounters with persons suspected of having TB are no-risk situations. TB bacteria disperse rapidly in large volumes of fresh air.

a) Encounters of less than 1 hour in enclosed spaces rarely result in transmission
b) Transmission of TB requires repeated and continual contact with the infected person(s).

12) Care and Cleaning

a) Cleaning is the physical removal of contamination using soap and water using a scrubbing action.
b) Disinfection is reducing the number of disease producing organisms by physical or chemical means. Personnel should clean the item with soap and water, and then apply a disinfecting solution. Solutions bleach and water at a 1 to 10 dilution ratio is an acceptable deamination. BOE may use environmental friendly approved methods of chemicals. DO NOT use a bleach solution in the cleaning of electronic equipment or clothing. When using a disinfectant follow the SDS instructions for proper PPE to wear.
    i) Remember, disinfectants can be toxic or caustic. Disinfecting solutions should have an EPA registry number and show that they are effective against HIV, HBV and mycobacterium tuberculosis. Routine disposal of germicidal cleaning water in the drainage is acceptable.
c) Contaminated Personal Protective equipment - Cleaning, Laundering and Disposal
    i) All PPE shall be cleaned, laundered, and disposed of by the Department at no cost to the employees. The Department will also make all necessary repairs and replacements at no cost to employees.
    ii) All garments penetrated by blood or other potentially infectious materials shall be removed immediately or as soon as feasible. All PPE shall be removed before leaving the work area.
    iii) When PPE is removed, it shall be placed in appropriately designated areas or containers for storage, washing, decontamination, or disposal.
d) Contaminated Equipment
    i) The Supervisor shall ensure that equipment that has become contaminated with blood or other potentially infectious materials is examined prior to servicing or shipping. Contaminated equipment shall be decontaminated, unless decontamination is not feasible. Contaminated equipment shall be tagged and labeled as such.
e) Community items, such as vehicle steering wheels, radios, Mobile Data Terminals, pens, typewriters, telephones, portable radios, etc. shall not be touched with contaminated gloves. Gloves should be changed each time before one of these items is used unless extreme care is taken to decontaminate the community items when the processing / packaging is completed.
f) All areas of the worksite contaminated with biological hazards shall be thoroughly cleaned as soon as possible with an EPA-approved decontaminate (e.g., bleach/water solution, disinfectant, virucide) before continuation of or return to service. Each operational unit shall make the appropriate arrangements for thorough cleaning. Vehicles so contaminated should be considered out of service until this cleaning is accomplished.

13) Laundering

a) The City of Stamford requires that all uniforms or protective clothing contaminated with blood or OPIM shall be changed as soon as possible. The items shall be sealed in a red Biohazard Bag and taken to the designated

laundering facility or disposed of according to policy. Contaminated clothing may not be taken home for laundering.

b) If leather gloves or uniform items become contaminated with blood or OPIM and can not be effectively cleaned or disinfected, they must be disposed of. Leather uniform items (belts, shoes, etc.) should be maintained with a high gloss finish to avoid absorbing infectious materials.

14) Cleaning and Disinfecting Instructions

a) Personnel shall clean and disinfect equipment as outlined in this plan. The following sequence shall be used for the handling and cleaning of contaminated equipment and spills:
   i) Personnel shall wear the appropriate personal protective equipment.
   ii) Wipe up or otherwise physically remove as much blood or body fluid as possible using absorbent materials (paper towels, etc.). Discard materials in a red biohazard bag.
   iii) Apply disinfectant or warm soapy water, and again physically remove as much as possible, this requires vigorous scrubbing and scraping if necessary.
   iv) After all possible visible contamination has been removed, apply the disinfectant for the manufacturer's recommended contact time (usually 10 minutes at room temperature) and rinse as directed.
   v) Allow to air dry.

15) Housekeeping - Biohazard Waste Disposal

The City of Stamford assures that personnel place all infectious waste needing disposals in a closable, leak-proof container or bag that is marked, color coded or labeled as required by law. The Departments have sealable, puncture resistant, leak proof containers for the proper disposal of needles, disposable syringes and other sharp surface instruments. Also every Stamford Fire & Rescue vehicle and Station has these types of containers for the proper disposal of SHARPS.

a) Contaminated laundry shall be handled as little as possible with a minimum of agitation. Contaminated laundry that is wet or presents a likelihood of soak-through shall be bagged at the location where it was used and shall not be sorted or rinsed in the location of use. Uniforms contaminated shall be labeled with biohazard label to alert cleaning agencies of potential contamination. Contaminated clothing must not be cleaned at home.
b) Contaminated Gloves
c) When gloves become contaminated they should be removed when possible, taking care to avoid contact wit the exterior of the gloves. All gloves will be considered contaminate and must be disposed of in an approved biohazard container. Personnel should never leave used gloves on scene or throw them in an ordinary waste receptacle.
d) Biohazard Bags
   i) Objects contaminated with potentially infectious material must be placed in an impervious bag. If the outside contamination of the bag is likely a second bag will be added. The bag will have the signal word "BIOHAZARD" or

biological hazard symbol conducive to the updated HazCom labeling 2013 . The items may then be transported to and are for disposal or appropriate cleaning.

e) Sharp Instruments
   i) Disposable syringes, needles, scalpel blades and other sharp items must be placed in a sealable, puncture-resistant, leak proof container for disposal. Employees shall monitor these containers so they do not overfill. All biohazard waste set for disposal must be disposed of according to Federal and State regulations and shall be handled by the City of Stamford's contracted company.

16) Occupational Exposure Determination

The following page is a quick reference guide concerning the different levels of exposure that personnel may encounter and the actions that shall be taken in the event of an exposure.

LEVEL	DESCRIPTION	ACTION TAKEN
LEVEL I	Contact limited to merely being in the presence of a person suspected of having a communicable disease. This may or may not include contamination of personal protective equipment.	No special action required. Personal protective equipment and other equipment to be disposed of cleaned or disinfected as outlined in this plan.
LEVEL II	Exposure to healthy, INTACT (employee's skin is healthy and unbroken) skin from blood or OPIM. (Less than one hour with person with known TB) If there is a question on whether or not an exposure has occurred, report immediately to Concentra Medical Center or Stamford Emergency Department for a medical evaluation	No special action required. Personal protective equipment and other equipment to be disposed of, clean or disinfected as outlined in this plan. Complete the City of Stamford first report of injury report (follow all instructions) if the employee seeks a medical evaluation.

LEVEL III	Exposure to NON-INTACT skin: defined as a break in the skin's surface that allows organisms a direct route into the body. This includes chapped skin, abrasions, cuts, lesions on the skin's surface, and skin with weeping or oozing dermatitis, inflammation or rash. Whenever there is contact with infected blood or body fluids through open wounds, mucous membranes and parenteral routes. EXAMPLES: ➲ Contaminated needle stick injury. ➲ Blood or body fluid contact with employees' mucous membranes of eyes, nose or mouth. ➲ Blood or body fluid in contact with non-intact skin. ➲ Cuts with sharp objects contaminated with blood or body fluids. ➲ Injuries sustained while cleaning contaminated equipment. ➲ One hour of more with a person with known TB without PPE	*****SPECIAL ACTION REQUIRED***** Immediately after exposure, report to the Stamford Hospital Emergency Department or Concentra Medical Center for a complete medical evaluation. DO NOT DELAY! Complete the following forms: ➲ Immediately notify your supervisor. ➲ City of Stamford first report of injury report (follow all instructions). ➲ Ryan White Exposure Form (SPD & SFRD). o Follow the instruction for the filling out and filing of this form. (refer to appendix B) ➲ **OSHA FORM 300 -** Log of work-related injuries & illnesses – If treated for Possible Pathogens list as "Privacy Case" <u>do not list employee's name.</u>

17) Post Exposure Procedures

Serologic testing is available through the City of Stamford's workers compensation medical providers. This is available to all employees with concern about a possible communicable disease exposure, provided that they have documented the potential exposure.

a) Exposed Employee Responsibilities
   i) Percutaneous / Mucosocutaneous Exposures
      (1) Initiate immediate self care

(2) Wash the wound with disinfectant soap and warm water. Scrub fingernails and nail beds for at least 15 seconds but not to the extent that the skin's integrity is broken.
(3) Flush eyes, nose or mouth exposures with water or a sterile solution.
(4) "Milk" any needle sticks, then wash and disinfect
(5) Make an immediate verbal report of the exposure to the supervisor on duty.
(6) Go to the hospital emergency room for post-exposure treatment and evaluation.

b) Level III Exposure Protocol
   i) Level III occupational exposures with a KNOWN contamination source or event should be handled as follows:
   ii) The hospital receiving the patient will be contacted and informed via the Ryan White Exposure form that a Level III Occupational Exposure has occurred.
   iii) The exposed employee will report IMMEDIATELY to the Stamford Hospital Emergency Department or Concentra Medical Center. A complete medical evaluation will be performed.
   iv) All appropriate Injury and Workers Compensation forms must be completed as indicated in the Occupational Exposure Determination chart with in this procedure.
   v) A determination of risk will be based on:
      (1) Clinical evaluation of the employee.
      (2) Information and / or blood test results from the original person.
   vi) Where permitted by law, blood will be drawn from the original person and appropriate tests completed, along with counseling and the proper consents signed (see attached Stamford Hospital Ryan White Policy)
   vii) The injured employee should be should be interviewed regarding any history of Hepatitis, risk factors for exposure to Hepatitis B and Hepatitis B immunization status. The appropriate blood test will be completed along with counseling and the proper consents signed.
c) Level III occupational exposures from an UNKNOWN source or event will be referred to an Infectious Disease Physician (ID) for follow up.
   i) Any positive test results will be followed up by an Infectious Disease Physician (ID).
   ii) The results of these tests will be provided to the employee with counseling from a physician. The results of these tests will remain in strict confidence between the employee and the attending physician. The employee will provide their supervisor with information necessary to comply with worker's compensation laws and other Department policies only. These tests will be done at the expense of the applicable city department. The employee will be provided a copy of all medical reports and copies of healthcare professional's written opinion at no cost within 15 days of their receipt by the Stamford Police Department.
d) CLINICAL ACTION REQUIRED FOR LEVEL III OCCUPATIONAL EXPOSURES
e) Documentation

i) When an employee has an exposure to a communicable disease, Level II or greater, the incident must be documented as outlined in this procedure. This documentation protects both the employee and the Department. Proper documentation is essential for insurance and compensation claims and is useful for quality assurance and compliance monitoring.
ii) All employee medical records, including communicable disease exposures are strictly confidential.

f) Notification
i) The Ryan White Comprehensive AIDS Resources Emergency Act of 1990 mandates that the receiving hospital's Infection Control Officer must notify the Department's Infection Control Coordinator within forty-eight hours of a communicable disease diagnosis in a patient treated by a hospital team member.
(1) Upon notification, the Infection Control Coordinator will notify the involved employee(s) and initiate any necessary follow up. It is the responsibility of the Infection Control Coordinator to verify documentation of the incident and coordinate any follow up activities.

g) Verification
i) Verification is the process of deciding if a reported exposure poses a real health risk to the employee. The Infection Control Coordinator will advise the employee of any required follow up treatment. The Operational Medical Director and or the Infection Control Officer at the receiving hospital will determine the appropriate follow up treatment. The employee will be verbally notified of any treatment within twenty-four hours, with written documentation to follow via the Ryan White form. If an exposure requires follow up treatment follow the outline with in this procedure.

h) Treatment

i) Treatment is medical care given to reduce the chance of contracting a communicable disease after exposure. The type and timing of treatment varies with different diseases. Depending on the disease, treatment may be short-term or long-term.

i) Diseases that usually require post-exposure treatment include, but are not limited to:
i) HIV
ii) Hepatitis B
iii) Hepatitis C
iv) Meningitis
v) Tuberculosis

j) All post-exposure testing will be obtained at the Stamford Hospital emergency Department or Concentra Medical Center.

18) Confidentiality of Patient Information

a) All patient related information must be considered confidential. Generally, notification laws emphasize patient confidentiality, not full disclosure to the attending emergency response personnel.

b) There are Federal and State laws that prohibit the release of confidential medical records as well as City of Stamford policies (i.e. HIPPA - Patient Privacy Act).
c) The same confidentiality standards apply to information regarding the communicable disease or test for status. The sharing of this information is a violation of the confidentiality standards. Appropriate disciplinary action will be taken towards individuals who violate these confidentiality standards.

19) Health Maintenance System

a) The health maintenance system is designed to optimize the health of workers and to minimize the risk of getting occupational infection or injury. The health maintenance system includes: pre-entry (or pre-employment) health assessment, periodic reassessment, reporting of communicable disease exposures and an employee assistance program.
b) All City of Stamford employees needing post-exposure follow up from a communicable disease exposure will use the Stamford Hospital emergency Department or the Concentra Medical Center.

20) Recordkeeping

a) The Supervisor will keep attendance records for all training sessions for at least three (3) year after the date of the training. Such records will include the attendance list with a name, job title and signature of each member; an outline of the training presented; the date and times the training was provided; a summary of each instructor's qualifications; and copies of any handouts or examinations.
b) All medical records and documentation concerning any member who is occupationally exposed to blood or body fluids while on duty with the Department must be maintained in a separate, secured, limited access file. The records will be kept for the required thirty (30) year period post employment with the City of Stamford. These records shall be kept confidential and will not be disclosed without the member's written consent to any person within or outside the workplace except as required by law or OSHA regulations.
c) Availability of Records
    i) Whenever an employee (or designated representative) requests access to a record, City of Stamford shall provide access to said employee's records in a reasonable time, place, and manner in accordance with 29 CFR 1910.1020(e). An employee (or designated representative) will only be given access to his or her own records.
d) Transfer of Records
    i) If the City of Stamford ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, Human Resource Director shall contact the Director of the National Institute for Occupational Safety and Health (NIOSH) three months prior to cessation of business for instruction on final disposition of the records.
e) Evaluation and Review
    i) The City Safety Officer shall review this Bloodborne Exposure Control Plan for effectiveness at least annually and as needed to incorporate changes to the standard or changes in the work place.

21) Training

a) The Department Supervisor will assure that all "at risk" employees receive education on precautionary measures, epidemiology, modes of transmission and prevention of HIV, HBV, HCV and other bloodborne pathogens.

b) "At risk" employees will receive training regarding the location and proper use of personal protective equipment, work practices, and precautions to be used in handling contaminated articles and infectious waste.

c) Training records will show the dates or training sessions, the content of those training sessions, the names or all persons conducting the training and the names of all who attended the training. Training record will be maintained for five years. All new hire Police Officers or other "at risk job classifications will receive this training before beginning their job assignments.

d) All employees classified "at risk" are required to attend the annual infection control training program. This program will include the following topics:
   i) A review of this procedure
   ii) A review of bloodborne pathogens
   iii) A review of post exposure procedures
   iv) Employee rights under this OSHA standard
   v) A review of personal protective equipment and it's use
   vi) Disinfecting procedures
   vii) Proper handling of bio-hazard waste
   viii) Hepatitis B vaccination information

APPENDIX A

CITY OF STAMFORD

The following statement of declination of Hepatitis B vaccine must be signed by an employee who chooses **not to accept** the vaccine. The statement can only be signed by the employee following appropriate training regarding hepatitis B, hepatitis B vaccine, the efficacy, safety, method of administration, benefits of the vaccination, the availability of the vaccine and that the vaccination is free of charge to the employee. The statement is not a waiver; an employee can request and receive the hepatitis B vaccine at a later date if they remain occupationally at risk for hepatitis B.

DECLINATION STATEMENT

I understand that due to my occupational exposure to blood or other potentially infectious material, I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given an opportunity to be vaccinated with hepatitis B vaccine at no charge to me. However, I decline the hepatitis B vaccine at this time. I understand that by declining this vaccine I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with the hepatitis B vaccine, I can receive the vaccine at no charge to me.

_____ _____

Employee Signature Date

_____ _____

Print Full Name Department/Bureau

CONFIDENTIAL INFORMATION

THE STAMFORD HOSPITAL
Ryan White Comprehensive Resources Emergency Act; Emergency Response Employees

Date: _____

Dear_____:
(Nurse Epidemiologist / Designee) Confidential Phone # or Fax _____

This is to inform you that _____ of _____
(Employee Name) (Service Agency (EMS, Fire, Police, etc.)
during the performance of his/her duties was:

☐ Exposed to Patient _____ on _____
(Name) (Date/Time)
who was diagnosed with _____ on _____
(Disease) (Date)

OR

☐ The Recipient of a Blood/Body Fluid Exposure (needlestick, mucous membrane splash)

from _____ on _____.
(Patient Name) (Date/Time)

Please provide appropriate patient/donor screening results to _____
(Designated Official for Service)
Test results will be available to the employee by contacting this Designated Official

_____Signed

] Upon completion of this section, copy for your service records and submit this form to the medical facility designee. In addition, give a copy of this form to the employee.

Date_____

Dear_____:
(Designated Official for Service)

☐ A telephone report of the preliminary results of the _____ test was made on
_____ to_____ by _____.
(date) (name, or designated official) (person making phone call)

Upon <u>final evaluation</u> of the medical information available for this incident, it is determined that:

☐ All test results for the involved patient were negative, hence, there was no significant exposure to an infectious disease.

☐ There was insufficient information available to make a determination of exposure to an infectious disease.

☐ Test results for the involved patient were positive for:
_____ _____

It is your responsibility to arrange for private, confidential treatment and follow up.

_____
(Nurse Epidemiologist / Designee)

Upon completion of this section, copy for your records and mail/fax to Designated Official at the appropriate agency. Designated Official to copy for their records.

All test results are to be reported to the employee by the Designated Official.

LOCKOUT.TAG OUT PROGRAM

1) Objective

a) The objective of this procedure is to establish a means of positive control to prevent the accidental starting or activating of machinery or systems while they are being repaired, cleaned and/or serviced. This program serves to:
   i) Establish a safe and positive means of shutting down machinery, equipment and systems.
   ii) Prohibit unauthorized personnel or remote control systems from starting machinery or equipment while it is being serviced.
   iii) Provide a secondary control system (tag out) when it is impossible to positively lockout the machinery or equipment.
   iv) Establish responsibility for implementing and controlling lockout/tag out procedures.
   v) Ensure that only approved locks, standardized tags and fastening devices provided by the company will be utilized in the lockout/tag out procedures.

2) Assignment of Responsibility

a) Foremen/Supervisors will be responsible for implementing the lockout/tag out program.
b) Foremen/Supervisors are responsible for enforcing the program and insuring compliance with the procedures in their departments.
c) Foremen/Supervisors are responsible for monitoring the compliance of this procedure and will conduct the annual inspection and certification of the authorized employees.
d) *Authorized employees* (those listed in Attachment A) are responsible for following established lockout/tag out procedures. An authorized employee is defined as a person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes an authorized employee when that employee's duties include performing servicing or maintenance covered under 1910.147, The Control of Hazardous Energy (lockout/tag out).
e) *Affected employees* (all other employees in the facility) are responsible for insuring they do not attempt to restart or re-energize machines or equipment that are locked out or tagged out. An affected employee is defined as a person whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tag out, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.

3) Procedures

The ensuing items are to be followed to ensure both compliance with the OSHA Control of Hazardous Energy Standard and the safety of our employees.

a) Preparation for Lockout or Tag out
   i) Employees who are required to utilize the lockout/tag out procedure (see Attachment A) must be knowledgeable of the different energy sources and the

proper sequence of shutting off or disconnecting energy means. The four types of energy sources are:
(1) Electrical (most common form);
(2) Hydraulic or pneumatic;
(3) Fluids and gases; and
(4) Mechanical (including gravity).

ii) More than one energy source may be utilized on some equipment and the proper procedure must be followed in order to identify energy sources and lockout/tag out accordingly. See Attachment E for specific procedure format.

iii) Electrical
(1) Shut off power at machine and disconnect.
(2) Disconnecting means must be locked or tagged.
(3) Press start button to see that correct systems are locked out.
(4) All controls must be returned to their safest position.
(5) Points to remember:
(a) If a machine or piece of equipment contains capacitors, they must be drained of stored energy.
(b) Possible disconnecting means include the power cord, power panels (look for primary and secondary voltage), breakers, the operator's station, motor circuit, relays, limit switches, and electrical interlocks.
(c) Some equipment may have a motor isolating shut-off and a control isolating shut-off.
(d) If the electrical energy is disconnected by simply unplugging the power cord, the cord must be kept under the control of the authorized employee or the plug end of the cord must be locked out or tagged out.

iv) Hydraulic/Pneumatic
(1) Shut off all energy sources (pumps and compressors). If the pumps and compressors supply energy to more than one piece of equipment, lockout or tag out the valve supplying energy to the piece of equipment being serviced.
(2) Stored pressure from hydraulic/pneumatic lines shall be drained/bled when release of stored energy could cause injury to employees.
(3) Make sure controls are returned to their safest position (off, stop, standby, inch, jog, etc.).

v) Fluids and Gases
(1) Identify the type of fluid or gas and the necessary personal protective equipment.
(2) Close valves to prevent flow, and lockout/tag out.
(3) Determine the isolating device, then close and lockout/tag out.
(4) Drain and bleed lines to zero energy state.
(5) Some systems may have electrically controlled valves. If so, they must be shut off and locked/tagged out.
(6) Check for zero energy state at the equipment.

vi) Mechanical Energy
(1) Mechanical energy includes gravity activation, energy stored in springs, etc.

(a) Block out or use die ram safety chain.
(b) Lockout or tag out safety device.
(c) Shut off, lockout or tag out electrical system.
(d) Check for zero energy state.
(e) Return controls to safest position.

b) Release from Lockout/Tag out

i) Inspection: Make certain the work is completed and inventory the tools and equipment that were used.
ii) Clean-up: Remove all towels, rags, work-aids, etc.
iii) Replace guards: Replace all guards possible. Sometimes a particular guard may have to be left off until the start sequence is over due to possible adjustments. However, all other guards should be put back into place.
iv) Check controls: All controls should be in their safest position.
v) The work area shall be checked to ensure that all employees have been safely positioned or removed and notified that the lockout/tag out devices are being removed.
vi) Remove locks/tags. Remove only your lock or tag.

4) Service or Maintenance Involving More than One Person

a) When servicing and/or maintenance is performed by more than one person, each authorized employee shall place his own lock or tag on the energy isolating source. This shall be done by utilizing a multiple lock scissors clamp if the equipment is capable of being locked out. If the equipment cannot be locked out, then each authorized employee must place his tag on the equipment.

5) Removal of an Authorized Employee's Lockout/Tag out by the Company

a) Each location must develop written emergency procedures that comply with 1910.147(e) (3) to be utilized at that location. Emergency procedures for removing lockout/tag out should include the following:
i) Verification by employer that the authorized employee who applied the device is not in the facility.
ii) Make reasonable efforts to advise the employee that his/her device has been removed. (This can be done when he/she returns to the facility).
iii) Ensure that the authorized employee has this knowledge before he/she resumes work at the facility.

6) Shift or Personnel Changes

a) Each facility must develop written procedures based on specific needs and capabilities. Each procedure must specify how the continuity of lockout or tag out protection will be ensured at all times. See 1910.147(e) (4).

7) Procedures for Outside Personnel/Contractors

a) Outside personnel/contractors shall be advised that the company has and enforces the use of lockout/tag out procedures. They will be informed of the use of locks

and tags and notified about the prohibition of attempts to restart or re-energize machines or equipment that are locked out or tagged out.

b) The company will obtain information from the outside personnel/contractor about their lockout/tag out procedures and advise affected employees of this information.

c) The outside personnel/contractor will be required to sign a certification form (see Attachment D). If outside personnel/contractor have previously signed a certification that is on file, additional signed certification is not necessary.

8) Training and Communication

a) Each authorized employee who will be utilizing the lockout/tag out procedure will be trained in the recognition of applicable hazardous energy sources, type and magnitude of energy available in the work place, and the methods and means necessary for energy isolation and control.

b) Each affected employee (all employees other than authorized employees utilizing the lockout/tag out procedure) shall be instructed in the purpose and use of the lockout/tag out procedure, and the prohibition of attempts to restart or re-energize machines or equipment that are locked out or tagged out.

c) Training will be certified using Attachment B (Authorized Personnel) or Attachment C (Affected Personnel). The certifications will be retained in the employee personnel files.

9) Periodic Inspection

a) A periodic inspection (at least annually) will be conducted of each authorized employee under the lockout/tag out procedure. This inspection shall be performed by the foreman/supervisor or designate. If foreman/supervisor or designate is also using the energy control procedure being inspected, then the inspection shall be performed by another party.

b) The inspection will include a review between the inspector and each authorized employee of that employee's responsibilities under the energy control (lockout/tag out) procedure. The inspection will also consist of a physical inspection of the authorized employee while performing work under the procedures.

c) The foreman/supervisor shall certify in writing that the inspection has been performed. The written certification (Attachment C) shall be retained in the individual's personnel file.

ATTACHMENT A

List of Authorized Personnel
For
Lockout/Tag out Procedures

NAME JOB TITLE

ATTACHMENT B

Certification of Training

I certify that I received training as an authorized employee under The City of Stamford _ Lockout/Tag out program. I further certify that I understand the procedures and will abide by those procedures.

_____ _____

EMPLOYEE SIGNATURE DATE

ATTACHMENT C

Lockout/Tag out Inspection Certification

I certify that _____ was inspected on this date utilizing lockout/tag out procedures. The inspection was performed while working on _____ .

_____ _____
AUTHORIZED EMPLOYEE SIGNATURE DATE

_____ _____
INSPECTOR'S SIGNATURE DATE

ATTACHMENT D

Outside Personnel/Contractor Certification

I certify that _____ and

(outside personnel/contractor) have informed each other of our respective lockout/tag out procedures.

_____ _____

AUTHORIZED EMPLOYEE SIGNATURE DATE

_____ _____

INSPECTOR SIGNATURE DATE

ATTACHMENT E

Equipment Specific Procedure

(Date)

Machine Identification

General Description:

_____

_____

_____

Manufacturer:

_____

_____

_____

Model Number:

_____

Serial Number:*

_____

_____

_____

** If more than one piece of same equipment, list all serial numbers.*

Location of equipment:

_____

_____

_____

Operator Controls

The types of controls available to the operator need to be determined. This should help identify energy sources and lockout capacity for the equipment.

List types of operator controls:

_____

_____

_____

_____

_____

_____

_____

_____

_____

Energy Sources

The energy sources, such as electrical, steam, hydraulic, pneumatic, natural gas, stored energy, etc.) Present on this equipment are:

ENERGY SOURCE	LOCATION	Lockable Yes	Lockable No	Type lock or block needed

Shutdown Procedures

List the steps in order necessary to shut down and de-energize the equipment. Be specific. For stored energy, be specific about how the energy will be dissipated or restrained.

Procedure:

_____

_____

Lock Type & Location:

_____

_____

How Will De-energized State Be Verified?

_____

_____

_____

_____

NOTIFY ALL AFFECTED EMPLOYEES WHEN THIS PROCEDURE IS IN APPLICATION.

Start Up Procedures

List the steps in order necessary to reactivate (energize) the equipment. Be specific.

Procedure:

Energy Source Activated:

NOTIFY ALL AFFECTED EMPLOYEES WHEN THIS PROCEDURE IS IN APPLICATION.

Procedures for Operations and Service/Maintenance

List those operations where the procedures above do not apply [See 29 CFR 1910.147 (a) (2)]. Alternate measures which provide effective protection must be developed for these operations. Job Safety Analysis is one method of determining appropriate measures.

Operation Name:

Affected and Authorized Employees

List each person affected by this procedure and those authorized to use this procedure.

AFFECTED EMPLOYEES	
Name	**Job Title**

AUTHORIZED EMPLOYEES	
Name	**Job Title**

CONFINED SPACES PROGRAM

Due to type and magnitude of the hazards posed to entrants of Confined Spaces, the City of Stamford has established a Confined Space Entry program to guide City employees and it's contractors to reduce the possibility of serious injury of death when working within a confined space. As the hazards vary from space to space, it is essential that individual differences be thoroughly evaluated to assure that the unique hazard posed by each space is adequately controlled. Confined spaces vary widely, both in their physical characteristics and in the reasons for which they are entered. Some typical spaces might be: Manholes, storm or sanitary sewers, underground pumping stations, transformer vaults, boilers, wells, pits, storage or process tanks,

a) Typical reasons for entering these spaces are listed below
b) Cleaning to remove sludge debris and other waste materials
c) Inspection of the physical integrity & maintenance of equipment
d) Maintenance such as abrasive blasting and application of surface coatings
e) Tapping, coating, wrapping and testing of underground sewage, steam and water piping systems
f) Installing, inspecting, repairing and replacing valves, piping, pumps, motors, etc. in below ground pits and vaults
g) Repair, including welding and adjustments to mechanical equipment
h) Adjusting and aligning mechanical devices and components
i) Checking and reading meters, gauges, dials, charts and other indicators
j) Installing, splicing, repairing, and inspecting electric, telephone cables
k) Rescue of workers who are injured or overcome inside the space

It is important to remember that conditions can change quite rapidly in a confined space and that activities which seem safe when conducted in an open space can become quite hazardous when performed in a confined space.

The following are some of the general categories of hazards which may be encountered in confined spaces: Atmospheric Hazards, Mechanical and Electrical Hazards. General Safety (means of access/egress, trips, slips, falls, hot, cold, noise etc.) Engulfment or flooding Hazard.

As these hazards are discussed in greater detail, remember that caution must always be used for confined space work. In fact, a general rule-of-thumb is to "expect the unexpected".

Confined Spaces are all around us. We may enter one on a regular basis, perhaps without even noticing we have entered a confined space. Like any hazardous area, the degree of the hazard and the risks associated with the space dictate how we must respond to the space. The Occupational Safety & Health Administration's regulations on confined space entry (29 CFR § 1910.146) were brought about in part due to the multiple fatalities involving untrained "would be" Rescuers. These regulations have

categorized confined spaces into two basic types. Those spaces which require a written permit to enter or "Permit Required Spaces" and those which do not.

1) Terms and Definitions

a) Acceptable entry conditions
The conditions that must exist in a permit space to allow entry and to ensure that employees involved with a permit-required confined space entry can safely enter into and work within the space.

b) Attendant
An individual stationed outside one or more permit spaces who monitors the authorized entrants and who performs all attendant's duties assigned in the employer's permit space program. The attendant will remain outside the confined space and to be in constant communication with the personnel working inside the confined space.

c) Authorized entrant
An employee who is authorized by the employer to enter a permit space to perform a specific type of duty or duties or to be at a specific location at the job site

d) Blanking or blinding
The absolute closure of a pipe, line, or duct by the fastening of a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore and that is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.

e) Bonding
The joining of two or more items with an electrical conductor so that all ends joined have the same electrical charge or potential.

f) Confined space
A space that:
i) Is large enough and so configured that an employee can bodily enter and perform assigned work; and
ii) Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry; and
iii) Is not designed for continuous employee occupancy.

g) Double block and bleed
The closure of a line, duct, or pipe by closing and locking or tagging two in-line valves and by opening and locking or tagging a drain or vent valve in the line between the two closed valves.

h) Emergency
Any occurrence (including any failure of hazard control or monitoring equipment) or event internal or external to the permit space that could endanger entrants.

i) Engulfment
The surrounding and effective capture of a person by a liquid or finely divided (flow able) solid substance that can be aspirated to cause death by filling or

plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.

j) Entry

The action by which a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.

k) Entry permit (permit)

The written or printed document that is provided by the employer to allow and control entry into a permit space and that contains the information specified in the OSHA regulation and this procedure.

l) Entry supervisor

The person (such as the employer, foreman, or crew chief) responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this section.

NOTE: An entry supervisor also may serve as an attendant or as an authorized entrant, as long as that person is trained and equipped as required by this section for each role he or she fills. Also, the duties of entry supervisor may be passed from one individual to another during the course of an entry operation.

m) Hazardous atmosphere

An atmosphere that may expose employees to the risk of death, incapacitation, and impairment of ability to self-rescue (that is, escape unaided from a permit space), injury, or acute illness from one or more of the following causes:

i) Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL);

ii) Airborne combustible dust at a concentration that meets or exceeds its LFL. This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet (1.52 m) or less.

iii) Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent;

iv) Atmospheric concentration of any substance for which a dose or a permissible exposure limit is published in Subpart G, Occupational Health and Environmental Control, or in Subpart Z, Toxic and Hazardous Substances, of this Part and which could result in employee exposure in excess of its dose or permissible exposure limit;

v) Any other atmospheric condition that is immediately dangerous to life or health.

vi) NOTE: For air contaminants for which OSHA has not determined a dose or permissible exposure limit, other sources of information, such as Safety Data Sheets that comply with the Hazard Communication Standard, section 1910.1200 of this Part, published Information and internal documents can provide guidance in establishing acceptable atmospheric conditions.

vii) An atmospheric concentration of any substance that is not capable of causing death, incapacitation, impairment of ability to self-rescue, injury, or acute illness due to its health effects is not covered by this provision.

n) Hot Work
Any work involving burning, welding or similar fire-producing operations. Also, work that produces a source of ignition, such as grinding, drilling, or heating.
i) Hot work permit Means the employer's written authorization to perform operations (for example, riveting, welding, cutting, burning, and heating) capable of providing a source of ignition.

o) Immediately dangerous to life or health (IDLH)
Means any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual's ability to escape unaided from a permit space.

NOTE: Some materials -- hydrogen fluoride gas and cadmium vapor, for example may produce immediate transient effects that, even if severe, may pass without medical attention, but are followed by sudden, possibly fatal collapse 12-72 hours after exposure. The victim "feels normal" from recovery from transient effects until collapse. Such materials in hazardous quantities are considered to be "immediately" dangerous to life or health.

p) Inerting
The displacement of the atmosphere in a permit space by a noncombustible gas (such as nitrogen) to such an extent that the resulting atmosphere is noncombustible.

NOTE: This procedure produces an IDLH oxygen-deficient atmosphere.

q) Isolation
The process by which a permit space is removed from service and completely protected against the release of energy and material into the space by such means as: blanking or blinding; misaligning or removing sections of lines, pipes, or ducts; a double block and bleed system; lockout or tag out of all sources of energy; or blocking or disconnecting all mechanical linkages.

r) Lower Explosive Limit (LEL)
The minimum concentration of a combustible gas or vapor in air that will ignite if an ignition source is introduced.

s) Line breaking
The intentional opening of a pipe, line, or duct that is or has been carrying flammable, corrosive, or toxic material, an inert gas, or any fluid at a volume, pressure, or temperature capable of causing injury.

t) Non-permit confined space
A confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

u) Oxygen deficient atmosphere
An atmosphere containing less than 19.5 percent oxygen by volume.

v) Oxygen enriched atmosphere
An atmosphere containing more than 23.5 percent oxygen by volume.

w) PPE - Personal Protective Equipment

Any devices or clothing worn by the worker to protect against hazards in the environment. Examples include but are not limited to; respirators, gloves, and chemical splash goggles, hard hats, safety shoes and hearing protection.

i) PEL - Permissible Exposure LevelConcentration of a substance to which an individual may be exposed repeatedly without adverse effect.

ii) PurgingThe removal of gases or vapors from a confined space by the process of displacement.

x) Permit-required confined space (permit space)
A confined space that has one or more of the following characteristics:
i) Contains or has a potential to contain a hazardous atmosphere;
ii) Contains a material that has the potential for engulfing an entrant;
iii) Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or
iv) Contains any other recognized serious safety or health hazard.

y) Permit-required confined space program (permit space program)
The employer's overall program for controlling, and, where appropriate, for protecting employees from, permit space hazards and for regulating employee entry into permit spaces.

z) Permit system
The employer's written procedure for preparing and issuing permits for entry and for returning the permit space to service following termination of entry.

aa) Prohibited condition
Any condition in a permit space that is not allowed by the permit during the period when entry is authorized.

bb) Rescue service
The personnel designated to rescue employees from permit spaces.

cc) Retrieval system
The equipment (including a retrieval line, chest or full-body harness, wristlets, if appropriate, and a lifting device or anchor) used for non-entry rescue of persons from permit spaces.

dd) Testing
The process by which the hazards that may confront entrants of a permit space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space.

NOTE: Testing enables employers both to devise and implement adequate control measures for the protection of authorized entrants and to determine if acceptable entry conditions are present immediately prior to, and during, entry.

2) Confined Space

a) A confined space is any area that has a limited opening for entry and exit that would make escape difficult in the event of an emergency. Limited ventilation, potential or known hazards and the fact that the space was not designed to be occupied on a continuous basis are also important factors. OSHA has provided the following definitions of confined spaces in the Code of Federal Regulations:

i) Confined Space
   (1) A space that is large enough and so configured that an employee can bodily enter and perform assigned work.
   (2) Has limited or restricted means of entry or exit (examples: tanks, vessels, silos, storage bins, hoppers, vaults and pits).
   (3) Is not designed for continues employee occupancy.

ii) Permit-required confined space
   (1) A confined space that has one or more of the following characteristics:
   (2) Contains or has a potential to contain a hazardous atmosphere.
   (3) Contains a material that has the potential for engulfing an entrant.
   (4) Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section.
   (5) Contains any other recognized serious safety or health hazard.

To be certain confined spaces are appropriately identified, an inspection of each space should be conducted and the criteria of a permit required confined space considered to be certain the space has been properly identified. A listing of all "Permit Required Confined Spaces" must be maintained. The City of Stamford inspection form and decision tree found in Appendix C will be used to collect and evaluate the data on each space.

b) Hazards in a Confined Space

i) Atmospheric Hazards
   (1) Most confined space deaths and injuries are caused by atmospheric hazards. Atmospheric hazards generally cannot be seen and, in most cases, it is too dangerous to assume that the sense of smell will serve as an "early warning system". Many of the typical hazards of confined spaces do not have reliable warning properties. Some of these hazards can completely incapacitate a person in a matter of seconds, others may cause damage which may not show up for months or even years following the exposure. Still others may alter the judgment level of those exposed without the individual being aware of their impairment. As mentioned earlier, conditions can change very quickly in confined spaces. Because of factors such as these, air monitoring is required if atmospheric hazards are suspected.
   (2) The greatest source of error in atmospheric monitoring is selecting the place within the confined space to take the necessary samples, since instruments can only measure the concentrations of the mixture that is drawn into the space. Corners and pockets at both the top and bottom levels of the space should be tested.
   (3) The three most common classes of atmospheric hazards are: Oxygen Deficiency, Combustible/Flammable Materials and Toxic Gases. Another atmospheric hazard may include Oxygen Enrichment. Other hazards which may be present include: Mechanical and Electrical Hazards, Engulfment and Flooding Hazards and various Environmental Hazards.

The presence of one or more hazards does not preclude the presence of additional hazards.

ii) Oxygen Deficiency Oxygen level below 19%

(1) Humans can survive only minutes without air. Air contains a mixture of gases but is composed primarily of nitrogen (78%) and oxygen (21%). The remainder of the mixture is comprised of relatively small quantities of other gases. The oxygen component of air is essential for life. Oxygen is normally consumed and produces carbon dioxide as a waste product. All cells will die when deprived of oxygen but some are more critically affected than others. For example, brain cells begin to die within 4-6 minutes of being deprived of oxygen and since the brain does not produce new cells, the damage is permanent. Oxygen levels must be maintained within well-defined limits. Too little or even too much is catastrophic for life. The effects of oxygen deficiency are listed below.

(a) Effects of Oxygen Deficiency

OXYGEN CONTENT	SYMPTOMS & PHYSICAL EFFECTS
18 - 23 %	None
12 - 16 %	Increased pulse rate lack of "fine" co-ordination in fingers and hands
10 - 12 %	Rapid pulse rate, nausea, headache, breathing difficulties, lack of co-ordination
6 - 10 %	Complete lack of coordination, inability to react to danger, loss of consciousness
0 - 6 %	Death

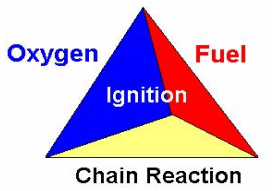
(b) In confined spaces, oxygen deficiency may result from either consumption or displacement of the oxygen present. Activities or processes which can "consume" oxygen include combustion (welding and cutting torches), decomposition of organic matter (rotting food or plant life) or oxidation of metals (rusting). Oxygen can be "displaced" when inert gases such as nitrogen, carbon dioxide, helium or steam are used to purge a space of residual chemicals, gases or vapors.

iii) Oxygen Enrichment Oxygen level above 23.5%

(1) Oxygen enrichment is the term used to describe a situation where the oxygen concentration is greater than 23.5%. Although much less common than oxygen deficiency, an atmosphere enriched with oxygen can also be deadly. An oxygen-enriched atmosphere (above 23.5 percent) will cause flammable materials, such as clothing and hair, to burn violently when ignited. This represents a serious fire hazard. Consequently, never use pure oxygen to ventilate a confined space. Ventilate with normal, clean outside air.

iv) Flammable / Combustible Materials

(1) Flammable and combustible materials are an important concern with regards to fires and explosions in confined spaces. In this situation, it is important to remember that for a fire or explosion to occur, four components are required. The four elements must all be present for the combustion process to take place. Remove one element from the tetrahedron and combustion is not possible.



(2) The proper mixture of fuel and oxygen varies from gas to gas, but the explosive range is defined as the area between the lower explosive limit (LEL) and the upper explosive limit (UEL). When the fuel and air mixture is below the LEL, ignition will not take place because the mixture is "too lean". Ignition will also not occur if the fuel and air mixture is above the UEL because the mixture is "too rich". When the mixture is above the UEL, it can readily move into the flammable range with the addition of dilution air. Situations where the mixture is above the upper explosive limit are particularly dangerous as the process of ventilation will lower the concentration of combustible vapor or gas down into the explosive range.

(3) Potential sources of ignition that could be found in confined spaces include: open flames, arcs from electrical equipment, hot surfaces, static electricity and frictional sparks. City workers must also be aware that the hazards resulting from gases can exist at any level. Differences in temperature and atmospheric pressure can cause the gases to become stratified within the confined space. Many flammable gases and vapors are heavier than air. If they flow into a pit, a tank opening or other confined space, they will present a serious fire and explosion hazard.

(4) In confined spaces, a common acceptable working limit for flammable and combustible vapors is 10% of the lower explosive (or flammable) limit (the LEL). If the concentration of gas is within ten percent (10%) of the lower explosive limit, the space should be evacuated and ventilated immediately. This applies for "cold work" only, where sparks or welding will not occur. For hot work, the working limit is 0-1% of the LEL. If the conditions include oxygen enrichment this represents a serious fire hazard and will have an impact of lowering the lower explosive limits considerably for all flammable gases,

v) Toxic Gas Hazards

(1) Toxic (or poisonous) gases present two kinds of risks in a confined space:
(a) Irritation and Asphyxiation.

(i) Asphyxiants are gases which can cause asphyxiation by either displacing the oxygen in the atmosphere or interfering with the body's ability to use oxygen. Those gases that are physiologically inert (i.e. produce no effect on the body) and are present in sufficient quantity to displace the air and, therefore, an adequate oxygen supply are called simple asphyxiants. Examples include nitrogen and methane. Substances which incapacitate the body's ability to utilize an adequate oxygen supply are called chemical asphyxiants.

(b) Carbon monoxide, CO is a toxic, colorless and odorless gas which combines with the hemoglobin of red blood cells. Carbon monoxide has a much higher affinity for hemoglobin than oxygen does so it will attach preferentially and exclude oxygen. This greatly reduces the amount of oxygen available for life processes and can lead to death due to chemical asphyxiation. Carbon monoxide is one of the most common asphyxiants encountered. It is formed by incomplete combustion wherever fuel containing carbon is burned. In addition to its presence as a by-product in many industrial situations, it is also produced in large amounts by internal combustion engines such as automobiles, fuel powered compressors, generators and fork lifts.

(c) Hydrogen sulfide, H2S is another chemical aspyxiant which is very toxic, colorless and combustible and is commonly found in confined spaces such as sewers, oil and gas refineries and many industrial environments. Hydrogen sulfide is easily detected at low concentrations by a strong foul odor, similar to rotten eggs. This odor cannot be used as an early warning sign however since hydrogen sulfide can quickly desensitize the sense of smell. After prolonged exposure, even at low concentrations, an individual may fail to smell the presence of hydrogen sulfide even if the concentration suddenly increases. Hydrogen sulfide enters the blood stream and paralyzes the nerve centers in the brain. The lungs cease to function and the individual is asphyxiated.

c) OSHA Permissible Exposure Limit

A Permissible Exposure Limit (PEL) is a Time Weighted Average (TWA) concentration that must not be exceeded during any 8-hour work shift of a 40-hour work week. A Short Term Exposure Limit (STEL) is measured over a 15-minute period. A "ceiling" concentration must not be exceeded during any part of the workday; if instantaneous monitoring is not feasible, the ceiling must be assessed as a 15-minute TWA exposure.

d) Mechanical / Electrical Hazards

The unexpected activation of mechanical equipment or the unexpected discharge of electrical equipment in a confined space presents a very hazardous situation for anyone within the space. Commonly encountered equipment includes blenders, stirrers, mixers and agitators. It is very important therefore to ensure that all mechanical and electrical equipment is locked and tagged out when any

work is too performed in a confined space. See the City Policy & Procedure regarding the Control of Hazardous Energy Sources.

e) Engulfment and Flooding Hazards

The movement or shifting of material within a confined space or the flooding of a space has been responsible for many injuries and fatalities. Engulfment involves loose, granular materials which can act like quicksand when walked upon or withdrawn from the space. Although not present in the City, silos with grain inside are a classic example of this type of hazard. Unstable sand and salt in the City salt domes could present a similar hazard. The flooding hazard is more likely to occur within the City of Stamford locations. A failure of the Control of Hazardous Energy Source program, leaving a valve or sluice open which permits the area to be flooded suddenly and unexpectedly. Open sewer channels, storm sewers and areas subject to tidal water infiltration must be identified. Weather conditions such as a sudden rain storm may also affect the space.

f) Environmental – Miscellaneous

Other confined space hazards to be wary of include: means of access and egress, temperature extremes, poor visibility and noise. Also, because of moisture, condensation, slime growths or deposits or other materials, the danger of slipping and falling is high. Deterioration of the structure, rusting of ladder rungs, grating and railings can result in falls and head injuries. The worker may also be exposed to pathogenic diseases. The presence of rats or other vermin is also a potential danger. Improper handling of tools and equipment can result in cuts, bruises and back injuries. Since many of the areas in which work may be done are quite small, head protection and protective gloves should be worn when using hand tools and the footing should be secure to avoid back injuries, slips, trips or falls in the area. The attendant at the surface must ensure that the surface in the vicinity of the access is kept clear of all objects which might fall into the confined space.

3) Responsibilities

a) This section outlines the responsibilities within the City of Stamford for implementation and enforcement of the Confined Space Entry Program. Everyone involved in a confined-space entry project has certain responsibilities and requires a certain amount of training. It is very important that every individual is familiar with their responsibilities. This section outlines the responsibilities and training requirements of each individual involved in a project.
   i) Outside Contractor
   ii) Department Head (Or their designated representatives)
   iii) Entry Supervisor
   iv) Authorized Entrant
   v) Authorized Attendant
   vi) Safety & Training Officer
   vii) Responsibilities and Training Requirements

b) Outside Contractors

Individuals contracted to enter and perform work in confined spaces shall work in accordance with the City of Stamford confined space procedures. Outside contractors will normally be under the jurisdiction of the Federal Office of the Occupational Safety & Health Administration with offices located in New Haven, CT., while the city employees are under the jurisdiction of the Connecticut Department of Labor. The requirements of each are identical and outside contractors are required to comply with all Federal OSHA regulations. These same regulations have been adopted by the State of Connecticut Department Labor, OSHA Division for city workers.

c) Department Head

Department heads or their designated representatives shall be responsible for the following:

i) Identifying confined spaces within facilities or areas under their control.
ii) Identifying hazards within a confined space under their control.
iii) Documenting that all training requirements for a specific confined space entry have been met by signing the pre- entry authorization space on the entry permit.
iv) Insuring that the required atmospheric tests are performed at the confined space and results recorded on the permit prior to entry authorization.
v) Obtaining and maintaining all equipment necessary to complete the confined-space entry project.
vi) Authorize entry by signing the Entry Authorization space on the entry permit after all conditions for a safe entry has been met.
vii) Terminating the entry and canceling the permit when entry operations covered by the entry permit have been completed.
viii) Terminating the entry and canceling the permit when a condition that is not allowed under the entry permit arises in or near the permit space.
ix) Determining, whenever responsibility for a permit space entry operation is transferred, and at intervals dictated by the hazards and operations performed within the space, that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained.

d) Entry Supervisor

Each entry supervisor must be trained in the requirements of the standard, including:

i) The hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.
ii) Checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin.
iii) Terminating the entry and canceling the permit as required.
iv) Verifying that rescue services are available and that the means for summoning are operable.

v) Removing unauthorized individuals who enter or who attempt to enter the permit space during entry operations.
vi) Determining, whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and operations performed within the space, that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained.

e) Authorized Entrant

The person(s) authorized to enter a confined space shall be responsible for and receive training in the following:

i) The knowledge of hazards that may be faced during entry, including the mode, signs or symptoms, and consequences of the exposure.
ii) Proper use of equipment, which includes:
iii) Atmospheric testing and monitoring equipment.
iv) Ventilating equipment needed to obtain acceptable entry conditions.
v) Communication equipment necessary to maintain contact with the standby person.
vi) Personal protective equipment as needed.
vii) Lighting equipment as needed.
viii) Barriers and shields as needed.
ix) Equipment, such as ladders, needed for safe ingress and egress.
x) Rescue and emergency equipment as needed.
xi) Any other equipment necessary for safe entry into and rescue from permit spaces.
xii) Communication with the attendant as necessary to enable the attendant to monitor entrant status and to enable the attendant to alert entrants of the need to evacuate the space if required.
xiii) Alert the attendant (standby person) whenever: The entrant recognizes any warning sign or symptom of exposure to a dangerous situation, or the entrant detects a prohibited condition.
xiv) Exiting the permit space as quickly as possible whenever:
xv) An order to evacuate has been given by the attendant or the entry supervisor;
xvi) The entrant recognizes any warning sign or symptom of exposure to a dangerous situation;
xvii) The entrant detects a prohibited condition; or an evacuation alarm is activated.

f) Authorized Attendant

An Attendant shall be trained to ensure that they are able to accomplish the following:

i) Recognize potential permit space hazards, monitor activities inside and outside the space to determine if it remains safe for entrants.
ii) Be aware of possible behavioral effects of hazard exposure in authorized entrants. They must understand possible behavioral effects of hazard exposure on authorized entrants. The attendants will also know information on the mode, signs or symptoms, and consequences of exposure.

iii) The Attendant must remain outside the permit space at all times during entry operation and perform assigned duties under the entry permit program until relieved by another attendant and will perform no other duties that might interfere with their primary duty to monitor and protect the authorized entrants.
iv) The Attendant will maintain effective and continuous communication with authorized entrants during entry and will maintaining an accurate listing and the identity of authorized entrants in the permit space at all times.
v) The Attendant will monitor activities inside and outside the space to determine if it is safe for entrants to remain in the space. The Attendant will order all entrants to evacuate the permit space immediately under the following conditions:
vi) If the attendant detects a prohibited condition.
vii) If the attendant detects the behavioral effects of hazard exposure in an authorized entrant.
viii) If the attendant detects a situation that could endanger the authorized entrants.
ix) If the attendant cannot effectively and safely perform the duties required by this program.
x) When unauthorized persons approach or enter a permit space while entry is underway the Authorized attendant will:
xi) Warn the unauthorized persons that they must stay away from the permit space.
xii) Advise the unauthorized persons that they must exit immediately if they have entered the permit space.
xiii) Inform the authorized entrants and the entry supervisor if unauthorized persons have entered the permit space.
xiv) If the Attendant determines that authorized entrants may need assistance to escape from permit space hazards he/she will summon rescue and other emergency services. The Attendant will attempt a non-entry rescue if proper equipment is in place and the rescue attempt will not present further hazards to the authorized entrant or attendant.

g) Safety & Training Officer

The Safety and Training Officer shall be responsible for and receive training in the following:

i) Review and update of the City of Stamford Confined Space Entry Program to conform to current Connecticut Department of Labor OSHA Division standards.
ii) Insure compliance with standards set forth in the program by periodic inspection of entry sites and canceling permits where unsafe conditions are present.
iii) Assisting Department Heads, Managers and Supervisors with:
iv) Providing training as set forth in the program,
v) Identification of confined spaces, identifying spaces that require a permit for entry,

vi) Labeling Permit-Required Confined Spaces.
vii) Perform a single annual review covering all entries performed during a 12-month period to ensure employees participating in entry operations are protected from permit space hazards.

4) Preparations to enter the space

Once the decision has been made to enter the space, a determination must be made if the space to be entered is a "Permit Required Space" or if the space may be entered without an entry permit.

a) "Confined space" means a space that:
   i) Is large enough and so configured that an employee can bodily enter and perform assigned work; and
   ii) Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry.); and
   iii) Is not designed for continuous employee occupancy.
b) "Permit-required confined space (permit space)" means a confined space that has one or more of the following characteristics:
   i) Contains or has a potential to contain a hazardous atmosphere;
   ii) Contains a material that has the potential for engulfing an entrant;
   (1) Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or
   iii) Contains any other recognized serious safety or health hazard.
c) The Confined Space Decision Flow Chart located in Appendix C may be a helpful tool to assist you in preparation for entry. Once the decision has been made to make an entry, trained personnel will be selected and the entry plan is developed. The confined space must be prepared for entry.
d) The Entry Permit
   i) The City of Stamford *Confined Space Entry Permit* will be completed by the entry supervisor prior to the entry of a Permit Required Confined Space. The permit will be left at the site and posted in a conspicuous place so that the authorized attendant or rescue personnel will have immediate access to the record.
   ii) "Confined Space Entry Permit" means the written or printed document that is provided by the employer to allow and control entry into a permit space and that contains the information specified in paragraph 1910.146 (f).
   iii) The entry permit serves several essential functions:
      (1) It serves a check list which will be used by all supervisory and entry personnel that appropriate information has been considered in the entry plan.
      (2) It controls entry so that only authorized personnel may enter a confined space;
      (3) It ensures that communication takes place and hazards are controlled;

(4) It describes safety precautions to be taken and will serve as an official written record of existing conditions, requirements, and safeguards;
(5) It serves as a summary for the rescue team of the hazards which can be expected and the number of entrants in the space, in the event a rescue team must enter the space.

e) The entry permit is the document that certifies that the employer complies with the requirements of the standard for entries in permit required confined spaces. Also, the entry supervisor must close off the space and cancel permits when an assignment has been completed or when prohibited conditions exist. All new conditions must be noted on the canceled permit and used in revising the permit space program. The standard also requires the employer to keep all canceled entry permits for at least one year.

f) OSHA's "Permit Required Confined Space" requires that the entry permit checklist contain the following:
   i) Potential hazards of the permit space.
   ii) Measures for isolation, lockout and tag out, equipment and procedures for purging, inerting, ventilating, and flushing used to remove or control potential hazards.
   iii) Acceptable environmental conditions that must be maintained during entry.
   iv) Testing and monitoring equipment procedures to verify that acceptable conditions are being maintained.
   v) The mode of communication which will be used to maintain contact between the authorized attendant and the authorized entrants within the space.
   vi) Rescue equipment and means of communication for other services to be summoned in the event of an emergency.
   vii) Required PPE such as respirators and protective clothing in order to ensure employees' safety.
   viii) Any other information considered to be necessary to ensure the safety of employees.

g) The following steps are to be followed when preparing the confined space for entry:
   i) Warning signs or barriers should to be used to prevent unauthorized entry or to protect entrants from external hazards. They should be placed on or around the confined space to prevent personnel not involved in the work from getting too near to the opening.
   ii) Place all tools, safety equipment, monitoring equipment, etc., near the confined space.
   iii) Isolate all mechanical and/or electrical hazards as provided in accordance with the City Control of Hazardous Energy Program (Lock out / Tag out).
   iv) Maintain the Confined Space Entry Permit at the main entry point of the confined space in a conspicuous location. This permit will also serve to alert those attempting a rescue of entrants and will help to facilitate a rapid and successful rescue.

5) Confined Space Cleaning Procedures

If cleaning must be conducted in a confined space to achieve acceptable atmospheric conditions, the following procedures must be followed in addition to regular confined space entry procedures;

a) All entrants must be equipped with designated safety equipment.
b) All entrants must be equipped with an SCBA.
c) No spark-producing tools will be allowed for use.
d) Assemble all personnel tools and personal protective equipment involved and conduct a simulated rescue drill.
e) The entry supervisor will then add any needed information, then complete and sign the Confined Space Entry Permit.
f) Purge/ventilate the confined space as required. Remember that the air which is being displaced by the ventilation process may contain toxic materials or may have a low concentration of oxygen. This displaced air may present a hazard outside the space until it has been disbursed safely into the atmosphere.

6) Utilizing Safety Equipment

Where practical, all personnel entering a confined space should be equipped with a retrieval line secured at one end to the entrant by a full-body harness with its other end secured to a tripod lifting hoist.

7) Atmospheric Testing Procedures

a) All testing equipment shall be calibrated as instructed by the manufacturer.
b) All of the manufacturer's operating instructions must be followed.
c) The test equipment should be tested in a known atmosphere to insure its accuracy.
d) Ventilation equipment must be shut off before conducting any atmospheric tests.
e) The atmosphere must be tested at the bottom, top, and middle of all confined spaces.
f) The atmosphere must be continuously monitored while work is being conducted in the confined space. Readings will be recorded every 30 minutes on the back of the Confined Space Entry Permit.
g) If the confined space is left for any reason, the atmosphere must be re-tested before re-entering the space.

8) Test the Atmosphere

One of the most common conditions in a confined space is caused by an oxygen deficient atmosphere. In recognition of this, atmospheric testing will be conducted first. In addition, testing monitors will not provide accurate readings for explosive vapors or toxic material if the oxygen levels are not within an acceptable range. Failure to confirm an adequate oxygen level may result in inaccurate readings for other atmospheric hazards. These tests will determine if: the oxygen levels are within an acceptable range, if explosive mixture is present and if toxic materials have

accumulated which could injure the entrants or those outside the space. In addition to ruing out a hazardous atmosphere, these tests will provide the attendant and entry personnel with an indication of what gases and vapors may accumulate during the entry phase

a) Oxygen levels:
   i) If oxygen content is less than 19.5% or greater than 21.5%, perform additional ventilation exhausting these gases to a safe location. Shut off ventilation equipment and re-test the oxygen content. Levels below 19.5 % are considered IDLH and may result in asphyxiation to the occupants. Level above 21.5% could represent an oxygen enriched atmosphere and present a serious fire hazard to occupants.
   ii) If oxygen content is between 19.5% and 21.5%, continue entry preparation.
b) Flammable vapors:
   i) To reduce the possibility of an explosion, the entry supervisor will test for suspected flammable gas levels. If the meter reading is less than 10% of the lower explosive limit (LEL), continue entry preparations. If the meter reading is above 10% of the LEL, immediately provide positive ventilation of the confined space, exhausting displaced gasses to a safe location. Then, shut off the ventilation and have the atmosphere re-tested.
   ii) If the meter reading is still above 10% of the LEL, the confined space must be cleaned before entry is permitted.
c) Toxic agents:
   i) The entry supervisor will also determine the toxicity of the atmosphere. If a toxic atmosphere is present, no person should be permitted to enter the confined space at a level exceeding the Permissible Exposure Limit without proper Personal Protective Equipment. Environmental Health & Safety should be called to assist in identifying proper precautions and the protective measures to be taken.
d) The greatest source of error in atmospheric monitoring is selecting the place within the confined space to take the necessary samples, since instruments can only measure the concentrations of the mixture that is drawn into the space. Corners and pockets at both the top and bottom levels of the space should be tested. Concentrations will vary depending on the physical properties of gases. For example, heavy petroleum product or paint vapors normally will be expected to reach their highest concentration at the bottom of a space. Light gases, such as acetylene and hydrogen, will tend to concentrate near their source. The structure of the confined space is also an important variable. Gas pockets can form behind partial bulkheads, deep beams, frames, diaphragms, brackets, and floors. Air samples should be taken at these structural pockets as well as in the open areas. If the instrumentation cannot be extended to these areas, only trained personnel may enter in order to perform the necessary tests. Adequate PPE for dangerous concentrations of vapor or lack of oxygen must be worn and precautions must be taken against ignition of any flammable gases or vapors present.
e) Another frequent cause of difficulty is the failure to retest a space after it has been determined to be safe. After a space has been considered non-hazardous, combustible liquids may be spilled, closed lines opened, or fuel gases may leak

from hoses to produce a flammable atmosphere. Such conditions must be corrected at once and tests must be made to ensure that the atmosphere is safe before resuming work.

f) NOTE: Every thirty minutes, (30 min.) record the results of all atmospheric testing on the back of the *Confined Space Entry Permit*. This will document that theses tests have been performed and will provide a record of the results should rescue become necessary. The record of what gases were suspected and what gases were found will save valuable time and allow the rescue team to enter the space sooner. This permit will be maintained on file for a period of 12 months following the issuance of the permit.

9) Ventilation:

The primary objectives when ventilating a confined space are:

a) To maintain a low level of airborne contaminants,
b) To prevent an explosion or fire; and to
c) To maintain oxygen levels within specified limits.
d) Natural ventilation may occur when the bottom and top man ways are removed from a confined space. The practice is normally inadequate for removal of airborne concentrations of flammable and toxic gases and vapors unless the opening can be left open for a considerable length of time. Normally there is not enough time to permit natural ventilation to purge the space and positive pressure ventilation must be used.
e) Mechanical air movers, such as blowers or fans, are a more effective means of ventilating a work space. Air movers can be placed at the top of the opening of a confined space, and using flexible ductwork push fresh air to the bottom man way driving contaminated air exhaust from the top. The potential for contaminated air discharging from the opening must be considered. The safety of nearby personnel and the location of the fresh air intake for the blower must be considered. This configuration generally provides for sweeping of the work zone with fresh air and, in the event of an emergency, allows entrants time to escape. An important consideration is not to locate exhaust from an air mover or fan into other work areas or near a source of ignition. Air movers, blowers, and fans must be non-sparking and electrically bonded and grounded to prevent the accumulation and discharge of static electricity.

10) Personal Protective Equipment

a) Personal protective equipment is used to protect workers only after all other feasible engineering means have been used to control or eliminate hazards. The type of PPE will depend upon the individual circumstances, the hazards which the space may reasonably present and the configuration of the space. As atmospheric hazards are typical hazards encountered, respiratory protection and monitoring equipment is usually required.
b) In some situations, a respirator will also be needed. A respirator will allow the employee to breathe without inhaling toxic gases or particles. There are two basic types of respirators, air-purifying, which filter dangerous substances from the air;

and air-supplying, which delivers a supply of safe breathing air from a tank or an uncontaminated source. An air-line respirator can only be used if the worker has a 10 minute rescue bottle. Air-purifying respirators can filter dangerous substances from the air, but provide no protection in an oxygen deficient environment. For this reason, air-purifying respirators should not be used in a confined space. Only air-supplying respirators (SAR/SCBA) should be used in confined spaces that have low oxygen levels or high levels of toxic gasses. They can supply the employee with safe breathing air from a tank or an uncontaminated source nearby.

c) In vertical entries, the safety harness should be attached to a retrieval device that will allow immediate removal of an employee in the event of an emergency. A full body or chest harness and a lifeline should be used when entering a confined space. In the event of an emergency, the attendant located on the outside should be able to initiate a rescue without entering the space.
d) Fire Extinguishers, hard hats, safety goggles, face shields, gloves, safety shoes, boots, disposable suits, earplugs / ear muffs, non-sparking flashlight, communication equipment and tools may also be needed when entering a confined space.

11) Lighting:

Lighting equipment needed to enable employees to see well enough to work safely and to exit the space quickly in an emergency. Adequate lighting will be necessary to provide a safe working environment in the confined space. This may be provided by a fixed lighting system or by temporary portable lighting brought inside the space. Conventional flash lights light may be adequate for some work or in the event of a power failure however may not be adequate for confined space entry. Portable lighting with power cords brought in from outside the space may present an electrical hazard if not properly installed and equipped with a properly installed ground fault interrupter.

12) Communications:

Communications equipment necessary for compliance with this program rather it be two way radios, intercom system or cell phone.

13) Harness:

Each authorized entrant shall use a chest or full body harness, with a retrieval line attached at the center of the entrant's back near shoulder level, or above the entrant's head. Wristlets may be used in lieu of the chest or full body harness if the employer can demonstrate that the use of a chest or full body harness is infeasible or creates a greater hazard and that the use of wristlets is the safest and most effective alternative.

14) **Retrieval Device***:*

The other end of the retrieval line shall be attached to a mechanical device or fixed point outside the permit space in such a manner that rescue can begin as soon as the rescuer becomes aware that rescue is necessary. A mechanical device shall be available to retrieve personnel from vertical type permit spaces more than 5 feet (1.52 m) deep.

15) Fire Suppression:

Even small fires within a confined space are particularly dangerous and present unacceptable hazards. Limited ventilation accelerates the harmful effects of smoke and heat. Poor visibility and the need to escape rapidly may present additional hazards. Efforts should be made to limit the combustible loading in a confined space and if necessary, an appropriate portable extinguisher should brought into the space. An extinguisher should always be available at the site.

16) Rescue Procedures

In the event of an emergency, the attendant should:

a) Immediately summon the City of Stamford Fire Department by radio or telephone via the 911 telephone line. Be certain to give the dispatcher an accurate location of the problem. Stay on the line with the dispatcher until they have obtained all the information they need.
b) Attempt to remove the victim by use of the retrieval line <u>from outside</u> the confined space if this can be accomplished without creating further hazard for the entrant or the attendant.
c) If the attendant is able to remove the victim with the retrieval line, he/she should administer aid within the limits of his/her training until emergency medical services (EMS) arrive.
d) If the attendant is unable to remove the victim by using the retrieval line, he or she must wait for help to arrive. The attendant is not to enter the confined space for any reason until trained backup personnel have arrived and are prepared to enter the space.
e) Tell responding rescue personnel what the hazards are in the space and provide your entry permit to the officer in charge.
f) Give EMS personnel any information they request.

NOTE: Historically, <u>more</u> deaths have claimed the lives of would be rescuers than original entrant victims in a confined space. Wait for additional trained rescue personnel and do not attempt a heroic yet foolish attempt to make a rescue by yourself.

17) Confined Space Inventory

A listing of all identified confined spaces on City of Stamford and Board of Education property is located in Appendix B within the City of Stamford. The following list

includes those City of Stamford and Board of Education spaces identified as confined spaces. Those which have been identified to be “Permit Required Spaces” have been so identified in bold type.

a) Boilers - Sewer Lines - Storm Sewers - Pumping Stations

Confined Space Entry Permit

City of Stamford

Department: _____

Date & Time of Entry: _____

Expected duration of stay: _____

Location of Space or Vessel: _____

Purpose for entering space:

List the names of all personnel assigned to this entry site below

Employee Entrant	Employee Attendant	Outside Contractor

All persons who enter the space must be trained in Confined Space Entry

Precautions:

Space empty and clean	[ ]	Communication devices available	[ ]
Atmosphere safe for entry	[ ]	Protective Equipment	[ ]
Conditions of the space will be monitored	[ ]	Self Contained Breathing Apparatus	[ ]
All lines and piping leading to the vessel been blanked or disconnected	[ ]	Fire Extinguisher	[ ]
	[ ]	Positive pressure ventilation	[ ]
Lock out devices in place	[ ]	Belt harness and retrieval line	[ ]
Cutting & Welding Permit Needed	[ ]	Rescue tripod	[ ]
Explosion proof safety lights available	[ ]	Warning signs	[ ]

In the Event of an Emergency Contact the Stamford Fire Department - Dial 911

Comments & Hazards anticipated

Entry Authorized by: _____

Confined Space Entry Permit

Atmospheric Monitoring Log

Device used to monitor air quality: _____

Person taking the measurements: _____

Time	% Oxygen	Explosive level	(List other gases or vapors suspected & test results)

This record is to be maintained at the department level for one year following date of entry

CONFINED SPACE DECISION FLOW CHART

29CFR§1910.146 App A

Does the workplace contain Confined Spaces as defined by *29CFR§1910.146(b)*?

- NO ->

YES

Does the workplace contain Permit Required Confined Spaces as defined by *1910.146(b)*?

- NO -> Consult other applicable OSHA Standards

STOP[1]

YES

Inform employees as required by *29CFR§1910.146(c)(2).*

Will permit spaces be entered?

- NO -> Prevent employees entry as required by *1910.146(c)(3)*
Do tasks from outside of space

YES

Will contractors enter?

-YES-> Task will be done by contractor's employees. Inform contractor as required by 1910.146(c)(8)(I), (ii) and (iii), Contractor obtains information required by 1910.146 (c) (9) (I) , (ii) and iii) from host.

NO

Both contractors and host employees will enter the space

YES NO

Coordinate entry operations as required by 1910.146 (c) (8) (iv) & (d)(11) Prevent unauthorized entry

Will Host employees enter to perform entry tasks?

-NO-> Prevent Unauthorized Entry

YES

[1] Spaces must be evacuated and reevaluated if hazards arise during entry

Yes No

Does space have known or potential hazards? -NO-> Not a Permit Required confined space 1910.146 does not apply Consult other OSHA Standards

YES

Can the hazards be eliminated? -YES-> Employer may choose to reclassify space to non-permit required confined space using 1910.146(c)(7) STOP[1]

NO

Can the space be maintained in a condition safe to enter by continuous forces air ventilation only? -YES-> Space may be entered under 910.146(c)(5) STOP[1]

NO

Prepare for entry via permit procedures.

Verify acceptable entry conditions (test results record, space isolated if needed, rescuers. means to summon available, entrants properly equipped, etc.) -NO-> Permit not valid until conditions meet permit specifications.

YES

Permit issued by authorizing signature. Acceptable entry conditions maintained throughout entry. -NO-> Emergency exists (prohibited condition). Entrants evacuated entry aborts. (call rescuers if needed) Permit is VOID. Reevaluate program to correct / prevent prohibited condition. Occurrence of emergency (usually) is proof of deficient program. No re-entry until program (and permit) is amended (may require a new program)

YES

Entry tasks completed. Permit returned and canceled.

Audit permit program and permit based on evaluation of entry by entrants, attendants, testers and preparers, etc.

[1] Spaces may have to be evacuated and re-evaluated if hazards arise during entry.

CONFINED SPACE SURVEY by _____

Department responsible for Space _____

Address _____

Description or Space Name: _____

For Entry contact : _____ @ Ext. _____

	yes	no
Is the space in question large enough that a worker can bodily enter?	[ ]	[ ]
Is the space configured so that an worker can enter to perform work inside	[ ]	[ ]
Does the space in question have limited or restricted means for entry or exit	[ ]	[ ]
Is the space designed for continuous worker occupancy	[ ]	[ ]

Occupancy of Space: _____

Electrical Equipment [ ]
Mechanical Equipment [ ]
Piping (water, gas, liquids, be specific re materials): _____

Other potential hazards: _____
loud noise
extreme heat
extreme cold
engulfment

Comments:

Do not write below this line

☐ PERMIT REQUIRED CONFINED SPACE ☐ CONFINED SPACE

_____
Safety Officer

OVER

Confined Space Sign

POWERED INDUSTRIL TRUCK (PIT) POLICY

1) Purpose and Background

The City of Stamford Risk Management Department has developed this policy to ensure a safe work environment and to protect the health and safety of staff who operate or maintain powered industrial trucks (PIT). The Occupational Safety and Health Administration (OSHA) per 29 CFR 1910.178 states in part, only trained and authorized operators shall be permitted to operate a PIT.

2) Scope

The powered industrial truck program applies to all City of Stamford departments that operate and/or maintain specialized industrial trucks powered by electric motors or internal combustion engines. This includes any self-propelled materials delivery vehicle or self propelled fork lift vehicle that the operator walks along with, rides standing on, or rides sitting on.

3) Policy

All powered industrial trucks (PITs) shall be operated and maintained in accordance with this policy.

4) Authority and Responsibility

a) Risk Management – Safety Officer is responsible for:
   i) Reviewing the PIT policy to assure compliance;
b) Departmental Peer PIT Instructors are responsible for:
   i) Coordinating and providing training of affected employees; and
   ii) Maintaining training records of all operators.
c) Departmental Supervisors are responsible for:
   i) Ensuring employees attend training and operate PITs in a safe manner;
   ii) Ensuring all equipment is in proper working condition;
   iii) Assuring operators perform appropriate pre-operation safety inspections and complete log books prior to operating equipment;
   iv) Scheduling maintenance by outside contractors;
   v) Inspecting daily log books on a monthly basis; and
   vi) Maintaining required documentation.
d) *Employees* are responsible for complying with this policy.

5) General Requirements

General requirements for PITs are as follows:

a) Only trained and authorized operators shall be permitted to operate a PIT;
b) The employee is responsible for ensuring the safe operation of the PIT;
c) Modifications and additions that affect capacity and the safe operation of the PIT shall not be performed by City of Stamford employees without the manufacturer's prior written approval. Capacity, operation, and maintenance instruction plates, tags, or decals shall be modified accordingly;
d) If the PIT is equipped with front-end attachments other than factory installed attachments, the PIT shall be marked to identify the attachments and show the

approximate weight of the truck and attachment combination at maximum elevation with load laterally centered;

e) Nameplates and markings shall be in place and maintained in a legible condition;
f) Supervisors/Foreman will conduct an assessment of the areas in which powered industrial trucks are used within their departments to determine if specialty designed equipment may be required. Use OSHA Standard 29 CFR 1910.178© for reference to determine areas which may be designated hazardous locations. If designated locations exist which require special design and tested industrial trucks, notify City of Stamford Risk Management/Safety Officer for assistance in determining which type of industrial truck to use;
g) All PIT's approved for fire safety purposes must bear a label or other identifying mark indicating approval by the testing laboratory; and
h) Any PIT not in safe operating condition shall be removed from service. All repairs shall be made by authorized personnel. No PIT shall be put back into service until all repairs have been made.

6) Pre-Operation Safety Inspection

Prior to operating a PIT, the employee shall perform a pre-operation safety inspection using the appropriate Pre-operation Inspection Checklist provided at facilities that operate PITs and as follows:

a) This inspection shall be made at least daily;
b) When PITs are used on a round-the-clock basis, they shall be examined after each shift;
c) The inspection shall identify any conditions that could affect the safe operation of the PIT;
d) If any unsafe condition(s) exist, the PIT shall be removed from service and tagged "Out of Service" until the proper repairs or concerns are addressed;
e) Upon an operator discovering any concerns, immediately notify the supervisor so he or she can notify the person responsible for the repairs; and
f) Only City of Stamford Fleet Maintenance or outside contractors qualified to repair PITs shall perform all repairs and adjustments.

7) Fuel Handling and Storage

a) The handling and storage of liquid fuels such as gasoline shall be in accordance with the National Fire Protection Association (NFPA) Flammable and Combustible Liquids Code (NFPA 30).
b) The handling and storage of liquefied petroleum gas fuel shall be in accordance with the Storage and Handling of Liquefied Petroleum Gases Code (NFPA 58).
c) The following procedures shall be followed:
    i) Battery charging installations shall be located in areas designated for that purpose;
    ii) When refueling or recharging the batteries of a PIT, the operator shall ensure that the PIT is shut-off and the parking brake is engaged;
d) Facilities shall be provided for flushing and neutralizing spilled electrolyte and for protecting charging apparatus from damage by trucks;

e) Refueling and recharging shall be completed in areas that are designated and well ventilated;
f) Personal protective equipment (approved face shield, goggles, gloves) shall be worn during all refueling and battery recharging operations;
g) For battery charging areas; an emergency eyewash/shower station shall be present in the area;
h) Smoking shall be prohibited in refueling and recharging areas. Fuel vapors and gases, which can escape from the battery and fuel vents, are extremely flammable;
i) Check the level on the battery monthly; and
j) When charging batteries, acid shall be poured into water; water shall not be poured into acid.

8) Workplace Hazards

Many hazards exist in the workplace that are easily detectable if a survey of the area is conducted. These hazards include, but are not limited to, the following:

a) Overhead obstructions such as fire protection sprinkler piping, ventilation ducts, lighting fixtures, power lines. If the load being moved is carried too high or the PIT mast is raised too high, damage can occur to the overhead obstruction and possibly cause injury to the operator or people in the immediate area;
b) Co-workers or pedestrians traveling to and from certain areas within the facility;
c) Poor housekeeping such as debris left on the floor and wet floors;
d) Poor condition of the floor surface such as uneven concrete, potholes and cracks;
e) Poor visibility around corners. The operator's view from a PIT can be blocked or obstructed by the load. If there is not a clear view, drive in reverse or have a co-worker, "spotter", direct you;
f) Operating a PIT in a confined area with poor ventilation can allow the PIT exhaust gases to accumulate. This creates a hazard not only for the forklift operator, but also for others within the area or building.
g) For individuals who wear eyeglasses, entering a warm atmosphere from a cold atmosphere (driving into a building from the outside) will cause eyeglasses steam up reducing vision; and
h) Driving too fast for the conditions of the area. When operating a PIT, always remain alert and cautious.
i) Note the existing and potential hazards and conditions that do or could exist in the work environment. Whenever a hazard is discovered which requires action such as housekeeping, poor floor condition or poor ventilation, immediately notify the supervisor to ensure the proper procedures are followed to address the hazards.

9) Operating Procedures

When operating a PIT, always travel with the forks approximately four inches from the ground so they clear any uneven surfaces. Always survey the area ahead and to the sides when traveling. Always travel in reverse or use a "spotter" when the load being carried obstructs the view.

a) Some factors that could cause the PIT to tip over:
    i) Overloads;
    ii) Unstable loads;

iii) Load not centered on forks;
iv) Traveling with the load raised;
v) Sudden stops and starts;
vi) Making sharp turns; and
vii) Traveling across a ramp or incline.
viii) Safety Practices
ix) The following safety practices shall be adhered to at all times:
x) Wear seatbelts whenever the PIT is equipped with them;
xi) Keep all body parts inside the driver's compartment;
xii) Drive at appropriate speeds;

b) Do not carry passengers on the PIT;
c) No person shall be permitted to stand or pass under elevated portions of any PIT, whether loaded or empty;
d) All PIT operators working on platforms that are six feet above a lower level shall wear appropriate fall protection devices;
e) When traveling behind other PITs or vehicles, always maintain at least three forklift lengths from the vehicle or PIT ahead, and maintain control of the PIT at all times;
f) Slowly approach ramps and inclines straight, not at an angle;
g) Never turn the PIT while on a ramp or incline;
h) When parking a PIT and prior to dismounting or leaving the unit, shut-off the power. The operator shall never leave a running PIT unattended;
i) When the PIT is left unattended, the load shall be fully lowered, controls shall be neutralized, power shut off, brakes set and wheels blocked if PIT is parked on an incline;
j) Never park a PIT in front of any fire protection equipment, emergency exits, or in a manner that would obstruct a person from exiting the area;
k) If at any time during operation a PIT is found to be in need of repair, defective, or in any way unsafe, it shall be immediately removed from service. The department supervisor shall be notified so he or she can notify the person responsible for the repairs; and
l) Refueling and recharging areas equipped with emergency eyewash stations shall be inspected on a weekly basis.

10) Training

a) The City of Stamford employees and outside contractor employees designated to operate a powered industrial truck shall be required to participate in and successfully complete a PIT training program approved by the Risk Management Department to ensure the operator is competent to operate a PIT safely before assuming their responsibilities.
b) The supervisor/Peer Instructor shall ensure that each powered industrial truck operator is competent to operate a powered industrial truck safely.
c) Prior to permitting an employee to operate a powered industrial truck (except for training purposes), the supervisor/Peer Instructor shall ensure that each operator has successfully completed the Lift Truck Operator required training and has a valid Operator Authorization Card.

d) All operator training and evaluation shall be conducted by designated persons who have the knowledge, training, and experience to train powered industrial truck operators and evaluate their competence.
e) Training consists of a combination of formal instruction and practical training. Formal instruction includes lecture, interactive discussion, video, and written material handouts. Practical training includes demonstrations performed by the trainer, practical exercises performed by the trainee, and evaluation of the operator's performance in the workplace.
f) Trainees may operate a powered industrial truck only:
    i) Under the direct supervision of persons who have the knowledge, training, and experience to train operators and evaluate their competence; and
    ii) Where such operation does not endanger the trainee or other employees.
g) Curriculum
    i) The curriculum of the training program shall, at a minimum, address the following topics:
        (1) Pre-Operation Safety Inspection;
        (2) Workplace Hazards;
        (3) Safe Driving and Operating Procedures;
        (4) Loading-Carrying-Unloading of Materials; and
        (5) Operation and Safety Driving Practical.
h) Refresher Training
    i) Employees shall be required to participate in refresher training at least once every three years. Retraining may also be deemed necessary when it has been documented that the operator has been observed to operate the PIT in an unsafe and/or inappropriate manner, involved in an accident or near miss incident, is assigned to drive a different type of PIT, or a condition in the workplace changes in a manner that could affect safe operation of the PIT as directed by this policy and according to OSHA regulations.
    ii) Refresher training shall consist of practical exercises performed by the trainee, and evaluation of the operator's performance in the workplace.

11) Powered Industrial Truck Classification

a) Powered industrial trucks are classified by their manufacturers according to their individual characteristics. There are seven classes of powered industrial trucks:
    - **Class 1**--Electric Motor, Sit-down Rider, Counter-Balanced Trucks (Solid and Pneumatic Tires).
    - **Class 2**--Electric Motor Narrow Aisle Trucks (Solid Tires).
    - **Class 3**--Electric Motor Hand Trucks or Hand/Rider Trucks (Solid Tires).
    - **Class 4**--Internal Combustion Engine Trucks (Solid Tires).
    - **Class 5**--Internal Combustion Engine Trucks (Pneumatic Tires).
    - **Class 6**--Electric and Internal Combustion Engine Tractors (Solid and Pneumatic Tires).
    - **Class 7**--Rough Terrain Forklift Trucks (Pneumatic Tires).

12) Powered Industrial Truck (PIT) Operator Training Program Outline

a) Introduction
   i) Overview of the program
      (1) Goal of the program: to provide a training program based on the trainee's prior knowledge, the types of vehicles used in the workplace, and the hazards of the workplace.
   ii) Course will utilize video, group discussion and hands-on practice. Each operator must obtain the knowledge and skills needed to do their job correctly and safely.
   iii) Types, Features, and Physics
      (1) Familiarize each operator with the basic types and functions of powered industrial trucks.
      (2) Develop an understanding of the information shown on a data plate.
      (3) Understand the critical truck measurements that affect safety.
      (4) Understand the forces that cause tipovers and the truck design considerations and safety ratings that help prevent them, including the "stability triangle."
   iv) Inspecting the vehicle
      (1) Understand the purpose and importance of pre-operational checkouts.
      (2) Provide a basic understanding of areas covered during a pre-operational checkout.
      (3) Familiarize each operator with a checklist for pre-operational checkouts, and what to do if a problem is discovered.
   v) Driving the Truck
      (1) Understand the elements of safe movement of a powered industrial truck.
      (2) Understand the differences between an automobile and a powered industrial truck.
      (3) Recognize the safety hazards associated with operating a powered industrial.
   vi) Load Handling
      (1) Understand the elements of load lifting safety.
      (2) Understand the safe operating procedures for raising and lowering loads.
   vii) LPG for Lift Trucks
      (1) Discuss LPG and its properties.
      (2) Understand the elements and procedures of safely refueling internal combustion vehicles.
      (3) Describe tank components: service valve, surge valve, relief valve, etc.
      (4) Discuss related safety issues.
   viii) Battery and Charging
      (1) Understand the elements and procedures of safely changing and charging batteries.
      (2) Discuss filling procedures and maintenance.
      (3) Discuss related safety issues.
   ix) Safety Concerns
      (1) Review/reinforce potential of serious injury
      (2) Review/reinforce safety procedures in your facility.

x) Specific Truck and Workplace Training/Hands-On
   (1) Review features of specific PIT's to be operated.
   (2) Review operating procedures of specific PIT's to be operated.
   (3) A review safety concern of specific PIT's to be operated.
   (4) Review workplace conditions and safety concerns of areas where PIT's will be operated.
   (5) Learn/practice actual operation of specific PIT's to be operated and specific workplace conditions where PIT's will be operated.
   (6) Demonstrate proficiency performing the powered industrial truck operator duties specific to the trainee's position and workplace conditions.

13) Certification of Completion of the Course

a) EMPLOYEE EVALUATION
   i) When the employee completes the training exercises and prior to operating the truck in the workplace, an evaluation of the employee must be performed. This evaluation will determine the adequacy of training and the ability of the employee to perform truck operations safely in the workplace. The OSHA standard also requires that an evaluation of the operator's performance be conducted at least once every three years and after refresher training.
   ii) The employer should then complete a certification of training record containing the name of the operator, the date of the training, the date of the evaluation, and the identity of the person(s) performing the training or evaluation.

14) Refresher Training

During the course of truck operation, the supervisor may observe the employee performing an unsafe act, such as riding with the load too high or traveling at an unsafe speed. The person making the correction should point out the incorrect manner of operation of the truck or other unsafe act being conducted, tell the employee how to do the operation correctly, and then ensure the employee does the operation correctly. When there have been multiple on-the-spot corrections, the employer may decide to conduct a more structured retraining program which would include the following information:

a) Common unsafe situations encountered in the workplace;
b) Unsafe operating methods observed or known to be used;
c) The need for constant attentiveness to the vehicle, the workplace conditions, and the manner in which the vehicle is operated.

City of Stamford – Powered Industrial Truck Pre-operational Inspection Checklist

Vehicle #:_____ Inspected by: _____ Date: _____

Check the following as appropriate:	**OK**	**Needs work**
○ **Overhead guard**	☐	☐
○ **Horn**	☐	☐
○ **Lights**	☐	☐
○ **Parking Brake**	☐	☐
○ **Service Brake**	☐	☐
○ **Steering**	☐	☐
○ **Fluid/Fuel Leaks**	☐	☐
○ **Backup Alarm**	☐	☐
○ **Tires (visual)**	☐	☐
○ **Seat Belt**	☐	☐
○ **Oil Level**	☐	☐
○ **Fire Extinguisher (charged)**	☐	☐
○ **Fuel Lines Secure**	☐	☐
○ **Electrical Lines Secure**	☐	☐
○ **Exhaust system**	☐	☐

○ **Additional information**_____

_____

_____

Do not operate until all deficiencies have been corrected. Keep on file.

City of Stamford – Powered Industrial Truck Operator Evaluation Checklist

Operators Name: _____ Date: _____

Type of Lift Operated: _____Score:_____Pass Fail

Observe the following:

1. **Performed vehicle inspection prior to use.** **Pass** **Fail**
2. **Shows familiarity with truck controls.** **Pass** **Fail**
3. **Wears seat belt (correctly).** **Pass** **Fail**
4. **Gave proper signals when turning and slowed at intersections.** **Pass** **Fail**
5. **Sounded horn at intersections and obeyed signs.** **Pass** **Fail**
6. **Kept a clear view of direction of travel.** **Pass** **Fail**
7. **Traveled backward when required.** **Pass** **Fail**
8. **Turned corners correctly – was aware of rear end swing.** **Pass** **Fail**
9. **Yielded to pedestrians.** **Pass** **Fail**
10. **No smoking on or around truck.** **Pass** **Fail**
11. **Drove under control (proper speed) and within proper traffic aisles.** **Pass** **Fail**
12. **When not carrying a load – traveled with forks at proper height.** **Pass** **Fail**
13. **Checked loads weight** **Pass** **Fail**
14. **Approached load properly.** **Pass** **Fail**
15. **Lifted and maneuvered load properly.** **Pass** **Fail**

16. Traveled with load at proper height. **Pass**
Fail
17. Lowered load smoothly/slowly. **Pass**
Fail
18. Stops smoothly/completely. **Pass**
Fail
19. Load balanced properly and forks under load all the way. **Pass**
Fail
20. Load is in proper containers or safely carried. **Pass**
Fail
21. Checked bridge plates/ramps before entering **Pass**
Fail
22. Placed loads with marked area/properly. **Pass**
Fail
23. Stacked loads evenly, neatly and safely. **Pass**
Fail
24. Placed forks on floor when parked, controls neutralized, brake on/set, power off. **Pass**
Fail

Proficiency Instructor (Print):
_____

Proficiency Instructor (Sign):_____

Class of Lifts Operator is qualified to operate (refer page 13 of Policy):
_____
_____

Place copy in Operator's Department personnel file.

HEARING CONVERSATION PROGRAM

1) Objective

The objective of the City of Stamford Hearing Conservation Program is to minimize occupational hearing loss by providing hearing protection, training, and annual hearing tests to all persons working in areas or with equipment that have noise levels equal to or exceeding an eight-hour time-weighted average (TWA) sound limit of 85 dBA (decibels measured on the A scale of a sound level meter). A copy of this program will be maintained by all affected departments. A copy of OSHA's Hearing Conservation Standard, 29 CFR 1910.95, can be obtained from City Safety Officer. A copy of the standard will also be posted in areas with affected employees.

2) Assignment of Responsibility

a) Management
   i) Use engineering and administrative controls to limit employee exposure.
   ii) Provide adequate hearing protection for employees.
   iii) Post signs and warnings in all high noise areas.
   iv) Conduct noise surveys annually or when new equipment is needed.
   v) Conduct annual hearing test for all employees.
   vi) Conduct hearing conservation training for all new employees.
   vii) Conduct annual hearing conservation training for all employees.

3) Employees

a) Use company-issue approved hearing protection in designated high noise areas.
b) Request new hearing protection when needed.
c) Exercise proper care of issued hearing protection.

4) Procedures

a) Noise Monitoring
b) Monitoring for noise exposure levels will be conducted by the Department Supervisor or the City Safety Officer. It is the responsibility of the individual departments to notify the City Safety Officer when there is a possible need for monitoring. Monitoring will be performed with the use of sound level meters and personal dosimeters at the discretion of City Safety Officer.
   i) Monitoring will also be conducted whenever there is a change in equipment, process or controls that affect the noise levels. This includes the addition or removal of machinery, alteration in building structure, or substitution of new equipment in place of that previously used. The responsible supervisor must inform the City Safety Officer when these types of changes are instituted.

5) Employee Training

a) Affected employees will be required to attend training concerning the proper usage and wearing of hearing protection. The training will be conducted by Department Supervisor or the City Safety Officer, or a designated representative, within a month of hire and annually thereafter.
b) Training shall consist of the following components:

i) how noise affects hearing and hearing loss;
ii) review of the OSHA hearing protection standard;
iii) explanation of audiometric testing;
iv) rules and procedures;
v) locations within company property where hearing protection is required; and
vi) How to use and care for hearing protectors.

c) Training records will be maintained by Department Supervisor with a copy to the City Safety Officer (see Attachment A).

6) Hearing Protection

Management, supervisors, and employees shall properly wear the prescribed hearing protection while working or traveling through any area that is designated as a high noise area.

a) Hearing protection will be provided at no cost to employees who perform tasks designated as having a high noise exposure and replaced as necessary. It is the supervisor's responsibility to require employees to wear hearing protection when noise levels reach or exceed 85 dBA. Those employees will have the opportunity to choose from at least two different types of hearing protection.
b) Personal stereo headsets, or "Walkman," are not approved for hearing protection and are not permitted in any operating area of company property.
c) Signage is required in areas that necessitate hearing protection. It is the responsibility of Department Supervisor to provide signage to the appropriate areas.
d) Preformed earplugs and earmuffs should be washed periodically and stored in a clean area. Foam inserts should be discarded after each use. Hands should be washed before handling preformed earplugs and foam inserts to prevent contaminants from being placed in the ear.
e) The Department Supervisor and or the City Safety Officer will keep a log of the areas or job tasks designated as requiring hearing protection, as well as the personnel affected by this Hearing Conservation Program (see Attachment B).

7) Audiograms/Hearing Tests

Employees subject to the Hearing Conservation Program who have time-weighted average (TWA) noise exposures of 85 dBA or greater for an eight (8) hour work shift will be required to have both a baseline and annual audiogram. The audiograms will be provided by the City of Stamford and conducted by the City's designated medical provider with no cost to the employee.

a) The baseline audiogram will be given to an employee within one (1) month of employment with the City of Stamford and before any exposure to high noise levels. Annual audiograms will be performed within one year from the date of the previous audiogram. It is the responsibility of the individual and Department Supervisor to schedule the annual audiogram.
b) If an annual audiogram shows that an employee has suffered a standard threshold shift, the employee will be retested within thirty (30) days of the annual audiogram. If the retest confirms the occurrence of a standard threshold shift, the employee will be notified in writing within twenty-one (21) days of the

confirmation. Employees who do experience a standard threshold shift will be refitted with hearing protection and provided more training on the effects of noise.

Hearing Conservation Training Log

Training Date: _____

Topic: _____

Training Conducted by: _____

Employee Name (printed)	Employee Signature	Job Title

Record of Hearing Protection Needs

City of Stamford **Personnel in Hearing Conservation Program** ***Date***				
Hearing protection is required for and has been issued to the following personnel:				
Employee Name	**Department**	**Job Description/ Equipment Being Used**	**Type of Hearing Protection Issued**	**Date Issued**

FALL PROTECTION PROGRAM

1) Objective

The objective of the City of Stamford Fall Protection Program is to identify and evaluate fall hazards to which employees will be exposed, and to provide specific

training as required by the Occupational Safety and Health Administration (OSHA) Fall Protection Standard, 29 CFR 1926, Subpart M**.**

2) Policy

It is the policy of City of Stamford to protect its employees from occupational injuries by implementing and enforcing safe work practices and appointing a competent person(s) to manage the Fall Protection Program. The City of Stamford Fall Protection Program shall comply with the OSHA requirements. A copy of the OSHA Fall Protection Standard shall be made available to all employees, and may be obtained from the City Safety Officer.

3) Assignment of Responsibility

a) Employer

It is the responsibility of the City of Stamford to provide fall protection to affected employees, and to ensure that all employees understand and adhere to the procedures of this plan.

b) Program Manager

It is the responsibility of the Department Manager, Supervisor or Foreman as the Fall Protection Program Manager to implement this program by:

i) Performing routine safety checks of work operations;
ii) Enforcing the City's safety policy and procedures;
iii) Correcting any unsafe practices or conditions immediately;
iv) Training employees and supervisors in recognizing fall hazards and the use of fall protection systems;
v) Maintaining records of employee training, equipment issue, and fall protection systems used at the jobsites; and
vi) Investigating and documenting all incidents that result in employee injury.

c) Employees

It is the responsibility of all employees to:

i) Understand and adhere to the procedures outlined in this Fall Protection Program;
ii) Follow the instructions of their Program Manager;
iii) Bring to management's attention any unsafe or hazardous conditions or practices that may cause injury to either themselves or any other employees; and
iv) Report any incident that causes injury to an employee, regardless of the nature of the injury.

4) Training

All employees who may be exposed to fall hazards are required to receive training on how to recognize such hazards, and how to minimize their exposure to them. Employees shall receive training as soon after employment as possible, and before they are required to work in areas where fall hazards exist. A record of employees who have received training and training dates shall be maintained by Program Manager with a copy to the City Safety Officer. Training of employees shall include:

a) Nature of the fall hazards employees may be exposed to.

b) Correct procedures for erecting, maintaining, disassembling, and inspecting fall protection systems.
c) Use and operation of controlled access zones, guardrails, personal fall arrest systems, safety nets, warning lines, and safety monitoring systems.
d) Role of each employee in the Safety Monitoring System (if one is used).
e) Limitations of the use of mechanical equipment during roofing work on low-slope roofs (if applicable).
f) Correct procedures for equipment and materials handling, and storage and erection of overhead protection.
g) Role of each employee in alternative Fall Protection Plans (if used).
h) Requirements of the OSHA Fall Protection Standard, 29 CFR 1926, Subpart M.
i) City of Stamford requirements for reporting incidents that cause injury to an employee.

Additional training shall be provided on an annual basis, or as needed when changes are made to this Fall Protection Program, an alternative Fall Protection Plan, or the OSHA Fall Protection Standard.

5) Controlled Access Zones

Only trained and authorized employees are permitted to enter controlled access zones and areas from which guardrails have been removed. All other workers are prohibited from entering controlled access zones.

a) Controlled access zones shall be defined by control lines consisting of ropes, wires, tapes, or equivalent material, with supporting stanchions, and shall be:
   i) Flagged with a high-visibility material at six (6) foot intervals.
   ii) Rigged and supported so that the line is between 30 and 50 inches (including sag) from the walking/working surface.
   iii) Strong enough to sustain stress of at least 200 pounds.
   iv) Extended along the entire length of an unprotected or leading edge.
   v) Parallel to the unprotected or leading edge.
   vi) Connected on each side to a guardrail system or wall.
   vii) Erected between six (6) feet and 25 feet from an unprotected edge, except in the following cases:
      (1) when working with precast concrete members: between six (6) feet and 60 feet from the leading edge, or half the length of the member being erected, whichever is less; or
      (2) When performing overhand bricking or related work: between ten (10) feet and 15 feet from the working edge.

6) Excavations

Fall protection will be provided to employees working at the edge of an excavation that is six (6) feet or deeper. Employees in these areas are required to use the fall protection systems as designated in this program.

a) Excavations that are six (6) feet or deeper shall be protected by guardrail systems, fences, barricades, or covers.

b) Walkways that allow employees to cross over an excavation that is six (6) feet or deeper shall be equipped with guardrails.

7) Fall protection Systems

a) Covers
   i) All covers shall be secured to prevent accidental displacement.
   ii) Covers shall be color-coded or bear the markings "HOLE" or "COVER".
   iii) Covers located in roadways shall be able to support twice the axle load of the largest vehicle that might cross them.
   iv) Covers shall be able to support twice the weight of employees, equipment, and materials that might cross them.

8) Guardrail Systems

Guardrail systems shall be erected at unprotected edges, ramps, runways, or holes where it is determined by Supervisor/Project Manager that erecting such systems will not cause an increased hazard to employees. The following specifications will be followed in the erection of guardrail systems.

a) Toprails shall be:
   i) At least ¼ inch in diameter (steel or plastic banding is unacceptable);
   ii) Flagged every six (6) feet or less with a high visibility material if wire rope is used;
   iii) Inspected by Supervisor/Project Manager as frequently as necessary to ensure strength and stability;
   iv) Forty-two (42) inches (plus or minus three (3) inches) above the walking/working level; and
   v) Adjusted to accommodate the height of stilts, if they are in use.
b) Midrails, screens, mesh, intermediate vertical members, and solid panels shall be erected in accordance with the OSHA Fall Protection Standard.
c) Gates or removable guardrail sections shall be placed across openings of hoisting areas or holes when they are not in use to prevent access.

9) Personal Fall Arrest Systems

Personal fall arrest systems shall be issued to and used by employees as determined by Responsible Person and may consist of anchorage, connectors, body harness, deceleration device, lifeline, or suitable combinations.

a) Personal fall arrest systems shall:
   i) Limit the maximum arresting force to 1800 pounds;
   ii) Be rigged so an employee cannot free fall more than six (6) feet or contact any lower level;
   iii) Bring an employee to a complete stop and limit the maximum deceleration distance traveled to three and a half (3 ½) feet;
   iv) Be strong enough to withstand twice the potential impact energy of an employee free falling six (6) feet (or the free fall distance permitted by the system, whichever is less);
   v) Be inspected prior to each use for damage and deterioration; and
   vi) Be removed from service if any damaged components are detected.

b) All components of a fall arrest system shall meet the specifications of the OSHA Fall Protection Standard, and shall be used in accordance with the manufacturer's instructions.
c) The use of non-locking snaphooks is prohibited.
d) Dee-rings and locking snaphooks shall:
   i) Have a minimum tensile strength of 5000 pounds; and
   ii) Be proof-tested to a minimum tensile load of 3600 pounds without cracking, breaking, or suffering permanent deformation.
e) Lifelines shall be:
   i) Designed, installed, and used under the supervision of Supervisor/Project Manager;
   ii) Protected against cuts and abrasions; and
   iii) Equipped with horizontal lifeline connection devices capable of locking in both directions on the lifeline when used on suspended scaffolds or similar work platforms that have horizontal lifelines that may become vertical lifelines.
f) Self-retracting lifelines and lanyards must have ropes and straps (webbing) made of synthetic fibers, and shall:
   i) Sustain a minimum tensile load of 3600 pounds if they automatically limit free fall distance to two (2) feet; or
   ii) Sustain a minimum tensile load of 5000 pounds (includes ripstitch, tearing, and deforming lanyards).
g) Anchorages must support at least 5000 pounds per person attached and shall be:
   i) Designed, installed, and used under the supervision of the Supervisor/Project Manager;
   ii) Capable of supporting twice the weight expected to be imposed on it; and
   iii) Independent of any anchorage used to support or suspend platforms.

10) Positioning Device Systems

Body belt or body harness systems shall be set up so that an employee can free fall no farther than two (2) feet, and shall be secured to an anchorage capable of supporting twice the potential impact load or 3000 pounds, whichever is greater. Requirements for snaphooks, dee-rings, and other connectors are the same as detailed in this Program under *Personal Fall Arrest Systems.*

11) Safety Monitoring Systems

In situations when no other fall protection has been implemented, Supervisor/Project Manager shall monitor the safety of employees in these work areas. The Supervisor/Project Manager shall be:

a) Competent in the recognition of fall hazards;
b) Capable of warning workers of fall hazard dangers;
c) Operating on the same walking/working surfaces as the employees and able to see them;
d) Close enough to work operations to communicate orally with employees; and
e) Free of other job duties that might distract them from the monitoring function.

No employees other than those engaged in the work being performed under the Safety Monitoring System shall be allowed in the area. All employees under a Safety Monitoring System are required to promptly comply with the fall hazard warnings of the Supervisor/Project Manager.

12) Safety Net Systems

Safety net systems must be installed no more than 30 feet below the walking/working surface with sufficient clearance to prevent contact with the surface below, and shall be installed with sufficient vertical and horizontal distances as described in the OSHA Fall Protection Standard.

a) All nets shall be inspected at least once a week for wear, damage, or deterioration by Project Manager. Defective nets shall be removed from use and replaced with acceptable nets.
b) All nets shall be in compliance with mesh, mesh crossing, border rope, and connection specifications as described in the OSHA Fall Protection Standard.
c) When nets are used on bridges, the potential fall area from the walking/working surface shall remain unobstructed.
d) Objects that have fallen into safety nets shall be removed as soon as possible and at least before the next working shift.

13) Warning Line Systems

Warning line systems consisting of supporting stanchions and ropes, wires, or chains shall be erected around all sides of roof work areas.

a) Lines shall be flagged at no more than six (6) foot intervals with high-visibility materials.
b) The lowest point of the line (including sag) shall be between 34 and 39 inches from the walking/working surface.
c) Stanchions of warning line systems shall be capable of resisting at least 16 pounds of force.
d) Ropes, wires, or chains must have a minimum tensile strength of 500 pounds.

Warning line systems shall be erected at least six (6) feet from the edge, except in areas where mechanical equipment is in use. When mechanical equipment is in use, warning line systems shall be erected at least six (6) feet from the parallel edge, and at least ten (10) feet from the perpendicular edge.

e) Tasks and Work Areas requiring Fall Protection

Unless otherwise specified, the Supervisor/Project Manager shall evaluate the worksite(s) and determine the specific type(s) of fall protection to be used in the following situations.

i) Framework and Reinforcing Steel
   (1) Fall protection will be provided when an employee is climbing or moving at a height of over 24 feet when working with rebar assemblies.

ii) Hoist Areas
   (1) Guardrail systems or personal fall arrest systems will be used in hoist areas when an employee may fall six (6) feet or more. If guardrail systems must

be removed for hoisting, employees are required to use personal fall arrest systems.

iii) Holes

(1) Covers or guardrail systems shall be erected around holes (including skylights) that are six (6) feet or more above lower levels. If covers or guardrail systems must be removed, employees are required to use personal fall arrest systems.

iv) Leading Edges

(1) Guardrail systems, safety net systems, or personal fall arrest systems shall be used when employees are constructing a leading edge that is six (6) feet or more above lower levels. An alternative Fall Protection Plan shall be used if the Supervisor/Project Manager determines that the implementation of conventional fall protection systems is infeasible or creates a greater hazard to employees. All alternative Fall Protection Plans for work on leading edges shall:

(a) Be written specific to the particular jobsite needs;
(b) Include explanation of how conventional fall protection is infeasible or creates a greater hazard to employees;
(c) Explain what alternative fall protection will be used for each task;
(d) Be maintained in writing at the jobsite by the Supervisor/Project Manager; and
(e) Meet the requirements of 29 CFR 1926.502(k).

v) Overhand Bricklaying and Related Work

(1) Guardrail systems, safety net systems, personal fall arrest systems, or controlled access zones shall be provided to employees engaged in overhead bricklaying or related work six (6) feet or more above the lower level. All employees reaching more than ten (10) inches below the walking/working surface shall be protected by guardrail systems, safety net systems, or personal fall arrest systems.

vi) Precast Concrete Erection

(1) Guardrail systems, safety net systems, or personal fall arrest systems shall be provided to employees working six (6) feet or more above the lower level while erecting or grouting precast concrete members. An alternative Fall Protection Plan shall be used if the Supervisor/Project Manager determines that the implementation of conventional fall protection systems is infeasible or creates a greater hazard to employees. All alternative Fall Protection Plans for precast concrete erection shall:

(a) Be written specific to the particular jobsite needs;
(b) Include explanation of how conventional fall protection is infeasible or creates a greater hazard to employees;
(c) Explain what alternative fall protection will be used for each task;
(d) Be maintained in writing at the jobsite by the Supervisor/Project Manager; and
(e) Meet the requirements of 29 CFR 1926.502(k).

vii) Residential Construction

(1) Guardrail systems, safety net systems, or personal fall arrest systems shall be provided to employees working six (6) feet or more above the lower level on

residential construction projects. However, certain tasks may be performed without the use of conventional fall protection if the Supervisor has determined that such fall protection is infeasible or creates greater hazards to employees. The Supervisor shall follow the guidelines of 29 CFR 1926, Subpart M; Appendix E in the development of alternative Fall Protection Plans for residential construction projects (see Attachment A).

viii) Roofing

(1) Low-Slope Roofs

(a) Fall protection shall be provided to employees engaged in roofing activities on low-slope roofs with unprotected sides and edges six (6) feet or more above lower levels. The type(s) of fall protection needed shall be determined by the Supervisor/Project Manager, and may consist of guardrail systems, safety net systems, personal fall arrest systems, or a combination of a warning line system and safety net system, warning line system and personal fall arrest system, or warning line system and safety monitoring system. On roofs 50 feet or less in width, the use of a safety monitoring system without a warning line system is permitted.

(2) Steep Roofs

(a) Guardrail systems with toe boards, safety net systems, or personal fall arrest systems will be provided to employees working on a steep roof with unprotected sides and edges six (6) feet or more above lower levels, as determined by the Supervisor/Project Manager.

ix) Wall Openings

(1) Guardrail systems, safety net systems, or a personal fall arrest system will be provided to employees working on, at, above, or near wall openings when the outside bottom edge of the wall opening is six (6) feet or more above lower levels and the inside bottom edge of the wall opening is less than 39 inches above the walking/working surface. The type of fall protection to be used will be determined by the Supervisor/Project Manager.

x) Ramps, Runways, and Other Walkways

(1) Employees using ramps, runways, and other walkways six (6) feet or more above the lower level shall be protected by guardrail systems.

f) Protection From Falling Objects

When guardrail systems are in use, the openings shall be small enough to prevent potential passage of falling objects. The following procedures must be followed by all employees to prevent hazards associated with falling objects.

i) No materials (except masonry and mortar) shall be stored within four (4) feet of working edges.

ii) Excess debris shall be removed regularly to keep work areas clear.

iii) During roofing work, materials and equipment shall be stored no less than six (6) feet from the roof edge unless guardrails are erected at the edge.

iv) Stacked materials must be stable and self-supporting.

v) Canopies shall be strong enough to prevent penetration by falling objects.

vi) Toe boards erected along the edges of overhead walking/working surfaces shall be:
(1) Capable of withstanding a force of at least 50 pounds; and
(2) Solid with a minimum of three and a half (3 ½) inches tall and no more than one quarter (1/4) inch clearance above the walking/working surface.
(3) Equipment shall not be piled higher than the toe board unless sufficient paneling or screening has been erected above the toe board.

g) Accident Investigation

All incidents that result in injury to workers, as well as near misses, regardless of their nature, shall be reported and investigated. Investigations shall be conducted by the Supervisor/Project Manager or the City Safety Officer as soon after an incident as possible to identify the cause and means of prevention to eliminate the risk of reoccurrence.
In the event of such an incident, the Fall Protection Program (and alternative Fall Protection Plans, if in place) shall be reevaluated to determine if additional practices, procedures, or training are necessary to prevent similar future incidents.

h) Changes to the Plan

Any changes to the Fall Protection Program (and alternative Fall Protection Plans, if in place) shall be approved by Department Supervisor/Project Manager, and shall be reviewed by a qualified person as the job progresses to determine additional practices, procedures or training needs necessary to prevent fall injuries. Affected employees shall be notified of all procedure changes, and trained if necessary. A copy of this plan, and any additional alternative Fall Protection Plans, shall be maintained at the jobsite by the Supervisor/Project Manager.

i) GLOSSARY

i) **Anchorage**: a secure point of attachment for lifelines, lanyards, or deceleration devices.
ii) **Body belt**: a strap with means both for securing it about the waist and for attaching it to a lanyard, lifeline, or deceleration device.
iii) **Body harness**: straps that may be secured about the person in a manner that distributes the fall-arrest forces over at least the thighs, pelvis, waist, chest, and shoulders with a means for attaching the harness to other components of a personal fall arrest system.
iv) **Connector:** A device that is used to couple (connect) parts of a personal fall arrest system or positioning device system together.
v) **Controlled access zone**: a work area designated and clearly marked in which certain types of work (such as overhand bricklaying) may take place without the use of conventional fall protection systems (guardrail, personal arrest, or safety net) to protect the employees working in the zone.
vi) **Deceleration device**: any mechanism, such as a rope, grab, rip stitch lanyard, specially-woven lanyard, tearing lanyard, deforming lanyard, or automatic self-retracting lifeline/lanyard, which serves to dissipate a substantial amount of

energy during a fall arrest, or otherwise limits the energy imposed on an employee during fall arrest.

vii) **Deceleration distance**: the additional vertical distance a falling person travels, excluding lifeline elongation and free fall distance, before stopping, from the point at which a deceleration device begins to operate.

viii) **Guardrail system**: a barrier erected to prevent employees from falling to lower levels.

ix) **Hole**: a void or gap two (2) inches (5.1 centimeters) or more in the least dimension in a floor, roof, or other walking/working surface.

x) **Lanyard**: a flexible line of rope, wire rope, or strap that generally has a connector at each end for connecting the body belt or body harness to a deceleration device, lifeline, or anchorage**.**

xi) **Leading edge**: the edge of a floor, roof, or formwork for a floor or other walking/working surface (such as a deck) which changes location as additional floor, roof, decking, or formwork sections are placed, formed, or constructed.

xii) **Lifeline:** a component consisting of a flexible line for connection to an anchorage at one end to hang vertically (vertical lifeline), or for connection to anchorages at both ends to stretch horizontally (horizontal lifeline), that serves as a means for connecting other components of a personal fall arrest system to an anchorage.

xiii) **Low slope roof**: a roof having a slope less than or equal to 4 in 12 (vertical to horizontal).

xiv) **Opening**: a gap or void 30 inches (76 centimeters) or more high and 18 inches (46 centimeters) or more wide, in a wall or partition through which employees can fall to a lower level.

xv) **Personal fall arrest system**: a system including but not limited to an anchorage, connectors, and a body harness used to arrest an employee in a fall from a working level.

xvi) **Positioning device system**: a body belt or body harness system rigged to allow an employee to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning backwards.

xvii) **Rope grab**: a deceleration device that travels on a lifeline and automatically, by friction, engages the lifeline and locks to arrest a fall.

xviii) **Safety monitoring system**: a safety system in which a competent person is responsible for recognizing and warning employees of fall hazards.

xix) **Self-retracting lifeline/lanyard**: a deceleration device containing a drum-wound line which can be slowly extracted from, or retracted onto, the drum under minimal tension during normal employee movement and which, after onset of a fall, automatically locks the drum and arrests the fall.

xx) **Snap hook**: a connector consisting of a hook-shaped member with a normally closed keeper, or a similar arrangement, which may be opened to permit the hook to receive an object and, when released automatically, closes to retain the object.

xxi) **Steep roof**: a roof having a slope greater than 4 in 12 (vertical to horizontal).

xxii) **Toe board**: a low protective barrier that prevents material and equipment from falling to lower levels and which protects personnel from falling.

xxiii) **Unprotected sides and edges**: any side or edge (except at entrances to points of access) of a walking/working surface (e.g., floor, roof, ramp, or runway) where there is no wall or guardrail system at least 39 inches (1 meter) high.

xxiv) **Walking/working surface**: any surface, whether horizontal or vertical, on which an employee walks or works, including but not limited to floors, roofs, ramps, bridges, runways, formwork, and concrete reinforcing steel. Does not include ladders, vehicles, or trailers on which employees must be located to perform their work duties.

xxv) **Warning line system**: a barrier erected on a roof to warn employees that they are approaching an unprotected roof side or edge and which designates an area in which roofing work may take place without the use of guardrail, body belt, or safety net systems to protect employees in the area.

RESPIRATORY PROTECTION PROGRAM

1) Objective

The City of Stamford Respiratory Protection Program is designed to protect employees by establishing accepted practices for respirator use, providing guidelines for training and respirator selection, and explaining proper storage, use and care of respirators. This program also serves to help the company and its employees comply with Occupational Safety and Health Administration (OSHA) respiratory protection requirements as found in 29 CFR 1910.134.

2) Assignment of Responsibility

a) Employer
   i) The City of Stamford is responsible for providing respirators to employees when they are necessary for health protection. The City of Stamford will provide respirators that are applicable and suitable for the intended purpose at no charge to affected employees. Any expense associated with training, medical evaluations and respiratory protection equipment will be borne by the company.

b) Program Administrator
   i) The Program Administrator for the City of Stamford is the Department Supervisor's Designate or the City Safety Officer. The Program Administrator is responsible for administering the respiratory protection program. Duties of the program administrator include:
      (1) Identifying work areas, process or tasks that require workers to wear respirators.
      (2) Evaluating hazards.
      (3) Selecting respiratory protection options.
      (4) Monitoring respirator use to ensure that respirators are used in accordance with their specifications.
      (5) Arranging for and/or conducting training.
      (6) Ensuring proper storage and maintenance of respiratory protection equipment.
      (7) Conducting qualitative fit testing with Bitrex.
      (8) Administering the medical surveillance program.
      (9) Maintaining records required by the program.
      (10) Evaluating the program.
      (11) Updating written program, as needed.

c) Supervisors
   i) Supervisors are responsible for ensuring that the respiratory protection program is implemented in their particular areas. In addition to being knowledgeable about the program requirements for their own protection, supervisors must also ensure that the program is understood and followed by the employees under their charge. Duties of the supervisor include:
      (1) Ensuring that employees under their supervision (including new hires) receive appropriate training, fit testing, and annual medical evaluation.
      (2) Ensuring the availability of appropriate respirators and accessories.

(3) Being aware of tasks requiring the use of respiratory protection.
(4) Enforcing the proper use of respiratory protection when necessary.
(5) Ensuring that respirators are properly cleaned, maintained, and stored according to this program.
(6) Ensuring that respirators fit well and do not cause discomfort.
(7) Continually monitoring work areas and operations to identify respiratory hazards.
(8) Coordinating with the Program Administrator on how to address respiratory hazards or other concerns regarding this program.

d) Employees
i) Each employee is responsible for wearing his or her respirator when and where required and in the manner in which they are trained. Employees must also:
(1) Care for and maintain their respirators as instructed, guard them against damage, and store them in a clean, sanitary location.
(2) Inform their supervisor if their respirator no longer fits well, and request a new one that fits properly.
(3) Inform their supervisor or the Program Administrator of any respiratory hazards that they feel are not adequately addressed in the workplace and of any other concerns that they have regarding this program.
(4) Use the respiratory protection in accordance with the manufacturer's instructions and the training received.

3) Applicability

This program applies to all employees who are required to wear respirators during normal work operations, as well as during some non-routine or emergency operations, such as a spill of a hazardous substance.

In addition, any employee who voluntarily wears a respirator when one is not required (i.e., in certain maintenance and coating operations) is subject to the medical evaluation, cleaning, maintenance, and storage elements of this program, and will be provided with necessary training. Employees who voluntarily wear filtering face pieces (dust masks) are not subject to the medical evaluation, cleaning, storage, and maintenance provisions of this program.

All employees and processes that fall under the provisions of this program are listed in Attachment D.

4) Program

a) Hazard Assessment and Respirator Selection

i) The Program Administrator will select respirators to be used on site, based on the hazards to which workers are exposed and in accordance with the OSHA Respiratory Protection Standard. The Program Administrator will conduct a hazard evaluation for each operation, process, or work area where airborne contaminants may be present in routine operations or during an emergency. A log of identified hazards will be maintained by the Program Administrator (See Sample Hazard Evaluation, Attachment C). The hazard evaluations shall include:

(1) Identification and development of a list of hazardous substances used in the workplace by department or work process.
(2) Review of work processes to determine where potential exposures to hazardous substances may occur. This review shall be conducted by surveying the workplace, reviewing the process records, and talking with employees and supervisors.
(3) Exposure monitoring to quantify potential hazardous exposures.
(4) The proper type of respirator for the specific hazard involved will be selected in accordance with the manufacturer=s instructions. A list of employees and appropriate respiratory protection will be maintained by the Program Administrator (see Attachment D).

b) Updating the Hazard Assessment

i) The Program Administrator must revise and update the hazard assessment as needed (i.e., any time work process changes may potentially affect exposure). If an employee feels that respiratory protection is needed during a particular activity, he/she is to contact his/her supervisor or the Program Administrator. The Program Administrator will evaluate the potential hazard, and arrange for outside assistance as necessary. The Program Administrator will then communicate the results of that assessment to the employees. If it is determined that respiratory protection is necessary, all other elements of the respiratory protection program will be in effect for those tasks, and the respiratory program will be updated accordingly.

c) Training

i) The Program Administrator will provide training to respirator users and their supervisors on the contents of the Respiratory Protection Program and their responsibilities under it, and on the OSHA Respiratory Protection Standard. All affected employees and their supervisors will be trained prior to using a respirator in the workplace. Supervisors will also be trained prior to supervising employees that must wear respirators.

ii) The training course will cover the following topics:
(1) The Respiratory Protection Program;
(2) The OSHA Respiratory Protection Standard (29 CFR 1910.134);
(3) Respiratory hazards encountered and their health affects;
(4) Proper selection and use of respirators;
(5) Limitations of respirators;
(6) Respirator donning and user seal (fit) checks;
(7) Fit testing;
(8) Emergency use procedures;
(9) Maintenance and storage; and
(10) Medical signs and symptoms limiting the effective use of respirators.

iii) Employees will be retrained annually or as needed (e.g., if they change departments or work processes and need to use a different respirator). Employees must demonstrate their understanding of the topics covered in the training through hands-on exercises and a written test. Respirator training will be documented by the Program Administrator and the documentation will

include the type, model, and size of respirator for which each employee has been trained and fit tested.

d) NIOSH Certification

i) All respirators must be certified by the National Institute for Occupational Safety and Health (NIOSH) and shall be used in accordance with the terms of that certification. Also, all filters, cartridges, and canisters must be labeled with the appropriate NIOSH approval label. The label must not be removed or defaced while the respirator is in use.

e) Voluntary Respirator Use

i) The Program Administrator shall authorize voluntary use of respiratory protective equipment as requested by all other workers on a case-by-case basis, depending on specific workplace conditions and the results of medical evaluations.

ii) The Program Administrator will provide all employees who voluntarily choose to wear the above respirators with a copy of Appendix D of the OSHA Respiratory Protection Standard. (Appendix D details the requirements for voluntary use of respirators by employees.) Employees who choose to wear a half face piece APR must comply with the procedures for Medical Evaluation, Respirator Use, Cleaning, Maintenance and Storage portions of this program.

f) Medical Evaluation

i) Employees who are either required to wear respirators, or who choose to wear a half face piece APR voluntarily, must pass a medical exam provided by the City of Stamford before being permitted to wear a respirator on the job. Employees are not permitted to wear respirators until a physician has determined that they are medically able to do so. Any employee refusing the medical evaluation will not be allowed to work in an area requiring respirator use.

ii) A licensed physician at where all City medical services are provided will provide the medical evaluations. Medical evaluation procedures are as follows:

(1) The medical evaluation will be conducted using the questionnaire provided in Appendix C of the OSHA Respiratory Protection Standard. The Program Administrator will provide a copy of this questionnaire to all employees requiring medical evaluations.

(2) To the extent feasible, the company will provide assistance to employees who are unable to read the questionnaire. When this is not possible, the employee will be sent directly to the physician for medical evaluation.

(3) All affected employees will be given a copy of the medical questionnaire to complete, along with a stamped and addressed envelope for mailing the questionnaire to the company physician. Employees will be permitted to complete the questionnaire on company time.

iii) Follow-up medical exams will be granted to employees as required by the Standard, and/or as deemed necessary by the evaluating physician.

iv) All employees will be granted the opportunity to speak with the physician about their medical evaluation, if they so request.

v) The Program Administrator shall provide the evaluating physician with a copy of this Program, a copy of the OSHA Respiratory Protection Standard, the list of hazardous substances by work area, and the following information about each employee requiring evaluation:
   (1) His or her work area or job title;
   (2) Proposed respirator type and weight;
   (3) Length of time required to wear respirator;
   (4) Expected physical work load (light, moderate or heavy);
   (5) Potential temperature and humidity extremes; and
   (6) Any additional protective clothing required.

vi) Positive pressure air purifying respirators will be provided to employees as required by medical necessity.

vii) After an employee has received clearance to wear his or her respirator, additional medical evaluations will be provided under the following circumstances:
   (1) The employee reports signs and/or symptoms related to their ability to use the respirator, such as shortness of breath, dizziness, chest pains or wheezing.
   (2) The evaluating physician or supervisor informs the Program Administrator that the employee needs to be reevaluated.
   (3) Information found during the implementation of this program, including observations made during the fit testing and program evaluation, indicates a need for reevaluation.
   (4) A change occurs in workplace conditions that may result in an increased physiological burden on the employee.

viii) A list of City employees currently included in medical surveillance is provided in Attachment D of this program.

ix) All examinations and questionnaires are to remain confidential between the employee and the physician. The Program Administrator will only retain the physician=s written recommendations regarding each employee=s ability to wear a respirator.

g) Fit Testing

i) Employees who are required to or who voluntarily wear half-face piece APRs will be fit tested:
   (1) Prior to being allowed to wear any respirator with a tight-fitting face piece;
   (2) Annually; or
   (3) When there are changes in the employee's physical condition that could affect respiratory fit (e.g., obvious change in body weight, facial scarring, etc.).

ii) Employees will be fit tested with the make, model, and size of respirator that they will actually wear. Employees will be provided with several models and sizes of respirators so that they may find an optimal fit. Fit testing of powered air purifying respirators will be conducted in the negative pressure mode.

iii) The Program Administrator will conduct fit tests in accordance with the OSHA Respiratory Protection Standard.

h) General Respirator Use Procedures

i) Employees will use their respirators under conditions specified in this program, and in accordance with the training they receive on the use of each particular model. In addition, the respirator shall not be used in a manner for which it is not certified by NIOSH or by its manufacturer.

ii) All employees shall conduct user seal checks each time they wear their respirators. Employees shall use either the positive or negative pressure check (depending on which test works best for them) as specified in the OSHA Respiratory Protection Standard.

iii) Positive Pressure Test: This test is performed by closing off the exhalation valve with your hand. Breathe air into the mask. The face fit is satisfactory if some pressure can be built up inside the mask without any air leaking out between the mask and the face of the wearer.

iv) Negative Pressure Test: This test is performed by closing of the inlet openings of the cartridge with the palm of you hand. Some masks may require that the filter holder be removed to seal off the intake valve. Inhale gently so that a vacuum occurs within the face piece. Hold your breath for ten (10) seconds. If the vacuum remains, and no inward leakage is detected, the respirator is fit properly.

v) All employees shall be permitted to leave the work area to go to the locker room to maintain their respirator for the following reasons:
   (1) To clean their respirator if it is impeding their ability to work;
   (2) To change filters or cartridges;
   (3) To replace parts; or
   (4) To inspect respirator if it stops functioning as intended.
   (5) Employees should notify their supervisor before leaving the area.

vi) Employees are not permitted to wear tight-fitting respirators if they have any condition, such as facial scars, facial hair, or missing dentures that would prevent a proper seal. Employees are not permitted to wear headphones, jewelry, or other items that may interfere with the seal between the face and the face piece.

vii) Before and after each use of a respirator, an employee or immediate supervisor must make an inspection of tightness or connections and the condition of the face piece, headbands, valves, filter holders and filters. Questionable items must be addressed immediately by the supervisor and/or Program Administrator.

i) Air Quality

i) For supplied-air respirators, only Grade D breathing air shall be used in the cylinders. The Program Administrator will coordinate deliveries of compressed air with the company's vendor and will require the vendor to certify that the air in the cylinders meets the specifications of Grade D breathing air.

ii) The Program Administrator will maintain a minimum air supply of one fully charged replacement cylinder for each SAR unit. In addition, cylinders may

be recharged as necessary from the breathing air cascade system located near the respirator storage area.

j) Change Schedules

i) Respirator cartridges shall be replaced as determined by the Program Administrator, supervisor(s), and manufacturers= recommendations.

k) Cleaning

i) Respirators are to be regularly cleaned and disinfected at the designated respirator cleaning station. Respirators issued for the exclusive use of an employee shall be cleaned as often as necessary. Atmosphere-supplying and emergency use respirators are to be cleaned and disinfected after each use.

ii) The following procedure is to be used when cleaning and disinfecting reusable respirators:

(1) Disassemble respirator, removing any filters, canisters, or cartridges.

(2) Wash the face piece and all associated parts (except cartridges and elastic headbands) in an approved cleaner-disinfectant solution in warm water (about 120 degrees Fahrenheit). Do not use organic solvents. Use a hand brush to remove dirt.

(3) Rinse completely in clean, warm water.

(4) Disinfect all facial contact areas by spraying the respirator with an approved disinfectant.

(5) Air dry in a clean area.

(6) Reassemble the respirator and replace any defective parts. Insert new filters or cartridges and make sure the seal is tight.

(7) Place respirator in a clean, dry plastic bag or other airtight container.

iii) The Program Administrator will ensure an adequate supply of appropriate cleaning and disinfection materials at the cleaning station. If supplies are low, employees should notify their supervisor, who will inform the Program Administrator.

l) Maintenance

i) Respirators are to be properly maintained at all times in order to ensure that they function properly and protect employees adequately. Maintenance involves a thorough visual inspection for cleanliness and defects. Worn or deteriorated parts will be replaced prior to use. No components will be replaced or repairs made beyond those recommended by the manufacturer. Repairs to regulators or alarms of atmosphere-supplying respirators will be conducted by the manufacturer.

ii) All respirators shall be inspected routinely before and after each use.

iii) Respirators kept for emergency use shall be inspected after each use, and at least monthly by the Program Administrator to assure that they are in satisfactory working order

iv) The Respirator Inspection Checklist (Attachment E) will be used when inspecting respirators.

v) A record shall be kept of inspection dates and findings for respirators maintained for emergency use.

vi) Employees are permitted to leave their work area to perform limited maintenance on their respirator in a designated area that is free of respiratory hazards. Situations when this is permitted include:
(1) Washing face and respirator face piece to prevent any eye or skin irritation;
(2) Replacing the filter, cartridge or canister;
(3) Detection of vapor or gas breakthrough or leakage in the face piece; or
(4) Detection of any other damage to the respirator or its components.

m) Storage

i) After inspection, cleaning, and necessary repairs, respirators shall be stored appropriately to protect against dust, sunlight, heat, extreme cold, excessive moisture, or damaging chemicals.
ii) Respirators must be stored in a clean, dry area, and in accordance with the manufacturer's recommendations. Each employee will clean and inspect their own air-purifying respirator in accordance with the provisions of this program, and will store their respirator in a plastic bag in the designated area. Each employee will have his/her name on the bag and that bag will only be used to store that employee's respirator.
iii) Respirators shall be packed or stored so that the face piece and exhalation valve will rest in a near normal position.
iv) Respirators shall not be placed in places such as lockers or toolboxes unless they are in carrying cartons.
v) Respirators maintained at stations and work areas for emergency use shall be stored in compartments built specifically for that purpose, be quickly accessible at all times, and be clearly marked.
vi) The Program Administrator will store supply of respirators and respirator components in their original manufacturer's packaging in the Designated Area.

n) Respirator Malfunctions and Defects

i) For any malfunction of an ASR (atmosphere-supplying respirator), such as breakthrough, face piece leakage, or improperly working valve, the respirator wearer should inform his/her supervisor that the respirator no longer functions as intended, and go to the designated safe area to maintain the respirator. The supervisor must ensure that the employee either receives the needed parts to repair the respirator or is provided with a new respirator.
ii) All workers wearing atmosphere-supplying respirators will work with a buddy. The Program Administrator shall develop and inform employees of the procedures to be used when a buddy is required to assist a coworker who experiences an ASR malfunction.
iii) Respirators that are defective or have defective parts shall be taken out of service immediately. If, during an inspection, an employee discovers a defect in a respirator, he/she is to bring the defect to the attention of his/her supervisor. Supervisors will give all defective respirators to the Program Administrator. The Program Administrator will decide whether to:
(1) Temporarily take the respirator out of service until it can be repaired;
(2) Perform a simple fix on the spot, such as replacing a head strap; or

(3) Dispose of the respirator due to an irreparable problem or defect.

iv) When a respirator is taken out of service for an extended period of time, the respirator will be tagged out of service, and the employee will be given a replacement of a similar make, model, and size. All tagged out respirators will be kept in the Designated Area.

o) Emergency Procedures

i) In emergency situations where an atmosphere exists in which the wearer of the respirator could be overcome by a toxic or oxygen-deficient atmosphere, the following procedure should be followed. The locations where the potential for dangerous atmosphere exists are listed in Attachment F of this procedure. Locations of emergency respirators are also listed in Attachment F.

ii) When the alarm sounds, employees in the affected area must immediately don their emergency escape respirator, shut down their process equipment, and exit the work area.

iii) All other employees must immediately evacuate the building. The City's Emergency Action Plan describes these procedures (including proper evacuation routes and rally points) in greater detail.

iv) Employees who must remain in a dangerous atmosphere must take the following precautions:

v) Employees must never enter a dangerous atmosphere without first obtaining the proper protective equipment and permission to enter from the Program Administrator or supervisor.

vi) Employees must never enter a dangerous atmosphere without at least one additional person present. The additional person must remain in the safe atmosphere.

vii) Communications (voice, visual or signal line) must be maintained between both individuals or all present.

viii) Respiratory protection in these instances is for escape purposes only. City employees are not trained as emergency responders, and are not authorized to act in such a manner.

p) Program Evaluation

i) The Program Administrator will conduct periodic evaluations of the workplace to ensure that the provisions of this program are being implemented. The evaluations will include regular consultations with employees who use respirators and their supervisors, site inspections, air monitoring and a review of records. Items to be considered will include:
   (1) Comfort;
   (2) Ability to breathe without objectionable effort;
   (3) Adequate visibility under all conditions
   (4) Provisions for wearing prescription glasses;
   (5) Ability to perform all tasks without undue interference; and
   (6) Confidence in the face piece fit.

ii) Identified problems will be noted in an inspection log and addressed by the Program Administrator. These findings will be reported to City management,

and the report will list plans to correct deficiencies in the respirator program and target dates for the implementation of those corrections.

q) Documentation and Recordkeeping

i) A written copy of this program and the OSHA Respiratory Protection Standard shall be kept in the Program Administrator's office and made available to all employees who wish to review it.

ii) Copies of training and fit test records shall be maintained by the Program Administrator. These records will be updated as new employees are trained, as existing employees receive refresher training, and as new fit tests are conducted

iii) For employees covered under the Respiratory Protection Program, the Program Administrator shall maintain copies of the physician's written recommendation regarding each employee's ability to wear a respirator. The completed medical questionnaires and evaluating physician's documented findings will remain confidential in the employee's medical records at the location of the evaluating physician's practice.

ATTACHMENT A

Sample Hazard Assessment Log

Hazard Assessment Log ***DATE***				
Department	**Contaminants**	**Exposure Level (8 hr TWA*)**	**PEL****	**Controls**

* Summarized from Industrial Hygiene report provided by ***Responsible Person***.

** These values were obtained from a survey on average exposures as published in the American Journal of Industrial Hygiene _____.

ATTACHMENT B

Sample Record of Respirator Use

Required and Voluntary Respirator Use at the City Of Stamford	
Type of Respirator	**Department/Process**
Filtering face piece (dust mask)	Voluntary use for warehouse workers
Half-face piece APR or PAPR with P100 filter	Prep and Assembly Voluntary use for maintenance workers when cleaning spray booth walls or changing spray booth filter
SAR, pressure demand, with auxiliary SCBA	Maintenance - dip coat tank cleaning
Continuous flow SAR with hood	Spray booth operations Prep (cleaning)*
Half-face piece APR with organic vapor cartridge	Voluntary use for Dip Coat Tenders, Spray Booth Operators (gun cleaning), and maintenance workers (loading coating agents into supply systems)
Escape SCBA	Dip Coat, Coatings Storage Area, Spray Booth Cleaning Area

* Until ventilation is installed.

ATTACHMENT C

Sample Hazard Evaluation

Process Hazard Evaluation for the City of Stamford ***DATE***	
Process	**Noted Hazards**
Prep-sanding	Ventilation controls on some sanders are in place, but employees continue to be exposed to respirable wood dust at 2.5 - 7.0 mg/m3 (8 hour time-weighted-average, or TWA). Half-face piece APRs with P100 filters and goggles are required for employees sanding wood pieces. PAPRs will be available for employees who are unable to wear an APR.
Prep-cleaning	Average methylene chloride exposures measured at 70 ppm based on 8-hour TWA exposure results for workers cleaning and stripping furniture pieces. Ventilation controls are planned, but will not be implemented until designs are completed and a contract has been let for installation of the controls. In the meantime, employees must wear supplied air hoods with continuous airflow, as required by the Methylene Chloride Standard 1910.1052.
Assembly	Ventilation controls on sanders are in place, but employees continue to be exposed to respirable wood dust at 2.5 - 6.0 mg/m3 (8 hour TWA); half-face piece APRs with P100 filters and goggles are required for employees sanding wood pieces in the assembly department. PAPRs will be available for employees who are unable to wear an APR. The substitution for aqueous-based glues will eliminate exposures to formaldehyde, methylene chloride, and epoxy resins.
Maintenance	Because of potential IDLH conditions, employees cleaning dip coat tanks must wear a pressure demand SAR during the performance of this task.
Cleaning Spray Booth Walls	Employees may voluntarily wear half-face piece APRs with P100 cartridges**.** Although exposure monitoring has shown that exposures are kept within PELs during this procedure, the City will provide respirators to workers who are concerned about potential exposures
Loading Coating Agents into Supply Systems	Employees may voluntarily wear half-face piece APRs with organic vapor cartridges. Although exposure monitoring has shown that exposures are kept within PELs during this procedure, the City will provide respirators to workers who are concerned about potential exposures
Changing Booth Filters	Employees may voluntarily wear half-face piece APRs with P100 cartridges. Although exposure monitoring has shown that exposures are kept within PELs during this procedure, the City will provide respirators to workers who are concerned about potential exposures

(Include documentation of the sampling data that hazard evaluation is based on.

ATTACHMENT D

Sample Record of Respirator Issuance

The City of Stamford Personnel in Respiratory Protection Program *Date*				
Respiratory protection is required for and has been issued to the following personnel:				
Name	**Department**	**Job Description/ Work Procedure**	**Type of Respirator**	**Date Issued**
		Operator	Half mask APR P100 filter when sanding/ AR continuous flow hood for cleaning	
		Dip tank cleaning	SAR, pressure demand with auxiliary SCBA	
		Spray Booth	SAR, continuous	

ATTACHMENT E

Respirator Inspection Checklist

Type of Respirator:	**Location:**
Respirator Issued to:	**Type of Hazard:**
Face piece	_____ Cracks, tears, or holes _____ Face mask distortion _____ Cracked or loose lenses/face shield
Head straps	_____ Breaks or tears _____ Broken buckles
Valves:	_____ Residue or dirt _____ Cracks or tears in valve material
Filters/Cartridges:	_____ Approval designation _____ Gaskets _____ Cracks or dents in housing _____ Proper cartridge for hazard
Air Supply Systems	_____ Breathing air quality/grade _____ Condition of supply hoses _____ Hose connections _____ Settings on regulators and valves
Rubber/Elastomer Parts	_____ Pliability _____ Deterioration

Inspected by:	**Date:**
Action Taken:	

ATTACHMENT F

Sample Emergency Potential Log

The following work areas have been identified as having foreseeable emergencies:

Area	Type of Emergency	Location of Emergency Respirator(s)
Spray Booth Cleaning Area	Spill of hazardous waste	Locker #1 in the Spray Booth Area
Dip Coat Area	Malfunction of ventilation system, leak in supply system	Storage cabinet #3 in Dip Coat/Drying Area
Coatings Storage Area	Spill or leak of hazardous substances	Locker #4 in the Coatings Storage Area

_____ _____

Program Administrator Date

ATTACHMENT G

Sample Immediately Dangerous to Life and Health (IDLH) Assessment Log

The Program Administrator has identified the following area as presenting the potential for IDLH conditions:

Process	IDLH Condition	Procedure
Dip Coat Tank Cleaning	Maintenance workers will be periodically required to enter the dip tank to perform scheduled or unscheduled maintenance.	Workers will follow the permit required confined space entry procedures specified in the City's Confined Space Program. As specified in these procedures, the Program Administrator has determined that workers entering this area shall wear a pressure demand SAR. In addition, an appropriately trained and equipped standby person shall remain outside the dip tank and maintain constant voice and visual communication with the worker. In the event of an emergency requiring the standby person to enter the IDLH environment, the standby person shall immediately notify the Program Administrator and will proceed with rescue operations in accordance with rescue procedures outlined in the City's Confined Space Program.

_____ _____

Program Administrator Date

ERGONOMICS GUIDELINES

1) Scope

The City of Stamford recognizing its employees need for guidelines and information on ergonomics, has prepared this Guide to Ergonomic Standards. The Guide was developed to provide employees of the City with:

a) An understanding of ergonomic principles and basic application.
b) An overview of ergonomic issues that may be encountered and general methods to control or eliminate them.

2) Purpose

Work to interface employees and work environments by thinking about the design of tools and equipment, and layout of the working environment. By fitting the job to the person, we can improve both employee well-being and workplace efficiency.

3) Ergonomics for Management

Ergonomics is an approach to improving performance and reducing costs. Good use of ergonomics in the design of tool, equipment and workplace can:

a) Reduce injuries, errors, defects and costs
b) Reduce employee turnover and absenteeism
c) Improve ease of use, morale and satisfaction
d) Improve quality, productivity and customer service
e) Stimulate innovation

4) Principles of Ergonomics

Ergonomics is a wide and diverse field of study that is difficult to summarize in a few simple rules. However, there are a number of basic design principles that can aid in making ergonomic improvements in the workplace. The Principles described in this guide are:

a) Keep Everything In Easy Reach
b) Work at Proper Heights
c) Work in Good Postures
d) Reduce Excessive Force
e) Reduce Excessive Repetition
f) Provide Change and Adjustability
g) Provide Clearance
h) Maintain a Comfortable Environment
i) Provide Good Work Organization

Note: This section of the Ergonomics Standards lists good principles of ergonomic design along with examples of how they might be applied. Some applications may not be feasible, or even desirable, in specific situations. A case-by-case review of each task is necessary and good judgment used in all cases. The employee should feel free to report any Cumulative Trauma Disorders to their supervisor. Work site evaluations to any employee who makes a request can be arranged by contacting the Risk Management Department.

5) Ergonomic Guidelines

a) Keep Everything in Easy Reach
b) Make layout changes to eliminate awkward and excessive reaches.
c) A good rule to follow is "watch where the elbow is." If the elbow is anywhere but at its neutral position at the side of the body, it may indicate an excessive reach.
d) Examples of ways to reduce reaches are:
   i) Reduce dimensions of the work surface
   ii) Tilt the work surface
   iii) Provide cut-outs into the work surface

6) Work at Proper Heights

a) Adjust equipment for the height of each individual
b) Adjust equipment for the nature of the work
c) Allow for change
d) A properly designed chair with a seat that curves down in front, support for the lower back and a height that can be changed to suit different users. The back should keep the spine at a 90° angle to the thighs. Height should be adjusted to permit correct placement of the head, hands, and knees (you shouldn't have to hunch over to see the screen or bend the elbows more than 90° to reach the keys). Knees should be at about the same level as the hips.
e) Generally, you should do all work at elbow height whether sitting or standing. Contact Purchasing about chair information and cost.

7) Work With Good Posture

a) Keep wrists in neutral posture
b) Keep elbows at your side
c) Keep back with natural curve of spine intact
d) Correct hand and wrist placement are important. Shoulder muscles can become tense when arms and hands are held too high. Arms should be held comfortably at the user's side with the user's upper arm and forearm at about a right angle. Wrists should be in line with the forearm; wrist problems (such as carpal tunnel syndrome) can develop if they are bent at extreme angles.
e) Good posture which is essential for the user's comfort and well being, especially when sitting several hours a day. To prevent neck and back strain, the spine and head should be kept upright, and the user should sit well back into the chair. Placing feet on a foot rest helps to take the strain off legs and back.
f) Changes in work stations, tool and work methods can be made to keep the wrist in good posture. You can easily identify the neutral wrist position for yourself by dangling your arms relaxed at your side. Similarly, changes can be make in a variety of ways to keep the arms low and elbows in.

8) Reduce Excessive Force

a) Reduce grasping force
b) Reduce loads on shoulders and lower back
c) Reduce the amount of force used when using the keyboard
d) Reduce the amount of weights lifted by using mechanical aids (i.e., Hand truck)

e) The amount of force needed to use a computer keyboard is less the eight (8) pounds per square inch. That means that a light touch is needed. If you are pounding the keyboard (i.e., making a lot of noise) you are applying over sixty (60) pounds per square inch. This adds extra stress to your fingers and wrist.
f) To Reduce loads to the lower back make sure to minimize the distance between a lifted object and your body. Reduce the amount of force used by not pulling items, but by pushing them.

9) Reduce Excessive Repetitions

Work to improve your work station layout, eliminate many of the unnecessary hand and arm motions. Other ways to reduce excessive repetitions:

a) Use power tools and equipment (i.e., electric stapler)
b) Improve the way you handle material
c) Eliminate double handing

10) Provide Clearance; Reduce Pressure Points

Make sure that you have enough space to work. Provide clearance for:

a) Head
b) Arms
c) Torso
d) Knees
e) Feet

Work to reduce pressure points on the body. A closely related problem is when employees must lean against a sharp or hard edge or object. To reduce the hard edge use a form of padding. (i.e., keyboard pad)

11) Provide Change and Adjustability

There is no one "correct" posture best for an entire working day. The human body needs changes and mobility. For example, alternate between standing and sitting, or change work heights for variety.

12) Maintain a Comfortable Environment

Provide good lighting and eliminate shadows from your work. Reduce the amount of glare on your work area. Improvements can include:

a) Task lighting focused on the areas where it may be needed.
b) Use indirect lighting to reduce direct glare.
c) Improve diffusers or shields to reduce direct glare

Good lighting is not always bright lighting. Glare can be reduced by pulling drapes or repositioning the VDT screen. Other options such as hoods, glare screens and/or special lighting should be utilized for further eye comfort. Be aware that computer tasks are best done with less room illumination and precision tasks may be require more than normal. Also, older employees typically need more light to see the same amount of detail as younger employees.

13) Provide Good Work Organization

Good workplace design includes more than physical issues such as proper heights and good lighting. The bottom line is to be organized, ranging from task allocation to various administrative practices. Ways to Improve Organization:

a) Good Planning: anticipate, think ahead, and discuss
b) Job Decision Latitude: Provide people with as much control as possible over the daily events of work life.
c) Employee Involvement: Encourage employee ideas and input in decision making.
d) Job Enlargement: Allocate more tasks and responsibilities to a job, rather than create an extremely narrow subdivision of labor.
e) Communications: Provide mechanisms to share information, coordinate, and help plan.
f) Team Building: Provide a sense of belonging and being valued, particularly in the small work group.
g) Training: Conduct on-going programs to train personnel in the job and interpersonal skills.

14) Office Ergonomics

Ergonomic design in City offices has become increasingly important to all employees. Here are several things you can do to improve your work station.

a) Use a Hard copy holder close to the monitor to reduce eye motions and discomfort and allow proper neck posture.
b) The top of the monitor should be placed at eye level to allow proper head and neck position.
c) Use a padded wrist rest to reduce arm and shoulder discomfort.
d) Adjust your chair to the right height.
e) Place keyboard at elbow height with a slight incline. All keyboards can be adjusted to meet your needs.
f) Place both feet flat on the floor or use a footrest to provide stability.

15) Video Display Terminal

The following approaches are recommended for all video display users

a) Employees engaged in extended periods of usage shall take a break from the terminal for fifteen (15) minutes after two (2) hours of consecutive work at the terminal.
b) An Anti Glare filter will reduce the total amount of glare from lights and outside sources.
c) Tilt the Monitor to 35 degrees this will reduce glare and eye and strain.
d) A well designed video display terminal (VDT) lets the user make individual adjustments. For comfortable head and neck placement, the top of the screen should be positioned at eye level. The screen should also be 18" to 28" from the user's eyes. To minimize tension in the shoulder muscles, the keyboard should be low enough so that the arms hang freely and elbows are bent at right angles. Depending on chair height, this would put the keyboard between 25" to 29" from the floor. Detachable keyboards and desks having a split level design are ideal for this. Contrast should be adjusted to a comfortable level; not so bright as to cause flicker or be hard on the eyes.

e) The work being copied should be near the VDT screen, at the same height and distance, to prevent eye and neck muscle strain from looking up and down between the work and the VDT screen.
f) Good eye care which can help prevent visual problems. Focusing at close range for long periods of time can sometimes cause blurred vision or eye soreness; common but temporary problems experienced by many people who work on jobs requiring a high degree of detail. To lessen the strain on eye muscles, as mentioned under design factors, the VDT screen should be at least 18" to 28" from the user's eyes. Also, the user should look up and focus on something in the distance every 15 minutes or so. Itching and burning may be caused by dryness, but blinking now and then will help keep the eyes moist.

16) Risk Factors for Cumulative Trauma
RISK FACTORS PREVENTION

a) **Repetition** The number of wrist, arm or back motions per day.
   i) Reduce the number of motions, or smooth these motions
b) **Force** The amount of exertion used, whether grip force, exertion on the arm, or compression on the back.
   i) Reduce the exertion needed to accomplish the task.
c) **Awkward Posture** The degree to which the body is in an awkward posture, or percentage of time in that posture; i.e., bent wrist, elbows away from the body, bent or twisted back.
   i) Design task, equipment and tools to keep the wrists in neutral position elbows at the sides and the back with the natural curve of the spine intact.
d) **Direct Pressure** Excess pressure on any part of the body.
   i) Improve tool and equipment design to eliminate the pressure or provide cushioning.
e) **Vibration** Exposure to vibrating tools or equipment.
   i) Isolate the hand or body from the vibration
f) **Temperature** Exposure to temperature extremes. Prevent the exposure or provide insulation.

17) Risk Factors
Important considerations in understanding these risk factors are:

a) The more factors involved, the greater the possibility of developing cumulative trauma.
b) Conversely, if any or all of these factors can be reduced or eliminated, the risk of the problem can be lessened.
c) Not all employees exposed to these factors will be affected. That is why the term "risk" is used-the risk of getting a disorder may be higher or lower depending upon the exposure, but it's not a guarantee.
d) The levels of exposure (how many motions, at what levels of force) which can trigger a disorder are not yet known. Moreover, precise measurement of these factors is often difficult.

18) Ergonomic Evaluations.

a) If you feel you are in the need of being ergonomically evaluated by the City of Stamford Risk Management Department, a request must be in writing by you supervisor to the Safety Officer.
b) The Safety Officer will fulfill your supervisors request within 5 business days and present recommendations needed on an Ergonomic Evaluation Form which will be given to both the supervisor and that employee.

CRANE & HOIST SAFETY POLICY

4) **Purpose**

Many types of cranes, hoists, and rigging devices may be used at City of Stamford/Board of Education facilities for lifting and moving materials. City of Stamford's policy is to maintain a safe workplace for its employees; therefore, it cannot be overemphasized that only qualified and licensed individuals shall operate these devices. The safety rules and guidance in this chapter apply to all operations at City of Stamford facilities that involve the use of cranes and hoists installed in or attached to buildings and to all City of Stamford/Board of Education employees, supplemental labor, and subcontractor personnel who use such devices.

4) Responsibilities

a) Supervisors are responsible for:
i) Ensuring that employees under their supervision receive the required training and are Certified and licensed to operate the cranes and hoists in their areas.
ii) Providing training for prospective crane and hoist operators. This training must be conducted by a qualified, designated instructor who is a licensed crane and hoist operator.
iii) Evaluating crane and hoist trainees using the Crane Safety Checklist and submitting the Qualification Request Form to the Site Safety Officer to obtain the operator's license.
iv) Ensuring that hoisting equipment is inspected and tested monthly by a responsible individual and that rigging equipment is inspected annually.

b) **Crane and Hoist Operators are responsible for:**
i) Operating hoisting equipment safely.
ii) Conducting functional tests prior to using the equipment.
iii) Selecting and using rigging equipment appropriately.
iv) Having a valid operator's license on their person while operating cranes or hoists.
v) Participating in the medical certification program, if required.

c) **Engineering/Maintenance/Operations Department is responsible for:**
i) Performing annual maintenance and inspection of all City of Stamford cranes and hoists that are not covered by a program with maintenance responsibility.
ii) Conducting periodic and special load tests of cranes and hoists.

iii) Maintaining written records of inspections and tests, and providing copies of all inspections and test results to facility managers and Site Safety Officers who have cranes and hoists on file.
iv) Inspecting and load testing cranes and hoists following modification or extensive repairs (e.g., a replaced cable or hook, or structural modification.)
v) Scheduling a non-destructive test and inspection for crane and hoist hooks at the time of the periodic load test, and testing and inspecting before use new replacement hooks and other hooks suspected of having been overloaded. The evaluation, inspection, and testing may include, but are not limited to visual, dye penetrate, and magnetic particle techniques referenced in ASME B30.10 (Hooks, Inspection and Testing.)
vi) Maintaining all manuals for cranes and hoists in a central file for reference.

d) Safety Officer is responsible for:

i) Conducting/monitoring the training for all Crane & Hoist Operators
ii) Periodically verifying monthly test and inspection reports.
iii) Interpreting crane and hoist safety rules and standards.

4) Safe Operating Requirements:

All workers who use any City of Stamford/Board of Education crane or hoist shall have an operator's license. The Department where assigned will issues licenses for authorized employees who have been specifically trained in crane and hoist operations and equipment safety.

a) **Crane and Hoist Operators:**

i) To be qualified as a Crane and Hoist Operator, the candidate shall have received hands-on training from a licensed, qualified crane and hoist operator designated by the candidate's supervisor. Upon successful completion of training, the licensed crane and hoist operator and the candidate's supervisor will fill out and sign the Qualification Request Form and Crane Safety Checklist. The candidate will be issued a license upon approval by the Facility Manager. Crane and Hoist Operators must renew their license every three years by satisfying the requirements described above.

b) **Crane and Hoist Safety Design Requirements:**

i) Following are the design requirements for cranes and hoists and their components:
ii) The design of all commercial cranes and hoists shall comply with the requirements of ASME/ANSI B30 standards and Crane Manufacturer's Association of America standards (CMAA-70 and CMAA-74). All crane and hoist hooks shall have safety latches.
iii) Hooks shall not be painted (or re-painted) if the paint previously applied by the manufacturer is worn.
iv) Crane pendants shall have an electrical disconnect switch or button to open the main-line control circuit.
v) Cranes and hoists shall have a main electrical disconnect switch. This switch shall be in a separate box that is labeled with lockout capability.
vi) Crane bridges and hoist monorails shall be labeled on both sides with the maximum capacity.

vii) Each hoist-hook block shall be labeled with the maximum hook capacity.
viii) Directional signs indicating N-W-S-E shall be displayed on the bridge underside, and a corresponding directional label shall be placed on the pendant.
ix) A device such as an upper-limit switch or slip clutch shall be installed on all building cranes and hoists. A lower-limit switch may be required when there is insufficient hoist rope on the drum to reach the lowest point.
x) All cab and remotely operated bridge cranes shall have a motion alarm to signal bridge movement.
xi) All newly installed cranes and hoists, or those that have been extensively repaired or rebuilt structurally, shall be load tested at 125% capacity prior to being placed into service.
xii) If an overload device is installed, a load test to the adjusted setting is required.
xiii) Personnel baskets and platforms suspended from any crane shall be designed in accordance with the specifications in 29 CFR 1926.550(g).

4) General Safety Rules:

a) Operators shall comply with the following rules while operating the cranes and hoists:
i) Hard hats (head protection) must be worn by all employees operating or working around the crane or hoist.
ii) Do not engage in any practice that will divert your attention while operating the crane.
iii) Respond to signals only from the person who is directing the lift, or any appointed signal person. Obey a stop signal at all times, no matter who gives it.
iv) Do not move a load over people. People shall not be placed in jeopardy by being under a suspended load. Also, do not work under a suspended load unless the load is supported by blocks, jacks, or a solid footing that will safely support the entire weight. Have a crane or hoist operator remain at the controls or lock open and tag the main electrical disconnect switch.
v) Ensure that the rated load capacity of a crane's bridge, individual hoist, or any sling or fitting is not exceeded. Know the weight of the object being lifted or use a dynamometer or load cell to determine the weight.
vi) Check that all controls are in the OFF position before closing the main-line disconnect switch.
vii) If spring-loaded reels are provided to lift pendants clear off the work area, ease the pendant up into the stop to prevent damaging the wire.
viii) Avoid side pulls. These can cause the hoist rope to slip out of the drum groove, damaging the rope or destabilizing the crane or hoist.
ix) To prevent shock loading, avoid sudden stops or starts. Shock loading can occur when a suspended load is accelerated or decelerated, and can overload the crane or hoist. When completing an upward or downward motion, ease the load slowly to a stop.

4) Operation Rules:

a) Pre-operational Test:

i) At the start of each work shift, operators shall do the following steps before making lifts with any crane or hoist:
ii) Test the upper-limit switch. Slowly raise the unloaded hook block until the limit switch trips.
iii) Visually inspect the hook, load lines, trolley, and bridge as much as possible from the operator's station; in most instances, this will be the floor of the building.
iv) If provided, test the lower-limit switch.
v) Test all direction and speed controls for both bridge and trolley travel.
vi) Test all bridge and trolley limit switches, where provided, if operation will bring the equipment in close proximity to the limit switches.
vii) Test the pendant emergency stop.
viii) Test the hoist brake to verify there is no drift without a load.
ix) If provided, test the bridge movement alarm.
x) Lock out and tag for repair any crane or hoist that fails any of the above tests.

4) Moving a Load:

a) Center the hook over the load to keep the cables from slipping out of the drum grooves and overlapping, and to prevent the load from swinging when it is lifted. Inspect the drum to verify that the cable is in the grooves.
b) Use a tag line when loads must traverse long distances or must otherwise be controlled. Manila rope may be used for tag lines.
c) Plan and check the travel path to avoid personnel and obstructions.
d) Lift the load only high enough to clear the tallest obstruction in the travel path.
e) Start and stop slowly.
f) Land the load when the move is finished. Choose a safe landing.
g) *Never* leave suspended loads unattended. In an emergency where the crane or hoist has become inoperative, if a load must be left suspended, barricade and post signs in the surrounding area, under the load, and on all four sides. Lock open and tag the crane or hoist's main electrical disconnect switch..

4) Parking a Crane or Hoist:

a) Remove all slings and accessories from the hook. Return the rigging device to the designated storage racks.
b) Raise the hook at least 2.1 m (7 ft) above the floor.
c) Store the pendant away from aisles and work areas, or raise it at least 2.1 m (7 ft) above the floor.
d) Place the emergency stop switch (or push button) in the OFF position.

4) Rigging:

a) General Rigging Safety Requirements:

i) Only select rigging equipment that is in good condition. All rigging equipment shall be inspected annually; defective equipment is to be removed from service and destroyed to prevent inadvertent reuse. The load capacity limits shall be stamped or affixed to all rigging components.

ii) City of Stamford policy requires a minimum safety factor of 5 to be maintained for wire rope slings. The following types of slings shall be rejected or destroyed:

(1) Nylon slings with
- (a) Abnormal wear.
- (b) Torn stitching.
- (c) Broken or cut fibers.
- (d) Discoloration or deterioration.

(2) Wire-rope slings with
- (a) Kinking, crushing, bird-caging, or other distortions.
- (b) Evidence of heat damage.
- (c) Cracks, deformation, or worn end attachments.
- (d) Six randomly broken wires in a single rope lay.
- (e) Three broken wires in one strand of rope.
- (f) Hooks opened more than 15% at the throat.
- (g) Hooks twisted sideways more than 10deg. from the plane of the unbent hook.

(3) Alloy steel chain slings with
- (a) Cracked, bent, or elongated links or components.
- (b) Cracked hooks shackles, eye bolts, turnbuckles, or other components that are damaged or deformed.

iii) Rigging a Load:

(1) Do the following when rigging a load:
(2) Determine the weight of the load. Do not guess.
(3) Determine the proper size for slings and components.
(4) Do not use manila rope for rigging.
(5) Make sure that shackle pins and shouldered eye bolts are installed in accordance with the manufacturer's recommendations.
(6) Make sure that ordinary (shoulder less) eye bolts are threaded in at least 1.5 times the bolt diameter.
(7) Use safety hoist rings (swivel eyes) as a preferred substitute for eye bolts wherever possible.
(8) Pad sharp edges to protect slings. Remember that machinery foundations or angle-iron edges may not feel sharp to the touch but could cut into rigging when under several tons of load. Wood, tire rubber, or other pliable materials may be suitable for padding.
(9) Do not use slings, eye bolts, shackles, or hooks that have been cut, welded, or brazed.
(10) Install wire-rope clips with the base only on the live end and the U-bolt only on the dead end. Follow the manufacturer's recommendations for the spacing for each specific wire size.
(11) Determine the center of gravity and balance the load before moving it.
(12) Initially lift the load only a few inches to test the rigging and balance.

4) Crane Overloading:

Cranes or hoists shall not be loaded beyond their rated capacity for normal operations. Any crane or hoist suspected of having been overloaded shall be removed from service by locking open and tagging the main disconnect switch. Additionally, overloaded cranes shall be inspected, repaired, load tested, and approved for use before being returned to service.

a) Working at Heights on Cranes or Hoists:

i) Anyone conducting maintenance or repair on cranes or hoists at heights greater than 1.8 m (6 ft) shall use fall protection. Fall protection should also be considered for heights less than 1.8 m. Fall protection includes safety harnesses that are fitted with a lifeline and securely attached to a structural member of the crane or building or properly secured safety nets.

ii) Use of a crane as a work platform should only be considered when conventional means of reaching an elevated worksite are hazardous or not possible. Workers shall not ride a moving bridge crane without an approval from the Safety Office, which shall specify the following as a minimum:

iii) Personnel shall not board any bridge crane unless the main disconnect switch is locked and tagged open.

iv) Personnel shall not use bridge cranes without a permanent platform (catwalk) as work platforms. Bridge catwalks shall have a permanent ladder access.

v) Personnel shall ride seated on the floor of a permanent platform with approved safety handrails, wear safety harnesses attached to designated anchors, and be in clear view of the crane operator at all times.

vi) Operators shall lock and tag open the main (or power) disconnect switch on the bridge catwalk when the crane is parked.

b) Hand Signals:

i) Signals to the operator shall be in accordance with the standard hand signals unless voice communications equipment (telephone, radio, or equivalent) is used. Signals shall be discernible or audible at all times. Some special operations may require addition to or modification of the basic signals. For all such cases, these special signals shall be agreed upon and thoroughly understood by both the person giving the signals and the operator, and shall not be in conflict with the standard signals.

c) Inspection, Maintenance, and Testing:

i) All tests and inspections shall be conducted in accordance with the manufacturer's recommendations.

d) Monthly Tests and Inspections:

i) All in-service cranes and hoists shall be inspected monthly and the results documented on The Crane/Hoist Inspection Form.

ii) Defective cranes and hoists shall be locked and tagged "out of service" until all defects are corrected. The inspector shall initiate corrective action by notifying the facility manager or building coordinator.

4) Annual Inspections:

a) The Department shall schedule and supervise (or perform) annual preventive maintenance (PM) and annual inspections of all cranes and hoists. The annual PM and inspection shall cover
   i) Hoisting and lowering mechanisms.
   ii) Trolley travel or monorail travel.
   iii) Bridge travel.
   iv) Limit switches and locking and safety devices.
   v) Structural members.
   vi) Bolts or rivets.
   vii) Sheaves and drums.
   viii) Parts such as pins, bearings, shafts, gears, rollers, locking devices, and clamping devices.
   ix) Brake system parts, linings, pawls, and ratchets.
   x) Load, wind, and other indicators over their full range.
   xi) Gasoline, diesel, electric, or other power plants.
   xii) Chain-drive sprockets.
   xiii) Crane and hoist hooks.
   xiv) Electrical apparatus such as controller contractors, limit switches, and push button stations.
   xv) Wire rope.
   xvi) Hoist chains.

4) Load Testing:

a) Newly installed cranes and hoists shall be load tested at 125% of the rated capacity by designated personnel.
   i) Slings shall have appropriate test data when purchased. It is the responsibility of the purchaser to ensure that the appropriate test data are obtained and maintained.
   ii) Re-rated cranes and hoists shall be load tested to 125% of the new capacity if the new rating is greater than the previous rated capacity.
   iii) Fixed cranes or hoists that have had major modifications or repair shall be load tested to 125% of the rated capacity.
   iv) Cranes and hoists that have been overloaded shall be inspected prior to being returned to service.
   v) Personnel platforms, baskets, and rigging suspended from a crane or hoist hook shall be load tested initially, then re-tested annually thereafter or at each new job site.
   vi) All cranes and hoists with a capacity greater than 2722 kg (3 tons) should be load tested every four years to 125% of the rated capacity. Cranes and hoists with a lesser capacity should be load tested every eight years to 125% of the rated capacity.
   vii) All mobile hoists shall be load tested at intervals to be determined by the Department Supervisor

4) Records:

a) The Department shall maintain records for all cranes, hoist and rigging equipment.

APPENDIX A
DAILY CRANE INSPECTION CHECKLIST
(Prior to Each Daily Use)

Date_____ Time _____ Inspector_____

Crane (Make, Model & SN) _____
Location_____

All listed items should be inspected prior to use on a pass/fail rating system. If the item is "FAIL" the machine is not to be used until repaired. Circle your inspection results.

1. Check functional operating / control mechanisms for maladjustment.
Pass Fail
2. All control mechanisms for contamination.
Pass Fail
3. Check for deterioration or leakage in lines, tanks, valves, drain pumps, and other parts of air or hydraulic systems.
Pass Fail
4. Visually inspect hooks for deformation and cracks. Hooks having a throat opening in excess of 15% of what it should be, and/or more than a 10 degree twist from the plane of the unbent hook need to be replaced.
Pass Fail
5. Visually check hoist chains, including end connections, for excessive wear, twist, distorted links interfering with proper function, or stretch beyond manufacturer's recommendations.
Pass Fail
6. Utilizing item 6 from the Appendix B form, perform a thorough inspection of any running ropes that have been idle for a period of one or more months.
Pass Fail

ACTIONS TAKEN ON FAILED ITEMS: _____
_____
_____
_____

APPENDIX B
FREQUENT CRANE INSPECTION CHECKLIST

Date_____ Time _____ Inspector_____

Crane (Make, Model & SN) _____ Location_____

All listed items should be inspected prior to use on a pass/fail rating system. If the item is "FAIL" the machine is not to be used until repaired. Circle your inspection results.

1. All control mechanisms for excessive wear of components.

Pass Fail

2. Check hooks for cracks and a throat opening in excess of 15% of what it should be, and/or more than a 10 degree twist from the plane of the unbent hook.

Pass Fail

3. Check hoist chains, including end connections, for excessive wear, twist, distorted links interfering with proper function, or stretch beyond manufacturer's recommendations.

Pass Fail

4. Check all functional operating mechanisms for excessive wear of components.

Pass Fail

5. Check rope revving for noncompliance with manufacturer's recommendations.

Pass Fail

6. Perform a thorough inspection of all running ropes. Any deterioration, resulting in appreciable loss of original strength, must be carefully observed and determination made as to whether further use of the rope would constitute a safety hazard. Some of the conditions that could result in an appreciable loss of strength are the following:

I. Reduction of rope diameter below nominal diameter due to loss of core support, internal or external corrosion, or wear of outside wires.
II. A number of broken outside wires and the degree of distribution or concentration of such broken wires.
III. Worn outside wires.
IV. Corroded or broken wires at end connections.
V. Corroded, cracked, bent, worn, or improperly applied end connections.
VI. Severe kinking, crushing, cutting, or unstranding.

Pass Fail

7. All safety devices for malfunction.

Pass Fail

8. Electrical apparatus for malfunctioning, signs of excessive deterioration, dirt, and moisture accumulation.

Pass Fail

ACTIONS TAKEN ON FAILED ITEMS:

_____

_____

APPENDIX C
PERIODIC CRANE INSPECTION CHECKLIST

Date_____ Time _____ Inspector_____
Crane (Make, Model & SN) _____Location_____

All listed items should be inspected prior to use on a pass/fail rating system. If the item is "FAIL" the machine is not to be used until repaired. Circle your inspection results.

1. Deformed, cracked, or corroded members.
Pass Fail

2. Loose bolts or rivets.
Pass Fail

3. Cracked or worn sheaves and drums.
Pass Fail

4. Worn, cracked or distorted parts such as pins, bearings, shafts, gears, rollers, locking and clamping devices.
Pass Fail

5. Excessive wear on brake (and clutch) system parts, linings, pawls, and ratchets.
Pass Fail

6. Load, (boom angle), wind, and other indicators over their full range, for any significant inaccuracies.
Pass Fail

7. Gasoline, diesel, electric, or other power plants for improper performance or noncompliance with applicable safety requirements.
Pass Fail

8. Excessive wear of chain drive sprockets and excessive chain stretch.
Pass Fail

9. Electrical apparatus, for signs of pitting or any deterioration of controller contractors, limit switches and pushbutton stations,
Pass Fail

10. (Travel, steering, braking, and locking devices for malfunction, and tires for excessive wear.)

Note: Items in parenthesis apply only to locomotive, crawler and wheel mounted cranes.

ACTIONS TAKEN ON FAILED ITEMS: _____
_____
_____
_____

APPENDIX E
SHEAVE & ROPE INSPECTION GUIDANCE

The following requirements have been obtained from 29 CFR 1910. Additional inspection criteria must be included to the inspection regimen based upon manufacturer recommendations.

SHEAVES

- Sheave grooves must be smooth and free from surface defects which could cause rope damage.
- Sheaves carrying ropes which can be momentarily unloaded must be provided with close-fitting guards or other suitable devices to guide the rope back into the groove when the load is applied again.
- The sheaves in the bottom block must be equipped with close-fitting guards that will prevent ropes from becoming fouled when the block is lying on the ground with ropes loose.
- Pockets and flanges of sheaves used with hoist chains must be of such dimensions that the chain does not catch or bind during operation.
- All running sheaves must be equipped with means for lubrication. Permanently lubricated, sealed and/or shielded bearings meet this requirement.

ROPES

- In using hoisting ropes, the crane manufacturer's recommendations must be followed. The rated load divided by the number or parts of rope must not exceed 20% of the nominal breaking strength of the rope.
- Rope must not be secured to the drum as follows:
  - No less than two wraps of rope must remain on the drum when the hook is in its extreme low position.
  - The rope end must be anchored by a clamp securely attached to the drum, or by a socket arrangement approved by the crane or rope manufacturer.
- Rope clips attached with U-bolts must have the U-bolts on the dead or short end of the rope ("never saddle a dead horse"). Spacing and number of all types of clips must be in accordance with the clip manufacturer's recommendations. Clips must be drop-forged steel in all sizes manufactured commercially.
- Swaged or compressed fittings must be applied as recommended by the rope or crane manufacturer.
- Heavy wear and/or broken wires may occur in sections in contact with equalizer sheaves or other sheaves where rope travel is limited, or with saddles. Particular care must be taken to inspect ropes at these locations.
- Particular care must be taken when inspecting non-rotating rope.

HEAT/COLD WEATHER SAFETY

The follow are guides use by NIOSH for employees working in high heat weather.

Heat Stress Awareness

Work/Rest Regimen	Light	Moderate	Heavy
Continuous Work	86º F	80º F	77º F
75% Work, 25% Rest, Each Hour	87º F	82º F	78º F
50% Work, 50% Rest, Each Hour	89º F	85º F	82º F
25% Work, 75% Rest, Each Hour	90º F	88º F	86º F

These guidelines were developed for acclimatized, fully clothed workers with adequate water and salt intake. In order to attain acclimation, National Institute of Occupational Safety and Health (NIOSH) recommends exposing the new worker to 20% of the workload one day and increasing exposure by 20% each additional day.

Even though you're acclimated, there are still steps you should be taking in order to avoid heat related illnesses:

* Drink small amounts of water regularly. One cup every 20 minutes is adequate.
* Wear loose fitting and light colored clothing.
* Take short breaks in the shade frequently.
* Eat smaller meals before work activity.
* Avoid caffeine, alcohol and large amounts of sugar.
* Make sure the medications you're currently taking are compatible with heat.

While you're on the job, look out for your co-workers by learning to recognize the symptoms of heat related illnesses.

Heat Cramps: Cramps are attributed to an electrolyte imbalance caused by sweating due to performing hard physical labor in hot environments. Cramps can be caused by having too much or too little salt in your system. Excess salt can build up in the body if you are sweating excessively and not replacing fluids by drinking water. Likewise, drinking too much water can cause excess salt loss. Most folks obtain enough sodium through their eating habits and only need to replace lost fluids with water during these situations. In extreme conditions, such as wearing heavy protective gear for many hours, you should drink carbohydrate and electrolyte replacement fluids every 15 to 20 minutes.

Heat Exhaustion: Symptoms include headache, nausea, vertigo, weakness, thirst and giddiness. The signs can be similar to heat stroke which is the most serious of the heat related illnesses so this should not be taken lightly although heat exhaustion does respond

readily to prompt treatment. Anyone experiencing heat exhaustion should be removed from the heat and given fluid replacement.

Heat Stroke: Heat stroke is a serious medical emergency. It occurs when the body fails to regulate its own temperature and that temperature rises to critical levels. The primary symptoms include confusion, irrational behavior, loss of consciousness, convulsions, lack of sweating and hot, dry skin and abnormally high body temperature (105º F). If you suspect your coworker is experiencing heat stroke, you must seek medical attention immediately! While waiting for medical professionals to arrive, place the worker in a shady area, the outer layer of clothing should be removed, and the skin should be wetted and fanned. Fluids should be replaced immediately.

For more information on heat related illnesses and how to avoid other outdoor health related issues, please see the following Web sites:

http://www.osha.gov/SLTC/heatstress/recognition.html

Cold Weather Safety

Guidelines

How fast a person's body cools in cold weather depends on the:

- air temperature,
- wind speed,
- heat of the sun, and
- work being done.

The fingers and toes usually feel cold first. Shivering then sets in. Shivering is the body's way of warning that it needs to be warmed-up. If not warmed, a person may become distracted by the discomfort and be more likely to have an accident. The risk of frostbite also increases. Therefore, the employer or contractor should provide heated warm-up shelters at the workplace where workers can get in out of the cold and drink hot beverages. Warm, sweet drinks and soups are better than coffee, as coffee increases heat loss from the body.

The Work Warm-Up Schedule (over) shows the warm-up breaks needed for work in cold conditions. It assumes that normal work practice provides for breaks in warm locations every two hours.

The schedule provides for additional breaks as the wind velocity at the work site increases and/or the temperature drops.

Warm-up breaks should begin when the temperature reaches -26^0 C (-15^0F) with winds of 16km/h (10mph) or greater. In winter, Environment Canada reports Wind Chill Factors

and/or Equivalent Temperatures. If only this information is available, warm-up breaks should begin when the wind chill reaches 1750 watts per square metre (Equivalent Temperature of –32º C). All non-emergency work should stop by the time the wind chill reaches 2250 (Equivalent Temperature of –51º C).

When the work involves riding on an unshielded vehicle or some other activity that generates wind, the number of breaks should be increased appropriately. If effective protection against the wind can be provided by shields or screens, work modification or other measures, then the work warm-up schedule for "No Noticeable Wind" would apply.

Special measures may be needed in some circumstances. For example, when work must be done in isolated areas, a 'buddy system' or a reliable two-way communication system should be used. Some vehicles may need to be equipped with survival gear.

These guidelines are not intended to replace established cold weather work practices that provide workers with better protection.

Work Warm-up Schedule for Outdoor Activities

This information applies to any four-hour period.
Warm-up breaks are assumed to provide 10 minutes in a warm environment.
These guidelines apply to workers wearing dry clothing.

Sunny sky **Air temperature**		**No noticeable wind**		**Wind** **8 km/h (5 mph)**		**Wind** **16 km/h (10 mph)**		**Wind** **24 km/h (15 mph)**		**Wind** **32 km/h (20 mph)**	
ºC below zero*	ºF below zero*	Max. work period	Number of breaks	Max. work period	Number of breaks	Max. work period	Number of breaks	Max. work period	Number of breaks	Max. work period	Number of breaks
26 to 28	15 to 19	normal breaks	1	normal breaks	1	75 minutes	2	55 minutes	3	40 minutes	4
29 to 31	20 to 24	normal breaks	1	75 minutes	2	55 minutes	3	40 minutes	4	30 minutes	5
32 to 34	25 to 29	75 minutes	2	55 minutes	3	40 minutes	4	30 minutes	5	Non-emergency work should stop	
35 to 37	30 to 34	55 minutes	3	40 minutes	4	30 minutes	5	Non-emergency work should stop			
38 to 39	35 to 39	40 minutes	4	30 minutes	5	Non-emergency work should stop					
40 to 42	40 to 44	30 minutes	5	Non-emergency work should stop							
43 and below	45 and below	Non-emergency work should stop									

* *all temperatures are approximate*

Apply the schedule one step lower for work with limited physical activity. For example, at -35°C (-30°F) with no noticeable wind, a worker with a job requiring little physical movement should have a maximum work period of 40 minutes with four breaks in a four-hour period.

If reliable weather reports are not available, use the following as a guide to estimate wind velocity:

- An 8 km/h (5 mph) wind will move a light flag
- A 16 km/h (10 mph) wind will fully extend the flag
- A 24 km/hr (15 mph) wind will raise a newspaper sheet
- A 32 km/h (20 mph) wind will produce blowing and drifting snow

If only the Wind Chill Factor (in watts per square metre) or Equivalent Temperature are available, a rough guide for applying them, rather than the temperature and wind velocity factors above, would be:

- Special warm-up breaks should be initiated at a wind chill of about 1750 (Equivalent Temperature of -32° C)
- All non-emergency work should stop at or before a wind chill of 2250 (Equivalent Temperature of -51° C)

If wind speeds are higher than those identified in the chart, a wind chill value of 2250 (or Equivalent Temperature of -51° C) should be used to determine the point at which all non-emergency work should stop.

HOT WORK Welding &Cutting Procedures

Hot work fires cause severe and costly property losses. These fires are preventable and the strict adherence to hot work guidelines can prevent most of these unnecessary losses. In addition to the increased fire hazard presented by this type of work, employees may be exposed to unnecessary exposure to hazardous conditions if city employees and its contractors do not exercise the proper precautions and use appropriate Personal Protective Equipment.

Due to type and magnitude of the hazards, the City of Stamford has established a Hot Work, Cutting and Welding Program to guide City employees and it's contractors to

reduce the possibility of serious injury or loss when performing hot work. As the hazards vary from space to space, it is essential that individual differences be thoroughly evaluated to assure that the unique hazard posed by each situation is adequately controlled.

It is important to remember that conditions may change quite rapidly in the work environment and activities that seem safe when initiated may become hazardous during the operation and prior to the completion of the project.

The following are some of the general categories of hazards, which may be encountered in with hot work, are: atmospheric hazards, electrical hazards and the potential for fire or explosion.

As these hazards are discussed in greater detail, remember that caution must always be used during hot work, "anticipate the unexpected".

1) Hot work Permits
   a) Cutting and welding operations have caused many fires in the past at industrial and municipal facilities. It is not normally the arc or flame which is the cause of ignition, instead, the many thousands of sparks and pieces of hot slag produced during a single welding operation account for most fires. These sparks and pieces of molten metal can travel up to 35 feet in most cases and can be the source of ignition causing combustible material to ignite resulting in a serious fire. Sparks and pieces of molten metal may also fall or settle in small holes and openings starting fires in hidden or unsuspected places.
   b) Situations when a Hot Work Permit may not be required
   c) Some areas of maintenance shops have been specifically designed to accommodate hot work and welding operations. In these areas, special precautions in construction and material storage have already been take to prevent or reduce the risk of fire loss. These areas may be designated by the City as an "authorized welding area" and do not require a *Hot work Permit* each time cutting or welding is conducted. This does not however eliminate the need for the welder to follow safe welding practices as outlined in these procedures.

2) Hot Work Permit Required
   a) Hot work is considered as any work operation involving open flames or producing heat and/or sparks. This includes but is not limited to: brazing, cutting, grinding, soldering, thawing pipe, torch applied roofing as well as all types of welding.

   b) When hot work is conducted outside and area designated as an "authorized welding area", the area supervisor is responsible to assure that the welder obtains a *Hot Work Permit* and has taken adequate precautions to reduce or eliminate the hazards introduced by the hot work. The permit should be signed and issued only after the precautions listed on the completed permit have been taken.

c) To reduce the potential for fire in and around hot work, the welder and local management should carefully review the required precautions as listed on the Hot Work Permit . As each individual situation may be different additional hazard may be present which are not listed on the permit form. These hazards should be addressed in the section entitled "Other Precautions Taken".
d) Only after the area supervisor has reviewed the work to be performed and the precautions taken to reduce the potential for a fire, should the area supervisor sign the permit. By their signature, the area supervisor has verified that the area has been examined; the precautions checked on the required precautions checklist have been taken to prevent or reduce the potential for fire. This signature is the final authorization to initiate the hot work.
e) After the *Hot Work Permit* is completed and signed by the area supervisor responsible for the effected area, the top copy shall be immediately sent via fax to the Safety and Training Office Tel 977 4908 and Fax 977-5072. The signed yellow original shall be maintained on file in the department for a period of one year to allow review and inspection by a visiting Factory Mutual Representative, OSHA compliance officer or other fire safety official. If you do not have the Hot Work Permit form provided by Factory Mutual, you can print one from the Local Area Network by going to:
f) The yellow permit card shall be posted in a prominent area immediately adjacent to the hot work for the duration of the hot work and post hot work fire watch. In some cases, additional notices should be posted. Additional Hot work permit and hot work warning signs can be obtained from the Office of Safety and Training, 977-4908.

4) Responsibilities

a) Department head
   i) The ultimate responsibility of enforcement of the *Hot Work Permit* system is that of senior management. Management should support procedures that lead to established safe practices. Hot work should be permitted only by those suitably trained and by contractors follow the City established safe practices.
b) Area supervisor
   i) Local management should exercise rigid control over the use of cutting and welding equipment and shall be certain that no welder or contractor initiated hot work until necessary precautions have been take and a *Hot Work Permit* has been completed and signed.
c) Welders
   i) Each welder or employee authorized to use hot work equipment shall proceed only when a *Hot Work Permit* has been completed and signed. The welder should follow safe working practices to assure his/her personal safety and the safety of others.
d) Fire Watch
   i) Individuals assigned to fire watch should be vigilant to assure that protective measures as indicated on the permit remain in force during the entire hot work operation. Fire watch when initiated shall be provided during and for 60

minutes after hot work, including any coffee, lunch or rest break. Hot work areas should be monitored for four hours after the job has been completed.

e) Outside Contractors and Vendors
   i) Contractors and vendors from the outside working on city property shall follow the same safe work practices adopted by the City. This includes the use of the *Hot Work Permit* and other safety precautions.

f) Safety & Training Officer
   i) The City Safety and Training Officer shall provide the necessary training to instruct department heads, area supervisors, welders and fire watch personnel in the precautions necessary to assure a safe welding environment. This training shall include familiarization with the hazards associated with hot work, the required precautions checklist and completion of the *Hot Work Permit*.
   ii) The Safety and Training Officer will monitor the proper use of the *Hot Work Permit* System.
   iii) The Safety Officer will inspect hot work areas as necessary to assure compliance with this program.

4) Standard Precautions

a) Standard Precautions to be taken for all hot work are listed below and on the hot work permit.

Required Precautions Check list

[ ].....Available sprinklers, hose streams and extinguishers are in service or operable.
[ ].....Hot Work equipment is in good repair

Requirement within 35 feet (11m) of the hot work to be performed
[ ].....Flammable liquids, dusts, lint and oily deposits have been removed
[ ].....Explosive atmosphere in the area has been eliminated
[ ].....Floors swept clean
[ ].....Combustible floors wet down or covered with damp sand or fire resistive sheets.
[ ].....Remove all other combustibles where possible otherwise protect these materials with fire resistive tarpaulins or metal shields.
[ ].....All wall and floor coverings have been covered
[ ].....Fire resistive tarpaulins suspended beneath the work.

Work on walls or ceilings
[ ].....Construction is noncombustible and without combustible covering insulation.
[ ].....Combustibles on other sides of walls moved away

Work on enclosed equipment
[ ].....Enclosed equipment cleaned of all combustibles
[ ].....Containers purged of flammable liquids/vapors.
[ ].....Pressurized vessels, piping and equipment removed from service, isolated and vented.

Fire watch / Hot work area monitoring
[ ].....Fire watch will be provided during and for 60 minutes after work, including and coffee, lunch or rest breaks
[ ].....Fire watch is supplied with suitable extinguishers, and where practical charges small hose lines with an appropriate nozzle.
[ ].....Fire watch personnel are trained in the use of this equipment and in the sounding of an alarm
[ ].....Fire watch may be required for adjoining area, above and/or below.

Monitor hot work area for 4 hours after a job has been completed.

5) Personal Protective Equipment
   a) Welding is a joining process in which metals, are heated, melted and mixed to produce a joint with properties similar to those of the materials being joined. There are dozens of different welding processes and there are hazards associated with each welding process. The type of hazard also depends on the environment in which welding is being performed.
   b) Among the common hazards in the welding process include:
      i) Bright light & ultraviolet radiation
      ii) Electric shock
      iii) Toxic fumes, gasses & particles
      iv) Heat, fire and burns,
      v) Noise
      vi) Ergonomic hazards
   c) When these hazards cannot be eliminated thought the use of Engineering Controls, the use of Personal Protective Equipment is necessary.

Hazard: **Bright light and ultraviolet radiation**
PPE: Headgear and eye protection

Cutting and welding using an electrical current or an oxygen/acetylene torch will produce an extremely bright light that can cause serious damage to the unprotected eye. The spectrum of light ranges from Ultraviolet (UV) to Visible Light and on to Infrared (IR) light. The visible light that provides us with color vision represents just a small, part of the electromagnetic spectrum. The UV and IR light is invisible to the human eye, but will have dangerous effects.

Ultraviolet Light
Ultraviolet or UV light can damage the eyes in several ways. Excessive exposure to the lowest wavelengths of UV light (180-280 nm) can cause damage to the Cornea and well as the Lens. These wavelengths are not common in nature, but are present in some industrial environments, such as electric arch welding. The mid UV wavelengths (280-320 nm) can cause damage to the Lens as well as cause welders eye (feels like sand in the eye). Mid UV light is present both in sunlight and in some industrial environments. The high UV wavelengths (320-380 nm) are present in all outdoor environments. Excessive exposure can cause fatigue or snow blindness.

High UV and Blue Light
Blue light (380-480 nm) can cause damage to the Retina (the back of the eye). Blue light is present in regular sun light, as well as in office environments (computer screens generate Blue light) and in select industrial applications.

Near Infrared Light
Infrared radiation (not visible light) is present in sun light, as well as in many industrial processes. Examples are steel manufacturing, glass melting and blowing operations as well as electric welding. Infrared light can cause damage to both the lens and cornea as well as the retina.

Welding arcs and flames emit intense visible, ultraviolet and infrared radiation. The UV radiation will tan and burn the skin just like UV radiation in sunlight. Long-term exposure to UV radiation can cause skin cancer. Wearing tightly woven fabrics will help to attenuate the UV from reaching the skin. Fabric garments should also be resistant to spark, heat and flame.

Ultra Violet light has a shorter wavelength than visible light.
The UV spectrum is divided into A, B, C. UV-C is the part from the UV spectrum with the shortest wavelength.

The UV-C and almost all UV-B are absorbed in the cornea of the eye. UV-A passes through the cornea and is absorbed in the lens of the eye. Just a few second exposures to intense UV light can Injury to the surface and mucous membrane of the eye. "Arc eye", "Welders' eye" and "Arc flash" are named for injury from mild feeling of pressure in the eye to intense pain and even cataracts. Sometime tearing and reddening of the eye and membranes around the eye are experienced. The eyes can then be abnormally sensitive to light. A permanent scarring of the retina due to its sensitivity to blue light (around 440-nm wavelength) has occurred in some welders. Of concern is that these symptoms may not be felt until several hours after the exposure.

Arc Eye, Welders Flash or Welders Eye : a painful condition of the eyes caused by damage to the surface of the cornea by ultraviolet light from arc welding. Almost all industrial cases result from continued exposure to UVL without adequate eye protection, i.e. it is a dose/time phenomenon. It usually resolves if the eyes are padded for 24 hours. It is similar to snow blindness and the condition caused by overexposure of the eye to sun-tanning lamps.

> ***The condition most commonly occurs in welders' mates and onlookers rather than in welders themselves, as they tend to be more careful in protecting themselves***.

Eyes - protect them with a helmet and visor of a grade designed for the type of arc welding; wear eye protection during slag removal or chipping.

The type of protection depends upon the work situation.

Filter Lenses for Protection Against Radiant Energy

OPERATION	ELECTRODE SIZE (1/32)	AMPS	MINIMUM PROTECTIVE* SHADE
Shielded metal arc welding	Less than 3/32	Less than 60	7
	3/32-5/32	60-160	8
	5/32-8/32	160-250	10
	More than 8/32	250-500	11
Gas metal arc welding and flux cored arc welding		Less than 60	7
		60-160	10
		160-250	10
		250-500	10
Gas tungsten arc welding		Less than 50	8
		50-150	8
		150-500	10
Air carbon arc cutting	Light	Less than 500	10
	Heavy	500-1000	11
Plasma arc welding		Less than 20	6
		20-100	8
		100-400	10
		400-800	11
Plasma arc cutting	Light**	Less than 300	8
	Medium**	300-400	9
	Heavy**	400-800	10
Torch brazing			3
Torch soldering			2

OPERATION	ELECTRODE SIZE (1/32)	AMPS	MINIMUM PROTECTIVE* SHADE
Carbon arc welding			14
Gas welding:			
Light	Under 1/8	Under 3.2	4
Medium	1/8-1/2	3.2-150	5
Heavy	Over 1/2	Over 12.7	6
Oxygen cutting:			
Light	Under 1	Under 25	3
Medium	1-6	25-50	4
Heavy	Over 6	Over 150	5

* As a rule of thumb, start with a shade that is too dark to see the weld zone (the darkest lens carries a value of 10). Then go to a lighter shade that gives sufficient view of the weld zone without going below the minimum. In oxyfuel gas welding or cutting where the torch produces a high yellow light, it is desirable to use a filter lens that absorbs the yellow or sodium line in the visible light of the (spectrum) operation.

** These values apply where the actual arc is clearly seen. Experience has shown that lighter filters may be used when the arc is hidden by the work piece.

Hazard: **Electrical Shock**
PPE: Non conductive clothing and PPE

The operator and other working near electrical arc welding equipment should be impressed with the fact that there are high voltages capable of inflicting severe, and often fatal injuries. A qualified electrician should carry out all work on electrical components of welding equipment.

Power circuit earth, every power circuit must be grounded to prevent accidental shock by stray electrical current. Do not operate welding machine without a ground on the power supply.

Care to be taken while welding on insulated areas ie. truck trays, trailers bogeys etc. to prevent the user from becoming part of the ground circuit.

Welding cables must not be operated at currents in excess of their rated capacity. The cables should be inspected frequently. Any joints should be made with proper connectors.

Electric Shock Resistance & insulated type footwear
Workers who may be exposed to live electrical conductors must wear safety footwear that protect against electrical shock. The soles of such footwear have specific electrical insulating properties that provide electrical shock resistance**.** Electrical hazard, safety-toe shoes are nonconductive and will prevent employees' feet from completing an electrical circuit to the ground. They can protect employees against open circuits of up to 600 volts in dry conditions. Electrical hazard, safety-toe shoes should be used in conjunction with other insulating equipment and precautions to reduce or eliminate the potential for your employees' bodies or parts of their bodies to provide a path for hazardous electrical energy. [2]
Train employees to recognize that the insulating protection of electrical hazard; safety-toe shoes may be compromised if

- The shoe is wet
- The rubber sole is worn through
- Metal particles become embedded in the sole or heel; or
- Other parts of the employees' bodies come into contact with conductive, grounded items.

Hazard: **Toxic fumes, gasses and particles**
PPE: Ventilation and respiratory protection

Toxic fumes and gasses
Vapors out gas and particles are emitted from metal heated beyond its melting point. In welding coated or painted metals, the coating burns off other toxic fumes. Some heavy metals such as chromium nickel cobalt, cadmium, lead, manganese, vanadium and other oxides etc. oxidises in the welding process. When inhaled, these fumes can produce fume

[2] Note: Nonconductive footwear must not be used in explosive or hazardous locations; in such locations, electrically conductive shoes are required.

fever and delayed kidney damage that can be fatal. Welders are at increased risk of pneumoconiosis (in particular siderosis), of cancer of several types (e.g., nasal, liver, sinonasal and stomach).
The process of welding and grinding metals generate particle in the micron or sub micron range, but such particles may coalesce and form larger aggregates. Most fume particles are in the "respirable" (RSP) category, and may thus penetrate deep into the respiratory system and are deposited there.

Prevent fume and gas hazards - by one or a combination of
a. Good general ventilation
b. Use of a booth
c. Local exhaust ventilation on the hand piece.

Fumes - if local exhaust ventilation is insufficient, ensure an adequate air supply to the operator is essential. Never weld or cut near cleaning tanks containing chlorinated solvents; heat breaks down vapors into extremely toxic gases.

Lung disease - during cutting and welding, nearly all metals generate fume that if inhaled can lead to lung disease. Some metals, especially nickel and chromium that are found in different grades of steel, have also been associated with causing lung cancer.

Metal fume fever - from nearly all metals during cutting and welding, can cause vomiting, chills and headache. Effects may be delayed several hours and last 24 hours. Zinc fume from galvanized iron is most severe, though copper and tin fume are nearly as bad.

Fume poisoning - from such metals as lead, zinc and cadmium, can enter through the nose and mouth through smoking or eating with contaminated hands. Continuous exposure may lead to long term blood disorders, nerve damage and kidney disease.

Fluoride - emitted from coating on low hydrogen rods. It can damage the lungs and cause general poisoning.

Ozone - a highly toxic gas produced from any arc-type welding, can cause long-term respiratory problems. Ozone has a characteristic irritating pungent odor and can cause short-term aches and nausea.

Heated coatings and paints - can release toxic substances such as cyanide, formaldehyde and isocyanates.

Fluxes - some types may give off hazardous substances when heated. A Material Safety Data Sheet should be obtained from suppliers to determine hazards of each flux.

Hazard: **Noise**
PPE: Hearing protection (ear muffs or ear plugs)

Noise
Metal handling such as drilling, grinding, metal-on-metal impacts, produces noise. Long-term exposure to loud noise can cause stress and even hearing loss. Welding itself produce noise level ranging from 50 to 116 dBA. Noise exposure limits an eight-hour exposure level to not exceed 85 dBA. Hearing protection may be necessary to reduce the potential of noise induced hearing loss.

Hazard: **Heat, fire and burns**
PPE: Protective gloves and clothing

Heat, Fire and Burns
The welding must generate heat sufficient to melt metals. The heat range varies with each type of metal, but mild steel may require over 1,000 ^{o}C to be joined or cut. Sparks and hot metal splatter are hot enough to ignite nearby materials including clothing and start a fire or explosion. Cutting or welding causes about 6% of all industrial fires.

Cuffs and pockets in clothing can catch a spark and result in serious burns. A flame retardant welding apron or coverall can reduce the potential for serious burns as will the use of proper work gloves.

Physical injury - electric shock, gas explosion, burns from sparks and spatter.

Prevent explosion - by checking before welding and cutting that tanks and drums are steamed clean free of substances that are flammable or give off flammable substances when heated.

Hazard: **Ergonomic and Mechanical injury**
PPE: Safety shoes

Welders tend to work with heavy machine parts and other heavy items. When the potential for a injury to the foot is present, protective footwear is required. The hazards present will dictate what level of foot or leg protection is needed. Steel toe safety shoes (or an equivalent composite safety shoe) is generally the minimum requirement . In some instances, additional protection may be required such as metatarsal safety shoes

Safety shoes must be selected based upon the potential hazards presented by the employee's work. Nonconductive soles to protect workers from workplace electrical hazards such as electrical arc welding operations may be necessary if there is significant potential for electrical shock.

Comfort - ensure personal protective equipment is comfortable to wear and work equipment comfortable to use.