

[DRAFT] Policy 8 [DRAFT]

HEALTH AND SAFETY

§ 8-1. Safety program.

[Adopted 5-13-2003 (P-74A)]

This Policy establishes a safety and health program for Kent County operations and assigns responsibility for administering and encouraging support of the program to the Division of Emergency Management.

A. Goals and purpose.

- (1) The goals of the safety program are to:
 - (a) Create awareness that Kent County governmental activities are subject to risks of loss and that these risks can be controlled with a successful program;
 - (b) Teach department heads the five steps of risk management:
 1. Risk Identification
 2. Risk Evaluation
 3. Risk Treatment
 4. Selection and Implementation
 5. Monitoring;
 - (c) Encourage and motivate department heads to identify and control risks in their respective departments.
- (2) The safety program shall have three specific purposes:
 - (a) Increase health and safety awareness among employees;
 - (b) Minimize the County government's exposure to liability and financial losses; and
 - (c) Develop accountability of all employees and departments for safety and health issues.

B. Administration.

- (1) The Division of Emergency Management in the Department of Public Safety shall be responsible for the administration of a County-wide health and safety program and the County's risk management effort. At least two employees designated by the department head shall be the County's Safety Officers. The Safety Officer and the Assistant County Safety Officer are responsible for developing and directing a workplace health and safety program. They shall assist operating personnel in achieving compliance with or developing a more comprehensive program than the Occupational Safety and Health Administration (OSHA) based guidelines.
- (2) At a minimum, the duties of the Safety Officers shall include:
 - (a) Investigating every workplace accident and documenting steps taken to remove or reasonably reduce hazards;

KENT COUNTY

- (b) Writing and distributing risk management policies and rules;
 - (c) Creating a risk management policy statement;
 - (d) Establishing inspection procedures to identify, monitor, and reedy key risks in each department;
 - (e) Assign Health & Safety Coordinator(s) to each Department and Division as required;
 - (f) Reviewing all major purchases, proposals of new services or designs for new buildings to identify loss exposures;
 - (g) Developing and conducting health and safety training, and health and safety incentive programs for employees;
 - (h) Establishing procedures for reporting and investigating all claims, incidents, and safety violations;
 - (i) Preparing a financial impact analysis of potential risks;
 - (j) Developing and updating a safety procedure manual; and
 - (k) Monitoring and publicizing safety efforts.
- (3) The Health and Safety Officers shall each be vested with the authority to order the work of any County employee or Department stopped if judged by either of them to be unsafe or posing the risk of injury or significant financial loss. Work may not resume until a Safety Officer has determined that it is safe to do so. In addition, a Safety Officer may close, block off, or otherwise prevent the entry or use of any County facility or equipment judged to be unsafe or posing a risk of injury or significant financial loss.
- C. The Emergency Management Division Manager shall coordinate health, safety and risk management program efforts with the Personnel Office as the office responsible for County insurance administration; the Department of Finance as the office responsible for determining safety improvement costs; the Division of Facilities Management as the office charged with making building alterations; the Division of Wastewater Facilities, which has the largest employee base in a high risk environment; the Division of Community Services, which has the largest daily interaction with the general public in graphically remote and isolated work and play environments, and the Division of Emergency Medical Services, which is exposed to hazards unique to the field of work; the County Administrator to provide direction and leadership in assessing risk; and other departments in identifying and managing specific hazards.
- D. Employees violating this Policy or disregarding the safety manual shall be subject to disciplinary action up to and including termination.
- E. An annual report shall be provided to the Levy Court detailing identified hazards, remediation efforts, compensable and non-compensable injuries, and related costs.

COUNTY ADMINISTRATOR

HEALTH & SAFETY OFFICER

AST. HEALTH & SAFETY OFFICER

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COORDINATOR

EMPLOYEE
COUNCIL

ROW
OFFICES

COORDINATOR

COORDINATOR

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Administrative Procedures

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- Emergency Planning and Response
- Injury Reporting and Medical Treatment
- Job Safety Analysis
- Medical Monitoring and Exposure Records
- Modified Duty and Return to Work
- New Employee Safety Orientation
- Safety Committee Operation
- Safety Inspection Program
- Work Zone and Traffic Control

Risk Specific Procedures

- Blood-borne Pathogens
- Chemical Right-To-Know
- Confined Space Entry
- Cranes, Slings and Hoists
- Ergonomics**
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- Forklift Operations
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- Hearing Conservation
- Heat Stress Prevention
- Ladder Safety
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- Respiratory Protection
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	<p style="text-align: center;">DRAFT</p> <p style="text-align: center;">PURPOSE & MISSION STATEMENT</p>		<p style="text-align: right;">Page 1 of 1</p>
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PURPOSE

This Mission Statement describes Kent County Delaware Governmental Body (referred to from this point forward as “Kent County”) actions taken to develop and provide a Safety Manual to educate, train, measure and improve the health and safety of Kent County Employees and Contractors working for and under the direction of Kent County.

MISSION STATEMENT

Continue to aggressively advance the goal of eliminating employee injuries, illnesses, near-miss incidents and property damage through an ever-improving Kent County Health and Safety Program

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PURPOSE

This procedure describes **Kent County Delaware Governmental Body** (referred to from this point forward as “**Kent County**”) actions taken in response to employee injuries, illnesses, near-miss incidents and property damage. The purpose of this procedure is to:

- Identify causes of employee accidents so that the necessary corrective actions can be taken to prevent re-occurrence.
- Assure that employees receive the appropriate medical treatment for injuries or illnesses that occur while at work.
- Evaluate the feasibility of modifying injured employees’ job duties for employees released for work with restrictions, and make sure that their job duties do not hinder the healing process.

RESPONSIBILITY

- Employees are responsible for immediately reporting all incidents of injuries, illnesses and **near-miss incidents** to their immediate supervisor.
- **Kent County Health & Safety Officer or His/Her Assistant** are responsible for conducting a thorough accident investigation and for completing the Accident Investigation Form for all reported injuries and **near-miss incidents**.
- **Kent County Administrator and the Personnel Director/Human Resource Manager** are responsible for reviewing and approving all accident investigation reports to ensure that the causes and corrective actions are identified and documented.
- The **Personnel Director**/Human Resource Manager is responsible for coordinating all medical appointments with the **Kent County** medical provider and for reporting work-related injuries to the company workers’ compensation insurance provider.
- The **Personnel Director**/Human Resource Manager is responsible for maintaining the Insurance Claims Records.
- The **Personnel Director**/Human Resource Manager is responsible for communicating to **Department Director(s)/Manager(s)** the modified duty status of injured employees using the Modified Duty Notification Form.
- **Personnel Director**/Human Resources are responsible for determining if there are suitable jobs available for injured employees to perform within the scope of their restrictions.
- **Department Director(s)/Manager(s)** are responsible for making sure that the appropriate corrective actions have been implemented to prevent the reoccurrence of accidents, injuries and **near-miss incidents**.
- The **Kent County Health & Safety Officer or His/Her Assistant**/Safety Committee Chairperson is responsible for making sure that an Accident Investigation Follow-up Report is completed for all accident investigations each month until identified corrective actions have been implemented.
- The Safety Committee is responsible for completing an Accident Investigation Evaluation Report for all accident investigations to evaluate the effectiveness of **Department Director(s)/Manager(s) and/or Division Supervisors’/Managers’** accident investigations and to provide management with useful feedback regarding completed investigations.

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DEFINITIONS

- *Insurance Claims Record* – The annual summary of all workplace injuries and illnesses that have been claimed on the company’s insurance.
- *Near-miss Incidents or Close-call* – An incident that did not cause a specific injury or property damage, but could have under slightly different circumstances. (i.e., an employee slips on an oil spill on the floor, but he/she does not fall and is not injured.)

PROCEDURE

Injury Reporting/Investigation

- All employees must report injuries, illness, or near injuries immediately to their supervisor. If the supervisor is not available a nearby manager or supervisor must be contacted.
- The notified supervisor or manager determines the nature of the injury; coordinates the appropriate 1st Aid and notifies **Personnel Director**/Human Resources of the injury.
- If emergency medical attention is needed, the supervisor or manager calls 911 to summons the appropriate emergency response agency (ambulance).
- If an employee requires non-urgent medical attention, **Personnel Director**/Human Resources schedule an appointment with the **Kent County’s** occupational medical provider.
- For all reported injuries, illnesses and near injuries, the department supervisor or manager completes an Accident Investigation Report, as soon as possible after the incident has occurred. The report shall be submitted to **Personnel Director**/Human Resources within 48 hours of the employee’s report of injury.
- **Personnel Director**/Human Resources report all injuries that require outside medical attention to the workers compensation insurance provider within 24 hours of receipt of the accident investigation report.
- **Personnel Director**/Human Resources records the date in which Accident Investigation Reports are received and forwards a copy to the **Kent County Health & Safety Officer or His/Her Assistant**/Safety Committee Chairperson.
- The **Personnel Director**/HR Manager determines if the incident needs to be added to the Insurance Claims Record and adds incidents to this log as necessary.
- If a work-related injury results in the hospitalization of three or more employees or a death of one or more employee (s), the highest ranking Manager or Supervisor on duty will contact the following individuals immediately:
 - **Kent County Administrator**
 - **Personnel Director**/Human Resources Manager
 - **Kent County Health & Safety Officer or His/Her Assistant**/Safety Committee Chairperson.

Corrective Action to Prevent Accident Reoccurrence

- The necessary corrective actions that are identified as a result of accident investigations are documented by **the Department Director(s)/Manager(s) and/or Division Supervisors’/Managers (to be know as the) Investigating Supervisor** on the Accident Investigation Report.
- **The Department Director(s)/Manager(s)** make sure that the corrective actions indicated on the Accident Investigation Report are implemented in a timely manner.

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- The Safety Committee completes an Accident Investigation Evaluation Form to provide feedback to the **Department Director(s)/Manager(s)** and/or **Supervisor** regarding the quality of the investigation. The Safety Committee provides an annual summary of these reports to the Municipality Manager.
- The **Kent County Health & Safety Officer or His/Her Assistant/ and/or the Safety Committee Chairperson** coordinates an accident investigation follow-up to determine if identified corrective actions have been implemented and are sufficient to prevent a reoccurrence. These follow-ups are completed each month until all of the identified corrective actions have been implemented. These reports are distributed to the **Department Director(s)/Manager(s)** and the **Kent County Personnel Director/HR Manager**.

Medical Management

The Personnel Office/Human Resources maintains a summary of each medical visit and associated correspondence/meetings with the employee in a file separate from the personnel files.

If an injured employee returns from the medical provider with work restrictions, **Personnel Office/Human Resources** sends a completed Modified Duty Notification Form to the employee's supervisor/manager and helps to coordinate the appropriate modified duty with the employee and the supervisor and/or manager.

The Personnel Office/Human Resources maintain the necessary contact with the workers' compensation insurance provider to assure the proper medical treatment and management of these claims.

Training

All employees will be provided training in methods of reporting injuries and this procedure. This training will be provided by **The Personnel Office/Human Resources** and/or by the employee's supervisor or designated lead **Safety Coordinator** within the first week of their employment.

Kent County Personnel Director/HR Manager provides training to all of **Department Director(s)/Manager(s) and/or Division Supervisors'/Managers'** regarding the contents of this procedure and the means to conduct effective accident investigations, including identifying accident causes and corrective actions.

RECORDS

Accident Investigation Forms and Modified Duty Notification Forms are filed in **The Personnel Office/Human Resources**, separate from the employee personnel records. These records are maintained for the duration of injured employees' employment plus 30 years.

The Accident Investigation Follow-up Forms and the Accident Investigation Evaluation Forms are contained with the safety committee records.

Near-Miss or Close-Call Reports are to stay within the employee's area of work and are to be filed in the employee's supervisor's office. The report is to be utilized for awareness and training of others that may be exposed to a similar working situation or event. This report is a training-aid only.

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Near-Miss (“Close-call”) Reporting

A near-miss can be defined as minor accidents or close calls that have the potential for property loss or injury. A near miss will prevent a task from being completed as planned.

Encourage all employees to identify and report a "Near Miss" or “Close Call”. Most accidents can be predicted by a "Near Miss" or “Close Call”. Hazards should be removed as soon as possible, but they still should be reported to supervisors so they can make note of it, even after the hazard has been removed. Discussing these near misses and hazards in a non-threatening atmosphere can raise awareness for employees to look out for other hazards that should be reported to their supervisor(s).

Any employee that reports a "Near Miss" or “Close Call” should receive positive feedback for his or her effort towards fostering a safer working environment. Negative feedback or reprisal for their efforts will discourage other employees from reporting “Near Misses” or “Close Calls”. Every effort should be made to encourage "Near Miss" or “Close Call” Reporting

"Near Misses" or “Close Calls” do not get reported because the employee often does not know they happened, which makes it very difficult to fix them or prevent future ones. Similarly, one employee may report a near miss to a supervisor, but other employees were not made aware of the "Near Miss" or “Close Call”. All too often, these incidents are not reported at all. Many employees simply say, "Whew! That was a close one!" and move on to their next task thinking “no-harm-no-fowl”. They go back to work without mentioning the incident to their supervisor, as if the incident was a one-time occurrence and not worth mentioning or reporting. Employees sometimes decide if nobody gets hurt and there is no damage, then it’s not really an accident, but this is a part of the problem. All near misses need to be reported and discussed with a supervisor.

Even before "Near Misses" or “Close Calls” occur, employers should discuss the importance of reporting near misses to create the best—and safest—work environment. Open discussion between employees and employers is an important aspect of near miss reporting. Encouraging employees to treat close calls exactly the way they treat accidents, which includes reporting them right away. This is the crucial first step to finding causes, taking corrective action and training employees to avoid the real accident waiting to happen.

The near miss training session could begin with the supervisor sharing his or her own experiences with close calls, which could prompt other employees to give close call examples of their own, as well as examples on how to prevent near misses. This will heighten awareness of the safety hazards illustrated by the near misses and will encourage employees to take action to correct those underlying problems. New employees and older employees will begin to understand and learn that they will not be lucky enough to avoid these accidents every time. It’s important for employees to discuss examples of near misses to really grasp the importance of the issue. The discussion should then turn to the causes of near misses and then end with corrective action. It’s important for these meetings to end with a discussion of proactive measures that need to be taken against near misses.



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**ACCIDENT, NEAR-MISS, AND INJURY
INVESTIGATION**

Original Issue Date:
INSERT DATE

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KENT COUNTY DELAWARE ACCIDENT INVESTIGATION REPORT

Employee Information *(This Section Is To Be Completed by Personnel Office/Human Resources Only)*

Name: _____ Shift: _____

Department & Division: _____ Job title: _____

Street Address: _____ City: _____ State: _____ Zip: _____

Social Security Number: ____-____-____ Phone Number: ____-____-____ Age: _____ Sex: _____

Birth Date: ____/____/____ Hire Date: ____/____/____ Marital Status: ____ # of Dependents: ____
(MM/DD/YYYY) (MM/DD/YYYY)

Incident Description

Time of Incident: ____:____ a.m./p.m. Time Reported: ____:____ a.m./p.m.

Date of Incident: ____/____/____ Date Reported: ____/____/____
(MM/DD/YYYY) (MM/DD/YYYY)

Indicate When Incident Occurred: ____ 1st Hour ____ Between 2nd & 8th Hour ____ Over the 8th Hour

Length of Time on Job: ____ In Training ____ Less than 1 Year ____ Over 1 Year

What Happened? (Explain all events that led up to and occurred during the incident. Include exact location, machine number, etc.)

(Use Back Side of this Form and/or Extra Sheets if Needed)

Were There Any Witnesses? ____ Yes ____ No - If So, Who? _____

Was a 3rd Party (i.e. sub-contractor) directly or indirectly involved with this incident? ____ Yes ____ No

Was Safety Equipment by-passed, not used or used improperly?

Was Medical Attention Offered? ____ Yes ____ No If Yes, Check All That Apply

____ 1st Aid on Site ____ Occupational Health Clinic ____ Hospital Emergency Room

____ Employee Does not wish to receive outside medical treatment at this time ____ Other (explain)

(Use Back Side of this Form and/or Extra Sheets if Needed)



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ACCIDENT, NEAR-MISS, AND INJURY INVESTIGATION

Original Issue Date:
INSERT DATE

Last Reviewed:
INSERT DATE

Revision Number:
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KENT COUNTY DELAWARE ACCIDENT INVESTIGATION REPORT

Incident Type

☐ Fall From Elevation ☐ Fall, Same Level ☐ Slip or Trip (No Fall) ☐ Struck Against Object
☐ Struck By Object ☐ Caught In, Under or Between ☐ Overexertion/Strain ☐ Motor Vehicle
☐ Equipment ☐ Other (Explain) _____

(Use Back Side of this Form and/or Extra Sheets if Needed)

Body Part(s) Affected (Circle Left or Right Where Applicable)

☐ Head ☐ Neck ☐ Hip (Lt/Rt) ☐ Wrist (Lt/Rt) ☐ Shin/Calf (Lt/Rt)
☐ Face ☐ Trunk/Torso ☐ Shoulder (Lt/Rt) ☐ Hand (Lt/Rt) ☐ Ankle (Lt/Rt)
☐ Lip/Mouth ☐ Abdomen ☐ Upper Arm (Lt/Rt) ☐ Finger(Lt/Rt) ☐ Foot (Lt/Rt)
☐ Eye (Lt/Rt) ☐ Upper Back ☐ Elbow (Lt/Rt) ☐ Thigh (Lt/Rt) ☐ Toe (Lt/Rt)
☐ Ear (Lt/Rt) ☐ Lower Back ☐ Forearm (Lt/Rt) ☐ Knee (Lt/Rt) ☐ Respiratory
☐ Other (Explain) _____

(Use Back Side of this Form and/or Extra Sheets if Needed)

Nature of Injury/Illness (Check All that Apply - Circle Where Applicable)

☐ Sprain/Strain ☐ Fracture/Dislocate/Crush ☐ Foreign Object ☐ Concussion
☐ Repetitive Trauma (CTD's) ☐ Skin Irritation/Dermatitis ☐ Heat Stress ☐ Chemical Exposure
☐ Cut/Scrape/Puncture ☐ Burn-Thermal/Electrical ☐ Hernia/Rupture ☐ Amputation
☐ Bruise/Contusion ☐ Burn-Chemical ☐ Other (Explain) _____

(Use Back Side of this Form and/or Extra Sheets if Needed)

Basic Causes (Check All that Apply - Circle Where Applicable)

☐ Unsafe Method ☐ Housekeeping/Clutter ☐ Procedure Not Followed Properly
☐ Spills/Leaks ☐ Using Improper Tool(s) ☐ Lack of Available Protective Equipment
☐ Shortcuts/Save Time ☐ Unguarded/Faulty Equipment ☐ Lack of Personal Protective Equipment
☐ Other (Explain) _____

(Use Back Side of this Form and/or Extra Sheets if Needed)

Root Causes (Check All that Apply - Circle Where Applicable)

☐ Lack of Procedure ☐ Lack of Enforcement/Motivation ☐ Inadequate Inspection/Maintenance
☐ Inadequate Procedure ☐ Lack of Knowledge/Training ☐ Other _____

(Use Back Side of this Form and/or Extra Sheets if Needed)

Corrective Action

Action Needed	Person(s) Responsible	Expected Completion Date
1)		
2)		
3)		

(Use Extra Sheets if Needed)

Employee Signature: _____ Date: _____

Supervisor Signature: _____ Date: _____

*Department Director/Manager Signature _____ Date _____

Personnel Director/HR Manager Signature _____ Date _____

***Department Director/Manager is to Return Completed Form to Personnel Director/HR Manager within 24 Hours of Report of Incident)**

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KENT COUNTY DELAWARE “NEAR-MISS” OR “CLOSE-CALL” REPORT

Employee Information *(This Section Is To Be Completed by Employee)*

Name: _____ Shift: _____

Department & Division: _____ Job title: _____

Street Address: _____ City: _____ State: _____ Zip: _____

Social Security Number: ____ - ____ - ____ Phone Number: ____ - ____ - ____ Age: _____ Sex: _____

Birth Date: ____/____/____ Hire Date: ____/____/____ Marital Status: ____ # of Dependents: ____
(MM/DD/YYYY) (MM/DD/YYYY)

Incident Description

Time of Near-miss: ____:____ a.m./p.m Time Reported: ____:____ a.m./p.m

Date of Near-miss: ____/____/____ Date Reported: ____/____/____
(MM/DD/YYYY) (MM/DD/YYYY)

When Near-miss Occurred: ____ 1st Hour ____ Between 2nd & 8th Hour ____ Over the 8th Hour

Length of Time on Job: ____ In Training ____ Less than 1 Year ____ Over 1 Year

What Happened? (Explain all events that led up to and occurred during the near-miss. Include exact location, machine number, etc.)

(Use Back Side of this Form and/or Extra Sheets if Needed)

Were There Any Witnesses? ____ Yes ____ No - If So, Who? _____

Was a 3rd Party (i.e. sub-contractor) directly or indirectly involved with this near-miss? ____ Yes ____ No

Was Safety Equipment by-passed, not used or used improperly? ____ Yes ____ No N/A ____

Was Medical Attention Offered? ____ Yes ____ No If Yes, Check All That Apply

____ 1st Aid on Site ____ Occupational Health Clinic ____ Hospital Emergency Room

____ Employee Declined medical treatment at this time ____ Other (explain)

(Use Back Side of this Form and/or Extra Sheets if Needed)



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ACCIDENT, NEAR-MISS, AND INJURY INVESTIGATION

Original Issue Date:
INSERT DATE

Last Reviewed:
INSERT DATE

Revision Number:
INSERT NUMBER

KENT COUNTY DELAWARE "NEAR-MISS" OR "CLOSE-CALL" REPORT

Near-Miss Type

☐ Fall From Elevation ☐ Fall, Same Level ☐ Slip or Trip (No Fall) ☐ Struck Against Object
☐ Struck By Object ☐ Caught In, Under or Between ☐ Overexertion/Strain ☐ Motor Vehicle
☐ Equipment ☐ Other (Explain) _____

(Use Back Side of this Form and/or Extra Sheets if Needed)

Body Part(s) Potentially Affected (Circle Left or Right Where Applicable)

☐ Head ☐ Neck ☐ Hip (Lt/Rt) ☐ Wrist (Lt/Rt) ☐ Shin/Calf (Lt/Rt)
☐ Face ☐ Trunk/Torso ☐ Shoulder (Lt/Rt) ☐ Hand (Lt/Rt) ☐ Ankle (Lt/Rt)
☐ Lip/Mouth ☐ Abdomen ☐ Upper Arm (Lt/Rt) ☐ Finger(Lt/Rt) ☐ Foot (Lt/Rt)
☐ Eye (Lt/Rt) ☐ Upper Back ☐ Elbow (Lt/Rt) ☐ Thigh (Lt/Rt) ☐ Toe (Lt/Rt)
☐ Ear (Lt/Rt) ☐ Lower Back ☐ Forearm (Lt/Rt) ☐ Knee (Lt/Rt) ☐ Respiratory
☐ Other (Explain) _____

(Use Back Side of this Form and/or Extra Sheets if Needed)

Potential Nature of Injury/Illness (Check All that Apply - Circle Where Applicable)

☐ Sprain/Strain ☐ Fracture/Dislocate/Crush ☐ Foreign Object ☐ Concussion
☐ Repetitive Trauma (CTD's) ☐ Skin Irritation/Dermatitis ☐ Heat Stress ☐ Chemical Exposure
☐ Cut/Scrape/Puncture ☐ Burn-Thermal/Electrical ☐ Hernia/Rupture ☐ Amputation
☐ Bruise/Contusion ☐ Burn-Chemical ☐ Other (Explain) _____

(Use Back Side of this Form and/or Extra Sheets if Needed)

Basic Causes (Check All that Apply - Circle Where Applicable)

☐ Unsafe Method ☐ Housekeeping/Clutter ☐ Procedure Not Followed Properly
☐ Spills/Leaks ☐ Using Improper Tool(s) ☐ Lack of Available Protective Equipment
☐ Shortcuts/Save Time ☐ Unguarded/Faulty Equipment ☐ Lack of Personal Protective Equipment
☐ Lack of Concentration ☐ Instructions Form Others ☐ Distraction(s)
☐ Other (Explain) _____

(Use Back Side of this Form and/or Extra Sheets if Needed)

Root Causes (Check All that Apply - Circle Where Applicable)

☐ Lack of Procedure ☐ Lack of Enforcement/Motivation ☐ Inadequate Inspection/Maintenance
☐ Inadequate Procedure ☐ Lack of Knowledge/Training ☐ Distraction
☐ Other (Explain) _____

(Use Extra Sheets if Needed)

Corrective Action

Action Needed	Person(s) Responsible	Expected Completion Date
1)		
2)		
3)		

(Use Back Side of this Form and/or Extra Sheets if Needed)

Employee Signature: _____ Date: _____

Supervisor Signature: _____ Date: _____

*Safety Coordinator _____ Date _____

* Near-Miss or Close-Call Reports are to stay within the employee's area of work and are to be filed in the Safety Coordinator's file. This form in only an inter-work center training tool, to only be utilized to track trends or to train.

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PURPOSE

This procedure is designed to ensure that all **Kent County Delaware Governmental Body** (referred to from this point forward as “**Kent County**”) employees who drive a vehicle for work are properly identified, trained, and evaluated. It is also designed to ensure that **Kent County** vehicles are properly inspected, serviced and maintained.

DRIVER QUALIFICATION

A **Kent County** driver is any employee or agent who may operate any owned, borrowed, leased, rented, or other vehicle for which the **Kent County** is legally liable.

Drivers are qualified to operate vehicles after annual submission and evaluation of:

- Annual Driving History Questionnaire
- Annual Vehicle Use Agreement
- A valid driver’s license
- Completion of any driver-training program required by **Kent County Delaware Policy and/or Regulations**

Drivers having two or more violation/at fault accidents or any DUI violation within a prior 18 month period may be denied driving privileges. In addition driving privileges will be denied if the driving record exhibits:

- Three (3) at fault accidents or combination of accidents and violations within a 3-year period involving any vehicle.
- Conviction of reckless driving, driving license suspension, conviction of driving with a suspended license, hit and run, or leaving the accident scene involving any vehicle.
- Conviction of any driving offense as a felony involving any vehicle.

The continuance of driving privileges is subject to the meeting of all drug-testing standards described in the employee’s manual.

The **Personnel Director** may reinstate driving privileges after the completion of a remedial action plan in its entirety. The reinstatement of driving privileges is discretionary. **The Kent County Administrator must approve of any remedial action and reinstatement of Kent County driving privileges.**

Kent County considers a Motor Vehicle Driving Record as public information. Abstracts of any driver’s history including a job applicant may be obtained and reviewed at any time by the **Personnel Director/Human Resource Manager**.

Drivers who may operate single vehicles in excess of 26,000 Gross Vehicle Weight or vehicles carrying hazardous materials requiring placarding must meet these additional qualifications to be eligible to drive these vehicles:

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- Possession of a valid CDL license.
- Employment application.
- Evidence of employment inquiries.
- Annual inquiry and review of driving record.
- Annual inquiry of driving record including abstract.
- Evidence of road test or equivalent.
- Meeting of all drug-testing requirements (see Employee's manual).
- Possession of a current certificate of medical examination.

The **Personnel Director/Human Resource Manager** will be responsible for keeping abreast of the requirements of DOT Federal Highway Administration's Federal Motor Carrier Safety Regulations and assuring that all driver qualifying standards specified therein are met.

The **Personnel Director/Human Resource Manager** will maintain a driver qualification file for each driver consistent with the requirements above.

EMPLOYEE ACCIDENT REPORTING PROCEDURE

The **Kent County** goal is to eliminate all accidents. To help meet this objective, all accidents will be reported, investigated, documented and subsequently, reviewed by the **Health & Safety Officer and/or Assistant Health & Safety Officer** and the Safety Committee. The desired purpose of our accident investigation includes the evaluation of the need for:

- Additional driver training or remedial training.
- Changes in driver selection/qualifying procedures.
- Changes in vehicle inspection and maintenance procedures.

Every **Over-the-road vehicle** will be equipped with an accident report kit to record the facts surrounding vehicle incidents and witness information. Our accident and record keeping procedures consist of the following components:

- Immediate reporting by the driver and Supervisor
- Documentation of causes by driver, **passenger(s)**, Supervisor, and **Department Director/Manager**.

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- Review by the Safety Committee to expedite corrective action.
- Periodic analysis of all accidents to assure recognition of recurring accident patterns and causes and the need for additional prevention measures or changes needed in the Vehicle Safety Program.

Drivers will report every vehicle incident involving any degree of damage to **Kent County** vehicles or other vehicles, damage to property other than vehicles, or injury to persons. Employees will take the following actions when incidents occur:

- Take immediate action to prevent further damage or injury at the scene of the accident.
- Pull onto shoulder or side of road.
- Actuate four-way flashers and place warning signals promptly and properly.
- Assist any injured person, but don't move them unless they are in danger of further injury.
- Call the **911 Center/police**.
- If someone is injured, request medical assistance **or provide assistance only if you are qualified to do so (i.e. CPR/ADE)**.
- If the driver cannot get to a nearby phone, he/she should write a note giving location and seriousness of the accident, and give it to a reliable-appearing motorist and ask him/her to notify police.
- The vehicle should not be left unattended except in extreme emergency.
- Exchange "Traffic Accident Exchange Information" forms with other driver(s).
- The driver should give identifying information to the other party involved, but should make no comments about assuming responsibility.
- Secure names and addresses from all witnesses. Witnesses should be asked to complete a Witness Information Card. If there are no witnesses, the name and address of the first person to arrive at the scene should be obtained.
- If cameras have been provided with your vehicle, take appropriate pictures of the accident scene and damage to any vehicles. **DO NOT TAKE PHOTOGRAPHS OF ANY INJURED PERSON.**
- Do not discuss the accident with anyone, admit fault, or sign anything for anyone except a police officer at the scene.
- Immediately notify your Supervisor, or if not available, **your Department Director, or the Personnel Director/Human Resource Manager.**
- Report the Accident
 - The driver should call his/her supervisor immediately in the event of any accident.
 - The accident should be reported to the nearest insurance claims office **after reporting it to the Personnel Director/Human Resource Manager.** .

In cases of theft or damage to a **Kent County** vehicle only:

- Notify the local police department.
Personnel Director/Human Resource Manager
- Immediately notify your Supervisor, or if not available, **your Department Director, or the Personnel Director/Human Resource Manager.**

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- Send a copy of the Police Report to the **Personnel Director/Human Resource Manager**.
- Department **Directors**, upon knowledge, are responsible for immediately reporting all vehicle accidents involving employees to the **Personnel Director/Human Resource Manager**.
- The driver involved in the accident must provide a written accident report noting the circumstances of the accident. The Police Department **and Incident Report Number** should be identified in the accident report if a police report is taken.
- **Any accident report, information/details** should be forwarded to the **Personnel Director/Human Resource Manager** and auto insurance carrier who will pursue independent investigation, if appropriate, and make a preliminary determination of degree of driver negligence. The **Personnel Director/Human Resource Manager** will annotate the initial investigation report with findings and route a copy of the accident report, an estimate of property damages, any police report, any claims adjustor report, and any witness reports to the **Health & Safety Officer and/or Assistant Health & Safety Officer and the Safety Committee**.

ACCIDENT INVESTIGATION AND RECORDS

Every accident will be reported, investigated, and reviewed in accordance with **Kent County** Accident and Injury Investigation Program.

FLEET SAFETY RULES

The following are **the Kent County** safe driving rules (may not apply to emergency personnel):

- Do not take chances. To arrive safely is more important than to arrive on time.
- Drivers should be mentally and physically rested and alert prior to each trip.
- Drinking of alcoholic beverages while driving, consumption of restricted drugs or driving while under the influence of alcohol or restricted drugs is prohibited.
- No use of **Cell Phones, PDA's, Texting Devices, or Computers** while operating a vehicle.
- Drivers must have a valid driver's license for the type of vehicle to be operated, and keep the license(s) with them at all times while driving.
- Traffic laws must be obeyed.
- Speed shall never be faster than a rate consistent with existing speed laws and road, traffic, and weather conditions. Posted speed limits must be obeyed.
- Never attempt to exercise the right-of-way; always let the other driver go first.
- Keep to the right except when overtaking slow moving vehicles, or when getting into a position to make a left turn.
- Never follow another vehicle so closely that you will not be able to make a safe stop under any conditions. Observe timed interval and following distance guidelines.
- Turn signals must be used to show where you are heading; when going into traffic and before every turn or lane change. Remember, signaling intentions neither gives the driver the right of way, nor guarantees a safe lane change.
- Slow down and watch for children in school zones.
- Vehicles are to be driven by authorized drivers only.

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- Do not give rides to hitchhikers or strangers.
- Seat belts **shall** be worn by drivers and **all** passengers.
- Check your vehicle daily before each trip, and check the vehicle visually each time before driving. Check lights, tires, brakes, and steering particularly. An unsafe vehicle should not be operated until repairs are made.
- Drivers must report all accidents immediately, as required by law and their company rules.
- Drivers must report all arrests and traffic convictions to their company. Repeated traffic convictions or failure to report traffic accidents or convictions may result in disciplinary action.

PREVENTATIVE MAINTENANCE

Vehicle and Equipment Specifications

The maintenance program begins when the vehicles are ordered. Management will consider use, route, terrain, cargo size, and weight when setting specifications.

Specifications will call for as much standardization as possible. Vehicle standardization can be by manufacturer and model type or by component within the vehicle. Advantages to standardization include reduced parts inventory, enhanced ability of mechanics to make repairs more efficiently and dependably due to their familiarity with the various components, reduction of inadvertent abuse of vehicles by drivers and, if the fleet has many similar units, better appraisal of the suitability of equipment for the task.

Preventative Maintenance (PM) Schedule

All owned vehicles will be part of preventative maintenance schedule. **Kent County** will determine the timeframe of the PM services and adhere to the schedule. The needed services and timeframe will be based on manufacturer recommendations **and/or harsh/adverse/high usage conditions**.

The critical components should include: brakes, tires, **safety equipment**, suspension equipment, steering components, lights, mirrors, windshield and windows, wipers, and horn.

Demand maintenance: To retain the safety and dependability of the vehicle, it is essential that periodic inspections, maintenance, and service be performed (follow the manufacturer's schedule of maintenance), including lubrication service, inspection/replacement of filters, engine drive belts, exhaust system, etc.

Driver responsibility for maintenance: Management must require driver inspections to report vehicle safety defects. Pre-trip inspections by the authorized drivers **shall** be conducted whenever a **Kent County** vehicle is being used.

Recordkeeping

Up-to-date vehicle records will be kept for each vehicle. These records will include:

- Driver's Vehicle Condition Reports (pre-trip reports) **turned in Monthly to Vehicle/Equipment Control Supervisor.**
- Service and Inspection Reports
- Vehicle history folder - Provides a complete history of the costs of maintenance, parts, and labor associated with the vehicles.

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DRIVER TRAINING

Training of new and existing drivers is an important part of an effective vehicle accident **and equipment** control program. The training methods may include formal meetings; time spent driving with Supervisors or experienced drivers; and the use of outside defensive driving courses.

It is expected that full or part time employees including temporaries expected to drive vehicles/**equipment** in the course of their duties will have the basic skills and credentials necessary to perform the required driving function as confirmed through the driver selection/qualifying process. The driver training conducted or approved by the **Kent County** will focus on assuring the understanding of regulations, assuring familiarity with new equipment, improving basic skills, and remedial defensive driving training.

The Driver's Supervisor or **Department Director in Supervisor's Absents** will decide the training required by each driver.

- Regulations – all drivers subject to DOT regulations will be provided with the Federal Motor Carrier Regulations Handbook and receive classroom instruction provided by **Kent County** or **certified** outside entity/contractor.
- **Kent County** Rules and Policies – all drivers will be trained in the basic rules governing vehicle/equipment use at the time of hire or when assigned to a new position as appropriate. The Supervisor will conduct this training.
- Vehicle Inspections – it will be the Supervisor's responsibilities to assure vehicle inspection requirements especially those dictated by the DOT are fully understood by the assigned driver.
- Familiarity with Equipment – for other than passenger automobiles, it will be the Supervisors responsibility to assure drivers assigned new equipment receive instruction in the operation of this equipment including a thorough understanding of its safe operation.
- Defensive Driving – Under the direction of the **Personnel Director/Human Resource Manager**, periodic formal instruction may be provided including classroom instruction, the use of topical videos, vendor sponsored training, etc. Mandatory attendance **shall** be required to maintain driving privileges.

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OPERATOR'S INSPECTION AND PRE-TRIP REPORT						MONTH/YEAR		
VEHICLE/EQUIPEMENT TYPE						REGISTRATION NO.		
RESPONSIBLE DIVISION			VEHICLE/EQUIPMENT CONTROL SUPERVISOR					
OPERATOR'S SIGNATURE SIGNIFIES ACCOMPLISHMENT OF PRE-TRIP CHECKS <i>(LAST NAME AND FIRST INITIAL ONLY REQUIRED)</i>								
DAY	SHIFT		DAY	SHIFT		DAY	SHIFT	
1	1)		11	1)		21	1)	
	2)			2)			2)	
	3)			3)			3)	
2	1)		12	1)		22	1)	
	2)			2)			2)	
	3)			3)			3)	
3	1)		13	1)		23	1)	
	2)			2)			2)	
	3)			3)			3)	
4	1)		14	1)		24	1)	
	2)			2)			2)	
	3)			3)			3)	
5	1)		15	1)		25	1)	
	2)			2)			2)	
	3)			3)			3)	
6	1)		16	1)		26	1)	
	2)			2)			2)	
	3)			3)			3)	
7	1)		17	1)		27	1)	
	2)			2)			2)	
	3)			3)			3)	
8	1)		18	1)		28	1)	
	2)			2)			2)	
	3)			3)			3)	
9	1)		19	1)		29	1)	
	2)			2)			2)	
	3)			3)			3)	
10	1)		20	1)		30	1)	
	2)			2)			2)	
	3)			3)			3)	
This Form Is To Be Turned Into The Division Vehicle/Equipment Supervisor At The End Of Each Month!						31	1)	
							2)	
							3)	

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*PRE-TRIP ITEMS TO BE CHECKED BY OPERATOR

1	CLEAN <i>(Exterior & Interior)</i>
2	DAMAGE <i>(Exterior & Interior, Missing Parts)</i>
3	TIRES <i>(Visually Check For Damage/Abnormalities)</i>
4	LEAKS <i>(Visually Check Fuel, Oil, Coolant)</i>
5	ENGINE OIL AND COOLANT <i>(Visually Check Fluid Levels)</i>
6	BATTERY <i>(Visually Check Fluid Levels, Hold-down Secure & Cleanliness)</i>
7	DRIVE BELT(S) <i>(Visually Check for Fraying Or Cracking)</i>
8	LIGHTS <i>(Visually Check All Proper Operation)</i>
9	SAFETY DEVICES <i>(Seatbelts/Harness, Headrests, ROPS, Warning Lights, Guards, Etc.)</i>
10	INSTRUMENTS / HORN / WINDSHIELD / WIPERS <i>(Functionally Check For Operation)</i>
11	BREAKS / STEERING <i>(Functionally Check – Responsive / Effective / Smooth Operation)</i>
12	HYDRAULIC HOSES / CYLINDERS <i>(Visually Check For Damage)</i>
13	TOWING CONNECTION & SAFETY CHAINS <i>(Visually Check For Serviceability)</i>
14	MARKINGS – CHECK LEGIBILITY <i>(I.E. Watch Step, VIN No., ID No., Etc.)</i>
15	HEATER / A/C / DEFROSTER <i>(Serviceable)</i>
15	EXHAUST SYSTEM <i>(Visually Check for Damage & Leaks)</i>
17	UNUSUAL OCCURRENCES <i>(Noise, Vibration, Odor, Erratic Instruments, Etc.)</i>
18	OTHER
19	OTHER
20	OTHER

*Print Operator's Inspection and Pre-Trip Report (Page 1 of 2 & 2 of 2) On One Sheet – Head to Head

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PURPOSE AND SCOPE

This procedure will provide **Kent County Delaware Governmental Body** (referred to from this point forward as “**Kent County**”), its employees, and other personnel at its facilities with a clear plan of action in the event of an emergency. The plan will comply with applicable emergency action regulations. This plan covers emergency actions for all work areas and facilities for the protection of employees, **general public**, and others from emergencies.

RESPONSIBILITIES

Department Directors/Managers will:

- Coordinate an orderly evacuation of personnel.
- Perform an accurate head count of personnel reported to the designated area.
- Determine a rescue method to locate missing personnel.
- Provide the response personnel with the necessary information about the facility.
- Perform adverse weather assessments and coordinate office emergency closing procedures due to adverse weather.
- Ensure that designated evacuation monitors and special needs assistants have received adequate information and training for performing their tasks.
- Ensure that employees with special needs evacuate in an emergency

Emergency Services Personnel Contact Information (*Contact, Address/Location, & Telephone Numbers to be Inserted by Department Directors/Managers or Their Designee*)

Service	Contact	Address/Location	Telephone
Ambulance/EMS			
Police			
Fire			
Primary Medical Facility			
Secondary Medical Facility			
Poison Control Center			
Emergency Response Team			
National Response Center			1-800-424-8802
Electric			
Water			
Gas			
Phone Company			
Chemical Spill Cleanup Contractor			

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DEFINITIONS

Exit: The portion of an exit route that is generally separated from other areas to provide a protected way of travel to the exit discharge. An example of an exit is a 2-hour fire resistance-rated enclosed stairway that leads from the fifth floor of an office building to the outside of the building.

Exit Route: A continuous and unobstructed path of exit travel from any point within a workplace to a place of safety (including refuge areas). An exit route consists of three parts: the exit access; the exit; and the exit discharge. (An exit route includes all vertical and horizontal areas along the route.)

REPORTING

The types of emergencies to be reported to Department **Directors/Managers** by facility personnel are:

- Medical
- Fire
- Severe weather
- Bomb threat
- Chemical spill
- Extended power loss
- Other, e.g., terrorist attack, hostage taking

PROCEDURE

Evacuation Routes

Evacuation route maps will be posted in each work area. The following information is marked on evacuation maps:

- “You Are Here” notation
- Emergency exits
- Primary and alternative evacuation routes
- Locations of fire extinguishers
- Employee assembly areas

All employees have been trained concerning the evacuation plan for their work areas.

Evacuation Procedures

Flashing strobe and piercing warning signal and/or other blaring attention getting devices are the signal(s) that all facility personnel must evacuate the facility. Whenever the alarm sounds, all personnel must evacuate according to the designated primary routes or alternative routes to the predetermined assembly areas. All designated primary and alternative routes are illustrated in the evacuation maps. A full evacuation drill for all personnel will be held **semi-annually or more** to test the effectiveness of this program.

Department Managers will ensure **a plan is in place for** the safe evacuation of personnel with special needs or disabilities.

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After personnel are evacuated and have reached the assembly areas, the Department **Directors/Managers** or a designee will conduct a thorough head count of all personnel. The name(s) of any missing persons and suspected locations for unaccounted or injured people will be immediately communicated to rescue personnel.

Medical Emergency

Call [911; or the appropriate medical emergency phone number for facilities with in-house emergency responders]

Provide the following information:

- Nature of the medical emergency
- Location of the emergency (e.g., address, building, and/or room number)
- Your name and phone number where you may be reached

Do not move the victim unless absolutely necessary.

The following personnel (**and work center personnel**) are trained in cardiopulmonary resuscitation (CPR) and first aid and will provide assistance before the arrival of the professional medical help **Information** (***Names & Telephone Numbers to be Inserted by Department Directors/Managers or Their Designee***):

Name: Phone:

Name: Phone:

Trained Work Center(s) Phone:

Trained Work Center(s) Phone

Each work center and over the road vehicle shall be provided with a First Aid Kit(s) that meets or exceeds the ANSI Standard Z308 and OSHA Standard 1910.151 Standards for First Aid Kit(s). Each kit is to be inventoried and stocked monthly with the required items listed on the work center First Aid Kit(s).

Each work center/facility, vehicle, and/or equipment shall be equipped with a portable cardiopulmonary resuscitation (CPR) defibrillator if that work center/facility, vehicle, and/or equipment has been determined a suitable location for such device by the Kent County Health & Safety Officer or His/Her Assistant.

Fire Emergency

- Activate the nearest fire alarm.
- Notify the local Fire Department (see the Emergency Contacts list for more information.)
- Notify the site personnel about the fire emergency by voice communication, radio, phone paging, or other means.
- Nonemergency personnel may fight the fire **ONLY** if both of the following conditions apply:
 - o The fire is small (e.g., trash can) and is not spreading to other areas; *and*
 - o The fire extinguisher is in working condition and personnel are trained to use it.
- Upon being notified about the fire emergency, occupants must:
 - o Leave the building using the designated escape routes.
 - o Assemble in the designated area
 - o Remain at the designated area until the Department **Director/Manager** has announced that it is safe to reenter.

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Power Outage

- Check generators and backup power systems to ensure that electrical power is switched to support critical systems.
- Turn off all noncritical electrical systems and equipment.
- Drain systems and equipment pressurized with water in areas exposed to prolonged freezing temperatures, or move them to heated areas if feasible.
- **Check and ensure elevators are not occupied.**

Upon restoration of power, the following measures will be taken:

- Ensure that generators and other backup systems are switched so that power is not fed back into the regular power system.
- Examine insulation systems for piping, vessels, and tanks.
- Examine electrical motors and drives.
- Check valve positions for all pressurized systems and equipment.
- Examine all electrical equipment and wiring systems.
- Make sure all warning systems are operational.
- Check the integrity of all fire detection and suppression systems.
- Ensure that all alarm systems are operational.

Chemical Spill

[IF UNSURE IF A SPILL IS A HAZARDOUS CHEMICAL OR IF IT IS A LARGE OR SMALL SPILL, TREAT IT AS IF IT IS A LARGE SPILL, AND IS A HAZARDOUS CHEMICAL]

The following are the locations of information and equipment for responding to a chemical spill **by trained professionals**. *(Locations to be Inserted by Department Directors/Managers or Their Designee):*

- Spill containment and security equipment: [location(s)]
- Personal protective equipment (PPE): [location(s)]
- Material safety data sheets (MSDSs): [physical location of file system or electronic access]

Large Spill

The following procedure must be followed by all employees when a large spill that involves of hazardous chemicals has occurred:

- Immediately notify the Department **Director/Manager**
- Contain the spill with available equipment (e.g., pads, booms, and absorbent).
- Secure the area and alert other site personnel.
- Do not attempt to clean the spill unless trained to do so.
- Attend to injured personnel and call the medical emergency number, if required.
- Evacuate the building as necessary.

[IF UNSURE IF A SPILL IS A HAZARDOUS CHEMICAL OR IF IT IS A LARGE OR SMALL SPILL, TREAT IT AS IF IT IS A LARGE SPILL, AND IS A HAZARDOUS CHEMICAL]

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Small Spill

The following procedure will be followed by all employees when a small chemical has occurred:

- Notify the Department Manager
- If toxic fumes are present, secure the area (with caution tapes or cones) **from an oxygen sufficient location** to prevent other personnel from entering.
- Deal with the spill in accordance with the instructions described in the MSDS.
- Small spills must be handled in a safe manner, while wearing the proper **Personal Protective Equipment (PPE)**.
- Review the general spill cleanup procedures.

Bomb Threat

All employees will be evacuated from the facility in the event of a bomb threat. Follow the evacuation procedures listed above.

Severe Weather and Natural Disasters

- In the event of severe weather or other natural disaster, all employees will be instructed to follow the specific procedures for each type of event.
- **The Kent County Administrator and/o the Personnel Director/Human Resource Manager** will determine future actions and will notify their **Department Directors** and employees as needed.

Shelter in Place

- In the event of an off-site hazardous chemical release or other event that makes an evacuation of the facility dangerous or impossible, employees will take shelter in place until it is safe to evacuate.
- Department **Directors/Managers** will perform the same duties for shelter-in-place procedures as for other emergency action procedures.
- Employees, visitors, and other personnel will be notified to take shelter in place by **electronic and/or physical means of notification (i.e. Public Address Systems, E-mail, Telephone, Runner, etc.)**. Shelter-in-place areas are: ***(Location(s) and/or room numbers to be Inserted by Department Directors/Managers or Their Designee)***

Critical Operations

- Department **Directors/Managers** will identify any critical operations or processes that must be shut down or inactivated before an evacuation is completed, and will designate the operations and the personnel who will implement the shutdown or inactivation. During some emergency situations, it will be necessary for some specially assigned personnel to remain at the work areas to perform critical operations.
- The **Critical Operations** Assignments table below contains the list of work areas and personnel that are considered critical operations.
- Personnel involved in critical operations may remain on the site by permission of the Department **Director/Manager**.

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- **Critical Operations Assignments** (*Work Area, Name, Job Title, & Description of Assignment to be Inserted by Department Directors/Managers or Their Designee*)

Work Area	Name	Job Title	Description of Assignment

TRAINING

The Department **Directors/Managers** will designate and train a sufficient number of employees to assist in the safe emergency evacuation of all personnel or perform emergency shutdowns, and will review the Emergency Response and Planning Plan with all employees covered by this plan:

- When the Emergency Response and Planning Plan is implemented
- Whenever the designated actions or responsibilities of personnel covered under the Emergency Response and Planning Plan change
- Whenever the Emergency Response and Planning Plan is changed
- Evacuation monitors must be trained to ensure a safe and orderly emergency evacuation of other employees and ensure post-evacuation accountability of all personnel.

PROGRAM REVIEW AND UPDATE

The Emergency Response and Planning Program will be reviewed annually and updated whenever:

- New hazards are identified or existing hazards change
- There are changes to the facility layout or infrastructure
- There are changes to emergency action and evacuation procedures

The Emergency Response and Planning Program shall be reviewed and evaluated by the Kent County Health & Safety Officer or Their Assistant annually.

RECORDKEEPING

A record of Emergency Response and Planning Plan training for employees will be maintained with the employee personnel files for a period of 5 years.

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PURPOSE

This procedure describes **Kent County Delaware Governmental Body** (referred to from this point forward as “**Kent County**”) steps for injury reporting and provision of prompt medical treatment to those employees injured.

RESPONSIBILITY

Employees are responsible for immediately reporting all incidents of injuries to their immediate supervisor. They must also notify **Personnel Director**/Human Resources of any treatment they receive after 90 days from a provider that is not part of the **County Insurance Plan and/or** Panel of Physicians.

Accident investigation steps and responsibilities are outlined in the **Kent County** Accident Investigation Procedure.

The **Personnel Director**/Human Resources Manager is responsible for reporting the injury to the worker’s compensation insurance carrier in a timely manner and maintaining all records related to the injury.

PROCEDURE

Injury Reporting

- All employees must report injuries immediately to their supervisor. If the supervisor is not available a nearby **Director/Manager/Supervisor** must be contacted.
- The notified supervisor or manager determines the nature of the injury; coordinates the appropriate first aid (with assistance from trained First Aid/CPR responders) and notifies **Personnel Director**/Human Resources of the injury.
- If emergency medical attention is needed, the supervisor, **director**/manager or **responsive employee** calls 911 to summons the appropriate emergency response agency/ambulance.
- If an employee requires non-urgent medical attention, **Personnel**/Human Resources will schedule an appointment with the approved occupational health medical provider (s).
- For all reported injuries, the supervisor or **director**/manager completes an Accident Investigation Report, as soon as possible after the incident has occurred. The report shall be submitted to **Personnel Director**/Human Resources within 48 hours of the employee’s report of injury.
- **Personnel**/Human Resources report all injuries that require outside medical attention to the workers’ compensation insurance provider within 24 hours of receipt of the accident investigation report.
- **Personnel Director/Human Resource Manager or Their Designee** records the date that the Accident Investigation Report is received and forwards a copy to the **Kent County Health & Safety Officer or Their Assistant who is the** Safety Committee Chairperson.
- **Personnel Director/Human Resource Manager or Their Designee** will determine if the incident needs to be added to the Insurance Claims Record (or OSHA Log if applicable) and adds incidents to this log as necessary.

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- If a work-related injury results in the hospitalization of three or more employees or a death of one or more employee(s), the highest ranking **Administrator, Director/Manager** or Supervisor on duty will contact the following individuals immediately (**within eight (8) hours**):

- **Occupational Safety & Health Administration, ;United States Department of Labor, Delaware Area Director**
 - **Monday – Friday (Non-Holidays) 302-573-6518**
 - **After Hours & Weekends 800-321-6742**
 - **TTY: 877-889-5627**

Treatment

- Injured employees will be treated at medical provider list on the approved Panel of Physicians. This treatment source will be used for at least 90 days from the time of the injury.
- The injured employee will be given instructions on where to receive treatment, their rights under the state workers' compensation laws, and a list of the panel of physicians.
- Injured employees will be given the acknowledgement form located at end of this plan to sign upon hire.

Panel of Medical Providers

The **Personnel Director/Human Resource Manager** will obtain an approved Panel of Medical Providers that includes at least six medical providers to treat employee injuries. This Panel will be conspicuously posted on employee bulletin boards **within departments and divisions**.

Accident Investigation

All injuries or incidents that may have resulted in an injury will be investigated in accordance with the Accident investigation steps and responsibilities outlined in the Accident Investigation Procedure. Any pertinent information will be reported to the workers' compensation insurance carrier as soon as it is identified.

MEDICAL MANAGEMENT

Personnel Director/Human Resource Manager will maintain a summary of each medical visit and associated correspondence/meetings with the employee in a file separate from the **employee's** personnel files.

If an injured employee returns from the medical provider with work restrictions **Personnel Director/Human Resource Manager** will send a completed list of those restrictions to the employee's supervisor/manager and will coordinate the appropriate modified duty with the employee and the supervisor and/or manager in accordance with the Modified Duty/Return to Work procedure.

Human Resources maintain the necessary contact with the workers' compensation insurance provider to assure the proper medical treatment and management of these claims.

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TRAINING

All employees will be provided training in methods of reporting injuries and this procedure. This training will be provided by **Personnel Director/Human Resource Manager or Their Designee** and/or by the employee's supervisor within the first week of their employment.

The **Personnel Director/Human Resource Manager or Their Designee** will provides training to all department managers and/or supervisors regarding the contents of this procedure and the means to conduct ensure injuries are promptly reported and treated to ensure a smooth transition back to work.

RECORDS

Accident Investigation Forms and Modified Duty Notification Forms are filed in Human Resources, separate form the employee personnel records. These records are maintained for the duration of injured employees' employment plus 30 years.

Data gathered on employees as a result of health surveillance will be confidential and documented and filed in individual employee medical records.

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NOTICE: MEDICAL TREATMENT FOR YOUR WORK INJURY OR OCCUPATIONAL ILLNESS

Your employer has selected a list of 6 or more physicians and other health care providers who are available to treat your work-related injuries and illnesses during the first 90 days of treatment. This list is posted at (list location here) for you to view. Also, you may get a copy of this list from the **Personnel Director/Human Resource Manager or Their Designee**.

If you are injured at work or suffer an occupational illness, you have certain legal RIGHTS and DUTIES under Section 306 (f. 1) (1) (i) of the Workers' Compensation Act regarding your medical treatment. These rights and duties are summarized below.

MEDICAL TREATMENT: DURING THE FIRST 90 DAYS

- You have the RIGHT to receive reasonable and necessary medical treatment for your work injury or occupational illness. Your employer must pay for the treatment, as long as the treatment is by one of the listed providers.
- You have the RIGHT to choose which of the listed providers will treat you for your work injury or Illness.
- You have the RIGHT to switch among any of the listed providers when you receive treatment; and if a listed provider refers you to a provider not on your employer's list, you have the RIGHT to receive treatment from the referral provider.
- You have the RIGHT to receive emergency medical treatment from any provider. However, non-emergency treatment must be given by a listed provider.
- If a listed provider prescribes surgery for you, you have the RIGHT to receive a second opinion from any provider your choice. If that opinion is different from the opinion of the listed provider, you have the RIGHT to choose which course of treatment to follow. If you choose the treatment prescribed in the second opinion, you must receive the treatment from a listed provider for a period of 90 days after the date of your visit to the provider of the second opinion.
- You have the DUTY to visit one or more of the listed providers for the first 90 days of treatment for your work injury or illness if you expect your employer to pay for the medical treatment you receive.
- If you seek treatment for your work injury or illness from a provider who is not on the list, your employer may not have to pay for this medical treatment during this 90-day period. Therefore, you should talk to your employer before seeking treatment from a provider who is not on the list.

IMPORTANT: The requirements your employer must meet to have a valid list of at least 6 providers are shown on the reverse side of this form. If the list does not meet these requirements, it is not a valid list, and you have the right to seek medical treatment for your work injury or occupational illness from any health care provider of your choice.

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MEDICAL TREATMENT AFTER THE FIRST 90 DAYS

- You have the **RIGHT** to receive treatment from any physician or other health care provider of your choice, whether or not they are listed by your employer. Your employer must pay for this treatment, as long as it is reasonable and necessary for your work injury or occupational illness and has been properly documented by the physician or other health care provider.
- You have the **DUTY** to notify your employer if you receive treatment from a physician or other health care provider who is not listed by your employer. You must notify your employer within five days of the first visit to any provider who is not on your employer's list. The employer may not be required to pay for treatment received until you have given this notice.

Your signature on this form indicates that you have been informed of and you understand these rights and duties. If you have questions, be sure you have your rights and duties explained to you before signing this form.

I, _____ HAVE BEEN INFORMED OF MY MEDICAL TREATMENT RIGHTS AND DUTIES WITH REGARD TO WORK-RELATED INJURIES AND OCCUPATIONAL ILLNESSES. THIS NOTICE WAS PRESENTED TO ME AT (check one):

Time of Hire _____

Date of Injury _____

Other _____

EMPLOYER REPRESENTATIVE: _____

DATE: _____

EMPLOYEE REFUSES TO SIGN BUT WAS PROVIDED A COPY OF THIS DOCUMENT _____

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PURPOSE AND SCOPE

This procedure describes the steps taken by **Kent County Delaware Governmental Body** (referred to from this point forward as “**Kent County**”) to help in prevention of workplace accidents and injuries by preparing a Job Safety Analysis (JSA). The information gathered from this JSA may also be used in employee training, writing job descriptions and procedures, and modified duty/return-to-work programs.

JSAs are used to identify and communicate to employees the safest and most efficient methods to follow during their job tasks.

RESPONSIBILITIES

Personnel Director (Risk Manager) has the overall responsibility for this JSA Program including the following:

- Selecting who will conduct job safety analyses
- Selecting jobs for analysis
- Documenting the steps of each selected job
- Identifying hazards
- Minimizing or eliminating the hazards
- Documenting the JSA
- Managing the JSA information
- Recordkeeping

Kent County performs regular Job Safety Analyses. They are an effective way to identify the hazards involved in each job, and protect employees from those identified hazards. Hazards can change with every job process change. Therefore, we perform a JSA of a job every time when job processes change, and before an employee initially performs the job.

PROCEDURE

Selecting Jobs

JSAs are applied first to high-risk jobs, such as those that have a history of accidents or those that expose employees to excessive amounts of energy or hazardous material. Past accident records may be used to indicate jobs that qualify for a JSA, along with new jobs for which the hazards are not yet identified, and jobs that have changed.

Once the jobs have been chosen, **Department Director(s)/Manager(s) and/or Division Supervisors'/Managers'** (the person or persons most familiar with the job) will identify those employees who will be involved in conducting the JSA.

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Separating Jobs into Basic Steps

During the development of a JSA, the chosen job will be broken into steps. Each step tells generally what must be done. The job steps are natural parts of the operation and the work is clearly advanced upon completion of each step. JSAs usually involve observing a worker while he or she is performing a task, asking the worker questions pertaining to the task, and recording the steps, including movements taken to complete the task.

To help identify potential JSAs at **Kent County** the job safety analysis may use questions such as these (this is not a complete list):

- Can any body part get caught in or between objects?
- Do tools, machines, or equipment present any hazards?
- Can the worker make harmful contact with objects?
- Can the worker slip, trip, or fall?
- Can the worker suffer strain from lifting or pulling?
- Is the worker exposed to extreme heat or cold?
- Is excessive noise or vibration a problem?
- Is there a danger from falling objects?
- Is lighting a problem?
- Can weather conditions affect safety?
- Is harmful radiation a possibility?
- Can contact be made with hot, toxic, or caustic substances?
- Are there dusts, fumes, mists, or vapors in the air?

After the task is done, the information is reviewed and revised if necessary. The steps are listed. A common job safety analysis rule of thumb indicates that most jobs will separate into 8-13 basic steps. In any case, the important thing is that the breakdowns have enough steps to accurately describe the work.

Identifying Hazards

After the basic steps of the job have been determined, each step is carefully examined to identify hazards or potential hazards. When the hazards are identified they are ranked according to their severity. The most severe hazards are given priority.

Hazard Control

Once hazards are identified for each job step, they are reviewed, and solutions are developed to minimize or eliminate the hazards. **Hazard elimination should be considered in this order:**

1. **Feasible Engineering Controls** (Abating the hazard by hazard removal, limiting exposure through job rotation or other means, or controlling it at its source)
2. **Training Personnel** (Assuring personnel are aware of the hazard and to follow safe work procedures to avoid it)
3. **Personnel Protective Equipment** (Prescribing PPE for protecting employees against the hazard and ensuring that they not only use it, but that they know how to use it correctly)

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For every known hazard associated with a job step, there should be a solution that offsets that hazard. The most serious hazards are the first ones to have solutions developed. Factors to be considered in assigning a priority for analysis of jobs include:

- Accident frequency and severity: jobs where accidents occur frequently or where they occur infrequently, but result in disabling injuries.
- Potential for severe injuries or illnesses: the consequences of an accident, hazardous condition, or exposure to harmful substance are potentially severe.
- Newly established jobs: due to lack of experience in these jobs, hazards may not be evident or anticipated.
- Modified jobs: new hazards may be associated with changes in job procedures.
- Infrequently performed jobs: workers may be at greater risk when undertaking non-routine jobs and a JSA provides a means of reviewing hazards.

The solution that provides the highest level of protection is given priority. Every solution is recorded, and this record is maintained. The choice is also based on effectiveness and employee acceptance.

A follow-up evaluation is conducted to ensure that the implemented solution successfully controlled the hazard and did not create new hazards.

JSA Forms

A copy of the JSA form can be found at the end of this Procedure.

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Appendix A: Sample Form for Job Safety Analysis

Job Safety Analysis		
Job:		
Analysis By:	Reviewed By:	Approved By:
Date:	Date:	Date:
Sequence of Steps	Potential Accidents or Hazards	Preventative Measures

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PURPOSE AND SCOPE

The purpose of this procedure is to ensure that **Kent County Delaware Governmental Body (referred to from this point forward as “Kent County”)** properly maintains all medical monitoring and employee exposure records while ensuring employee confidentiality.

RESPONSIBILITIES

Personnel Director/Human Resource Manager is responsible for maintaining the following:

- Employee medical records
- Company exposure records

PROCEDURE

Employee Medical Records

All employee medical records will be kept in a separate folder in the employee’s personnel file. Medical records will be completely confidential and will not be released to anyone other than the employee without written consent from the employee.

Medical records will be kept for at least the duration of employment plus 30 years. These records include but are not limited to:

- Audiograms (Hearing Tests)
- Respirator fit testing and medical clearance
- Exposure to Bloodborne Pathogens
- Injury or illness related medical visits

Exposure Records

These records will be kept on file for 30 years. Exposure records may include but are not limited to:

- Chemical exposure monitoring
- Noise monitoring
- Mold monitoring
- Indoor Air Quality monitoring

Employee Access

All employees have access to the following:

- Their own medical records
- Company exposure records

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Kent County will make these records available upon request by the employee. Employees can request access to these records through the Personnel Director/Human Resource Manager

TRAINING

Employees will be notified of their rights under this program upon hire and annually thereafter to ensure compliance with the Workers Right to Know Act. This information will include:

- Who is responsible for maintaining the records
- What is covered by medical and exposure records
- How long they are kept on file
- Confidentiality of the records
- Employee access to the records

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PURPOSE

Kent County Delaware Governmental Body (referred to from this point forward as “Kent County”) has established return-to-work controls and operational procedures through the use of this document. Poor reintegration of employees after an extended illness or injury can result in further complications and delay getting an employee back to full work capacity.

HEALTH SURVEILLANCE UPON RETURN-TO-WORK

Personnel Director/Human Resource Manager maintains a summary of each medical visit and associated correspondence/meetings with the employee in a file separate from the personnel files.

If an injured employee returns from the medical provider with work restrictions, Human Resources sends a completed Modified Duty Notification Form to the employee’s supervisor/manager and helps to coordinate the appropriate modified duty with the employee and the supervisor and/or manager.

Supervisors will ensure that employees returning to work are given a break-in period to recondition their muscle-tendon groups prior to working at full capacity. A follow-up assessment of these workers after the break-in period will be conducted to determine the following:

- If any duties are aggravating the previous illness or injury.
- If reconditioning of weak muscle-tendon groups has been successful.
- Whether any reported soreness, stiffness, or other problems is transient and consistent with normal adaptation to the job or whether it indicates the onset of stressors associated with the previous illness or injury.
- If problems are identified, what further follow-up action is required.

Human Resources maintain the necessary contact with the workers’ compensation and health care providers to assure the proper medical treatment and management of these claims.

PERIODIC HEALTH SURVEILLANCE

Periodic health surveillance (based on care giver recommendations) will be conducted on all employees who are assigned to positions involving exposure to duties that are known or suspected to aggravate an existing or preexisting condition. The content of this assessment will include the following:

- A medical and occupational review.
- A physical examination (if required).
- A detailed update of the employee's medical and occupational status.

Data gathered on employees as a result of health surveillance will be confidential and documented and filed in individual employee medical records.

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PROGRAM REVIEW AND EVALUATION

Personnel Director (Risk Manager) will review and evaluate this written program as follows:

- On an annual basis
- When changes occur that prompt revision of this document
- When facility operational changes occur that require a revision of this document
- When an accident or close call occurs which relates to the topic

The purpose will be to evaluate the success of the program and to monitor the progress of affected employees. The results of the evaluation will be shared with all responsible parties. New or revised goals arising from the review will be provided to affected employee as needed. Any deficiencies identified will have corrective actions initiated. Evaluation techniques will include the following:

- Analysis of trends in injury/illness rates.
- Employee surveys.
- Before and after surveys/evaluations of return-to-work cases.
- Up-to-date records or logs of job improvements tried or implemented.

MODIFIED DUTY JOB DESCRIPTIONS

Kent County has developed a list of potential modified activity jobs and has prepared a job description that includes a general overview of the job and includes a list of the limited physical demands. Examples of Modified Duty jobs include:

- Equipment Cleaning
- Filing and Clerical Work
- General Housekeeping
- Inventory
- Painting
- Repair Work
- Security Patrol/Fire Watch
- Tool Room Attendant
- **PPE/Safety Equipment Inspection**
- **Data (Office/Computer) Input**
- **Safety Instructor**

Baseline screening surveys will be conducted to identify jobs that put our employees at additional risk after return-to-work.

WORK PRACTICE CONTROLS

An effective program for return-to-work includes procedures for safe and proper work that are understood and followed by managers, supervisors, and workers. Key elements of a good work practice program include proper work techniques, employee reconditioning, regular monitoring, feedback, modifications, and enforcement.

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Supervisor awareness and control of proper work techniques will improve safety. The following includes ideas for appropriate training and work practice controls for our employees:

- Proper work techniques, including work methods that improve posture and reduce stress and strain on previously injured body parts.
- Good tool care, including regular maintenance.
- Correct lifting techniques and work (proper body mechanics).
- Proper selection, use, of all tools associated with the job.
- Correct installation and use of work stations and fixtures.

Supervisors will ensure that returning employees are allowed an appropriate reconditioning period. Returning employees will be gradually integrated into a full workload as appropriate for specific jobs and individuals. Important - Supervisors will closely monitor employees that fall into this category throughout their reintegration period.

Regular monitoring at all levels of operation helps to ensure that employees continue to use proper work practices. This monitoring will include a periodic review of the techniques in use and their effectiveness, including a determination of whether the procedures in use are those specified; if not, then it should be determined why changes have occurred and whether corrective action is necessary.

ADMINISTRATIVE CONTROLS

Company administrative controls may be used to reduce the duration, frequency, and severity of exposures to work stressors that may aggravate previous illnesses or injuries. Examples of administrative controls include the following:

- Reducing the total number of repetitions for suspect muscle groups or other bodily parts by such means as decreasing the work pace, limiting overtime work etc.
- Providing rest pauses to relieve fatigued muscle-tendon groups. The length of time needed depends on the task's overall effort and total cycle time.
- Increasing the number of employees assigned to a task to alleviate severe conditions.
- Using job rotation, used with caution and as a preventive measure. The principle of job rotation is to alleviate physical fatigue and stress of a particular set of muscles and tendons or other body parts by rotating employees among other jobs that use different muscle-tendon groups. If rotation is utilized, the new job must be reviewed to ensure that the same muscle-tendon groups are not used when they are rotated.
- Job enlargement. Having employees perform broader functions which reduce the stress on specific muscle groups while performing individual tasks.

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TRAINING AND EDUCATION

The purpose of training and education is to ensure that **Kent County** employees are sufficiently informed about the hazards to which they may be exposed and thus are able to participate actively in their own protection.

Employees **shall** be adequately trained about changes to or additional job hazards before being allowed to return-to-work. Proper training **shall** allow managers, supervisors, and employees to understand the hazards associated with a job, their prevention and control, and their medical consequences.

Training for affected employees **shall** consist of both general and specific job training:

- General Training. Employees **shall** be given formal instruction on the hazards associated with their jobs and with their equipment. This will include information on the varieties of hazards associated with the job, what risk factors cause or contribute to them, how to recognize hazards, and how to prevent them. This instruction will be repeated for each employee as necessary
- Job-Specific Training. Employees returning to work **shall** receive a reorientation meeting prior to being placed in a light duty or full duty job. This **shall** include a review of the restriction with both the employee and supervisor responsible for that employee. If additional training is required, the training **shall** be provided before the employee is allowed to return to work.

Supervisors **shall** receive training so that they know how to ensure that employees returning to work follow safe work practices and do not perform tasks outside of the restrictions provided by the medical provider.

Managers **shall** be made aware of their safety and health responsibilities and will receive sufficient training pertaining to this program to effectively carry out their responsibilities.

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PURPOSE AND SCOPE

To assure that all new and transferred employees **at work site, at any Kent County Delaware Governmental Body (referred to from this point forward as “Kent County”)** receive the necessary training and information to conduct their job tasks in a safe manner.

RESPONSIBILITIES

Personnel Director/Human Resources Manager will be responsible for assuring required new employee safety orientation training is conducted.

Department Director(s)/Manager(s) and/or Division Supervisors’/Managers’ will be responsible for developing a training checklist for each job title which will include:

- Training topics
- Frequency of training topics
- Employee sign-off and date section
- Trainer sign-off and date section

Personnel Director/Human Resources Manager will review the checklist with the employee, which becomes a permanent personnel document.

TRAINING TOPICS

Employees will receive training on a variety of safety topics. The topics will be specific to the employee’s job title and responsibilities. The training topics may include but are not limited to:

- | | |
|---|---|
| <ul style="list-style-type: none"> - Specific Job Hazards - Accident Reporting and Prevention Programs - Emergency Action Plans - Personal Protective Equipment (PPE) - Medical Services and First Aid - Use of Hand Tools - Use of Lift Trucks - Use of Power Operated Tools and Equipment - Ergonomics and Safe Lifting Techniques - Respiratory Protection Program - Hearing Conservation - Hazard Communication - Emergency Response | <ul style="list-style-type: none"> - Heat Stress - Machine Guarding - Vehicle Safety - Machine Guarding - Mobile Shop Equipment - Scaffolding Safety in Construction - Workplace Violence - Fall Protection - Excavation Safety - Construction Site Safety - Electrical Safety - Lockout/Tagout - Bloodborne Pathogens - Cold Weather Safety |
|---|---|

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RECORDKEEPING

For each training session, the following information will be recorded and maintained in the employee's personnel file:

- Date of training.
- A listing of topics reviewed or discussed.
- The instructor (for each topic if more than one instructor was involved).
- The name of each person attending, as well as those required to receive the training involved who were not present shall be documented.
- A list of all matters that were found to require some type of follow-up or further action (this includes the training of those who were unable to attend).
- The name of the source document or audio-visual presentation, if one was used, should be identified.

TRAINING CHECKLISTS

All completed training checklists will be kept on file with **Department Director(s)/Manager(s) and/or Division Supervisors'/Managers'**.

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PURPOSE AND SCOPE

The purpose of the Kent County Delaware Governmental Body (referred to from this point forward as “Kent County”) safety committee is to promote workplace safety and injury prevention through the interactive involvement of employee and management representatives. The committee will act as a resource to help management with its on-going efforts to provide a safe and healthy workplace for all employees.

RESPONSIBILITIES

Safety Committee Members

- Attend and participate in all committee meetings.
- Work in a cooperative manner with other members of the safety committee in an attempt to help the committee achieve its goals.
- Perform committee functions as assigned by the Chairperson (Kent County Health & Safety Officer) or Vice-Chairperson (Kent County Assistant Health & Safety Officer).
- Act as a liaison between the safety committee and the department and/or division which they represent.

Safety Committee Chairperson

- Facilitate organized safety committee meetings
- Prepare and distribute a written agenda prior to every meeting
- Prepare and distribute written minutes for every meeting
- Coordinate all committee communications and correspondences
- Ensure adherence to committee by-laws
- Assign sub-committees as needed (safety inspections, accident investigation, training, etc.)

Safety Committee Vice-Chairperson

- Act on behalf of the Chairperson in his/her absence
- Assist the Chairperson with his/her responsibilities

PROCEDURE

Membership

- The committee will be comprised of both management and non-management personnel with at least 50% being employees who do not serve in a management capacity.
- Committee membership will be documented on the Committee Membership List which includes membership initiation date, employee name, title, department, shift, safety training date and management status.
- The committee will be comprised of members from the major operating departments/divisions and will represent all operating shifts.
- All employees will be provided with training in the requirements of a safety committee, hazard identification, and accident investigation root cause analysis.
- Every two years, approximately half of the members will rotate from the committee to allow other employees to participate, but will be done in such a way that ensures a core group of experienced members will serve on the committee at all times.

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Term of Membership

- Committee members will serve a 12-month term.
- Upon term completion the committee will elect officers for the next 12-month term.
- The committee will then decide which of the remaining members will rotate from the committee (approximately ½).
- New members will be nominated and selected by the existing safety committee members.
- If during the 12-month term a committee member is not able to serve his or her full term, the committee will replace this member as soon as possible.

Safety Committee Organization

The safety committee will be organized as follows:

- Chairperson
- Vice-Chairperson
- Active Members
- Sub-committees may be appointed by the Chairperson as necessary.

Procedural Rules

- All actions of the committee will be determined by consensus or (if necessary) a majority vote basis.
- Meetings will be held monthly on a day and time agreeable to the committee members.
- Meetings must include more than half of the membership to be held. Guests, consultants and alternate committee members should not be counted for purpose of recording a quorum.
- Meetings will be conducted in a timely manner following an agenda prepared by the Chairperson or Vice-Chairperson.
- Department managers and/or supervisors will allow safety committee members at least **three (3)** hours per month to conduct their committee responsibilities and will allow committee officers four **(4)** hours per month.
- A copy of each month's meeting minutes will be forwarded in a timely manner to the following:
 - Safety Committee Members
 - Senior Management Team
 - **Kent County Administrator**
 - **Personnel Director/Human Resource Manager**
 - Employee Bulletin Boards
- The format for safety committee meetings will include:
 - Attendance
 - Follow-up with outstanding issues from prior meeting
 - Review of monthly safety inspections
 - Review of incident investigations since prior meeting
 - Review of employee concerns/suggestions
 - Future activity/event planning

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Meeting Attendance

- All committee members are responsible for attending the monthly meetings.
- The committee may choose to replace members who continuously are unable to attend the monthly meetings.

Committee Training

- All **Kent County** committees will receive annual training from individuals who meet **the Occupational Safety and Health Administration, Department of Labor and/or Delaware Department of Labor Division of Industrial Affairs Occupational Safety and Health** requirements for accident and illness prevention service providers.
- Annual training will include the following topics:
 - Safety Committee Operation
 - Hazard Detection and Inspection
 - Incident Investigation and Prevention

RECORDS

- The Safety Committee Chairperson maintains records of all committee meeting minutes, agendas, meeting attendance, correspondence, etc.
- Committee records will be maintained for a period of five years.

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PURPOSE AND SCOPE

The purpose of the Safety Inspection Program is to ensure that **Kent County Delaware Governmental Body** (referred to from this point forward as “**Kent County**”) has a proactive safety approach by identifying safety hazards and correcting them in a timely manner. The inspections will be used to determine unsafe trends and guide **Kent County** with developing future policies, procedures, and training programs.

RESPONSIBILITIES

With input from the Safety Committee, Department Directors/Managers and/or Division Supervisors/Managers; the Health and Safety Officer, Assistant Health and Safety Officer, and the Personnel Director/Human Resource Manager are responsible for:

- Reviewing and updating this procedure
- Ensuring the elements of this plan are followed
- Training the employees responsible for conducting facility inspections

The Safety Committee is responsible for:

- Determining the inspection timeline (which facilities and how often)
- Determining who will be conducting the inspections
- Developing a site specific facility inspection checklist
- Reviewing the inspections and ensuring all corrective actions are completed in a timely manner
- Determining trends based on the inspections and developing proper protocols to stop those **negative** trends **while encouraging positive trends**.

PROCEDURE

Facility inspections will follow a specific timeline developed by the safety committee. The table below indicates which facilities will be inspected, how often they will be inspected, and who is responsible for the inspections.

TABLE 1 – Audit Schedule

Facility Name	Inspection Frequency	Inspector
Administrative Complex	Monthly	Safety Coordinator
Library	Monthly	Safety Coordinator
Emergency Services Building	Monthly	Safety Coordinator
Medic Station/South Harrington	Monthly	Safety Coordinator
Medic Station/North Smyrna	Monthly	Safety Coordinator
Wastewater Facilities	Monthly	Safety Coordinator
Brecknock Park Camden	Monthly	Safety Coordinator
Browns Brach Park Harrington	Monthly	Safety Coordinator
Big Oak Park Smyrna	Monthly	Safety Coordinator
Blessing Barn Harrington	Bi-Monthly	Safety Coordinator
Lebanon Landing Dover	Bi-Monthly	Safety Coordinator
Tidbury Creek Park	Bi-Monthly	Safety Coordinator

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Inspection Checklist

Inspection checklist will be developed and used during safety inspections. The checklists will:

- Be specific to the hazards associated with the location to be inspected, **refer to the Job Safety Analysis (JSA)**
- Include physical hazards as well as those associated with employee behaviors (examples: forklift operation, use of power tools, lifting techniques, **first responder actions**, etc.)
- Include a location for the inspector(s) to sign-off on the results upon completion

Inspection Checklist Sections

The checklists may include but are not limited to:

- Electrical hazards
- Fire protection and life safety codes
- Chemical labeling, handling, and storage
- Lockout/tagout
- Machine Guarding
- Power tool use
- Material handling and storage
- Emergency Equipment (first aid supplies, eyewashes, bloodborne pathogens supplies, etc.)
- Confined Spaces
- Personal Protective Equipment
- Forklifts and Heavy Equipment use
- Bloodborne Pathogens
- Safe lifting
- Office ergonomics
- **Fall Protection/Ladder use**
- Driver safety
- **Hazard Response Vehicle Operation**
- **Overhead Lifting Devices**

Inspection Checklist Completion

Completed inspections will be given to the safety committee to review and:

- Determine most effective corrective actions
- Assign responsible parties to the corrective actions
- Assign a completion date for each corrective action
- Follow-up on all corrective actions until completed
- Determine trends from the inspections to determine possible corrective actions including new policies, procedures, and/or training
- Document all correspondences in the safety committee meeting minutes

The results of the inspections should be communicated to all affected employees (those that work in that area)

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TRAINING

Health and Safety Officer or Assistant Health and Safety Officer is responsible for training facility inspectors prior to conducting inspections on the following topics:

- What facilities are being inspected
- The frequency of inspections
- How to conduct the inspections (what to look for)
- What the process is for correcting the inspection items
- How to communicate with employees when unsafe acts are noted

RECORDS

The Safety Committee Chairperson (**Health & Safety Officer**) maintains records of all facility inspections as well as all safety committee correspondences related to the corrective actions progress and completion. Facility inspections as well as committee records will be maintained for a period of five years.

Electronic or hard copy records may be utilized for Facility Inspections Records.

Facility Inspection Records will be sent to the Personnel Director/Human Resource Manager for proper disposal or retention after being maintained for a period of five years by the Health & Safety Officer.

WORKPLACE INSPECTION CHECKLIST & HEALTH AND SAFETY AUDIT CHECKLIST

A Workplace Inspection Checklist(s) and Health and Safety Audit Checklist shall be tailored to each workplace, department, division, or shop as applicable. As note in Table 1 (Audit Schedule) above...”... inspections will follow a specific timeline developed by the safety committee

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WORKPLACE INSPECTION CHECKLIST [Sample]

ENTRANCES AND EXITS	YES	NO	N/A
Are entrances and exits to and from work areas free from obstructions?			
Are doors clearly marked?			
WALKWAYS, FLOORS AND STAIRS			
Are stairs and walkways kept clear of boxes, equipment, cables and other obstacles?			
Is the foot space on each stair adequate?			
Are handrails adequate and in good state of repair?			
Are stairs in a good state of repair?			
Do stairs have anti-slip materials where warranted?			
Are floors clear of slip and trip hazards, e.g., extension cords, torn carpet, uneven surfaces, cracks, holes, etc?			
Are walkways clear of trip hazards such as open drawers, boxes, etc.?			
Are walkways free of oil and grease?			
Are walkways adequately lit and clearly marked?			
Do walkways have unobstructed vision at intersections?			
STORAGE FACILITIES			
Are materials stored in bins wherever possible?			
Is sufficient storage provided?			
Are heavy items stored between mid-thigh and shoulder height?			
Is there a safe means of accessing high shelves?			
Is storage equipment in good condition and not overloaded?			
Is stored material secured to prevent shifting/falling?			
Are stored areas free from rubbish?			
Are shelf units properly attached to walls and are cabinets/cupboards stable?			
Are racks and pallets in good condition?			
LIGHTING, VENTILATION AND TEMPERATURE			
Does the lighting in the work area allow staff to see their work easily?			
Are all light fitting in good working order? No flickering lights, etc.?			
Are glare and excessive brightness minimized in the work area?			
Is temperature maintained as a comfortable level?			
Is there adequate ventilation throughout the work area?			
Are all light bulbs, tubes and lighting covers adequately cleaned?			
Are ventilation ducts kept clean and unobstructed?			
Is general indoor air quality acceptable for the majority of occupants, i.e., temperature, humidity, air flow, etc?			

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WORKPLACE INSPECTION CHECKLIST [Sample] (Con't)

EQUIPMENT	YES	NO	N/A
Is equipment clean and working properly			
Is noise and fume producing equipment located away from workstations?			
Is all lifting or moving equipment in good condition?			
Is office equipment in good condition i.e., fax machines, printers, laminators?			
Are procedures for safely operating equipment accessible to staff?			
Are lockout/tagout procedures used?			
Are there clear indications when equipment is switch on?			
Are there procedures to report faulty equipment?			
Are equipment guards in place?			
Are noise levels controlled and is hearing protection being used?			
HAZARDOUS SUBSTANCES			
Are hazardous substances properly labeled?			
Are hazardous substances properly stored?			
Do procedures exist for the safe use and disposal of hazardous substances?			
Are material safety data sheets available for all chemicals?			
Is there a register of hazardous substances?			
Are all containers labeled?			
Are eye wash stations readily available and easily accessible to employees?			
ELECTRICAL			
Are all cords, plugs and sockets in good condition, i.e., not frayed, exposed, cracked, grounding plug etc.?			
Has electrical equipment been inspected, tested and tagged in accordance with County policies and Regulations?			
Are portable power tools in good condition?			
Are all electrical items in good condition?			
Have switches and circuits/circuit breakers been identified and are they in working condition? Do breaker boxes have three (3) feet of clearance?			
Are battery charges marked and well ventilated?			
SECURITY			
Are premises secure while employees are at work, e.g., during minimum staff shifts or low manning?			
Are security doors operational?			
Are there procedures for managing suspicious mail and threats?			
Have employees been trained in workplace violence procedures?			

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WORKPLACE INSPECTION CHECKLIST [Sample] (Con't)

STAFF AMENITIES	YES	NO	N/A
Are staff toilets and bathrooms facilities in good condition?			
Are toilets and bathroom facilities cleaned regularly?			
Is kitchen and break room equipment in good working order?			
Are hot water taps appropriately marked?			
Are surfaces in bathrooms, break rooms, and kitchen areas slip free?			
Are kitchen, break room, and bathroom rubbish removed regularly?			
Do kitchens & break rooms, contain serviceable/accessible fire extinguishers?			
Are microwaves, refrigerators, etc., cleaned regularly to reduce the risk of infection and/or fire?			
EMERGENCY PROCEDURES			
Can emergency signals and alarms be clearly heard?			
Are emergency exits clearly marked, easy to open and functional?			
Are alarms and signals tested on a regular basis?			
Are emergency exit lights operational?			
Has there been an evacuation drill in the last 12 months?			
Are evacuation drills reviewed and documented			
Have floor wardens been appointed? Are their names posted?			
Are details of office/floor emergency procedures displayed?			
Is an evacuation plan displayed?			
Are fire extinguishers easily identified and located?			
Have fire extinguishers been inspected and tagged within the last two months			
Are fire hoses conveniently located in major corridors?			
Are sprinkler systems and smoke detectors operational?			
Have re-entry procedures been developed and displayed?			
Has emergency evacuation training been provided to all employees?			
FIRST AID			
Have first aid responders' names been communicated to all employees?			
Are details of first aid responders and locations of the first aid kits displayed?			
Are there adequate - currently-trained first responders in or near worksite			
Are first aid kits clearly labeled?			
Are first aid kits easily accessible?			
Are first aid kits regularly maintained and stocked?			
Are emergency telephone numbers clearly displayed?			
Are storage areas for AED devices communicated to personnel?			

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WORKPLACE INSPECTION CHECKLIST [Sample] (Con't)

DESKS AND/OR WORKSTATIONS	YES	NO	N/A
If desks are adjustable, can adjustments be easily made?			
Is there enough space on each desk for the work required?			
Is the height of desks appropriate for main tasks performed, e.g., keyboard?			
Are items in constant use within easy reach?			
Are workstations and/or desks stable and undamaged?			
Do workstations have adequate storage?			
Are waste bins emptied regularly?			
Is there sufficient space around workstations to provide safe access?			
Has staff been provided with information on how to optimize their workstation, where applicable? Provide comment:			
Have aids been provided for computer workstations (for example, foot/back rest and document holders)?			
PERSONAL COMPUTERS			
Are monitor screens located approximately an arm's length away?			
Are the tops of screens located just below eye level?			
Can the height and angle of the monitor be adjusted?			
Are character displayed on screen legible and stable?			
Is screen glare minimized?			
Is the mouse situated so that the user does not have to reach or stretch?			
Is the mouse easy to move?			
CHAIRS (Used for working at personal computers)			
Can height of chairs be adjusted according to the tasks being undertaken?			
Can height of back rests be adjusted to provide appropriate lumbar support?			
Can back rest angle be adjusted so users are setting upright when using a PC?			
Can chairs be moved to the workstation without obstruction of arm rests?			
Are chairs stable and undamaged?			
Does the base of chair have five (5) or more wheeled supports?			
SAFE LIFTING			
Have workers been trained on, and are they using, safe lifting techniques?			
Are employees avoiding heavy loads (splitting loads - asking for help)?			
When lifting, do employees bend their knees to take pressure off their backs?			

[illegible]

[illegible]

[illegible]

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HEALTH AND SAFETY AUDIT CHECKLIST [Sample] (Con't)

PERSONAL PROTECTIVE EQUIPEMNT AND CLOTHING	YES	NO	N/A
Are protective goggles or face shields provided and worn where there is any danger of flying particles of corrosive materials?			
Are protective gloves, aprons, shields or other means provided against corrosive liquids and chemicals?			
Are hard hats provided and worn where danger of head injury, falling objects, or overhead work exists?			
Is appropriate foot protection required where there is the risk of foot injuries from hot, corrosive, falling objects, or penetrating action			
Are approved respirators provided for general or emergency as needed?			
Is all protective equipment maintained in sanitary condition and ready for use?			
Does Kent County have eye wash facilities and quick drench shower within the work area where employees are exposed to injurious liquid materials?			
Where special electrical emergency equipment is needed, is it available?			
Is protection against the effects of occupation noise exposure provided when levels exceed those of the OSHA standard?			
GENERAL WORK ENVIRONMENT			
Are all work sites clean and orderly?			
Are work surfaces kept dry or are appropriate means taken to ensure the surfaces are slip resistant?			
Are all spilled materials or liquids cleaned up immediately?			
Is combustible scrap, debris and waste stored safely and removed from the worksite properly?			
Is accumulated combustible dust routinely removed from elevated surfaces?			
Are covered metal waste cans used for oily and solvent soaked rags?			
Are minimum number of toilets and washing facilities provided?			
Are all toilets and washing facilities clean and sanitary?			
Is all work areas adequately illuminated?			
Are pits and floor opening covered or otherwise guarded?			
FLOORS AND WALL OPENINGS			
Are floor openings guarded by cover, a guardrail, or equivalent on all sides?			
Are toe boards installed around the edges of permanent floor opening, where persons may pass below the opening?			
Are skylight screens of such construction and mounting that they will withstand a load of at least 200 pounds			
Are manhole covers, and similar covers, plus supports designed to carry a truck real axle load of at least 20,000 pounds where subject to vehicle traffic?			

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HEALTH AND SAFETY AUDIT CHECKLIST [Sample] (Con't)

WALKWAYS	YES	NO	N/A
Are aisles and passageways kept clear?			
Are aisles and walkways marked as appropriate?			
Are wet surfaces covered with non-slip materials?			
Is there safe clearance for walking in aisles where motorized or mechanical handling equipment is operating?			
Is adequate headroom provided for the entire length of any aisle or walkway?			
Are standard guardrails provided wherever aisle or walkway surfaces are elevated more than 30 inches above any adjacent floor or the ground?			
STAIRS AND STAIRWAYS			
Are standard stair rails or handrails on all stairways having four or more risers?			
Are all stairways at least 22 inches wide?			
Do stairs have at least six foot six inches (6' - 6") overhead clearance?			
Are steps risers on stairs uniform from top to bottom, with no riser spacing greater than 7 ½ Inch?			
Are steps on stairs provided with a surface that renders them slip resistant?			
Are stairways handrails located between 30 and 34 inches above the leading edge of stair treads?			
Do stairway handrails have at least 1 ½ inch of clearance between the handrails and the wall or surface on which they are mounted?			
Are stairway handrails capable of withstanding a load of 200 pounds, applied in any direction?			
When stairs or stairways exit directly into areas where vehicles may be operated, are adequate barriers and warning provided to prevent employees stepping into the path of traffic?			
EXITING OR EGRESS			
Are exits marked with an exit sign and illuminated by a reliable light source?			
Are the directions to exits, when not apparent, marked with visible signs?			
Are doors, passageways or stairways, that are neither exits nor access to exits which could be mistaken for exits, appropriated marked "Not An Exit", etc.?			
Are all exits kept free of obstructions?			
Are there sufficient exits to permit prompt escape in case of emergency?			
Are exit stairways which are required to be separated form other parts of a building, enclosed by at least 2-hour fire-resistive construction in building more than four stories in height, and not less than 1-hour fire-resistive construction elsewhere?			

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HEALTH AND SAFETY AUDIT CHECKLIST [Sample] (Con't)

EXIT DOORS	YES	NO	N/A
Where panic hardware is installed on a required exit door, will it allow the door to open by applying a force of 15 pounds or less in the direction of the exit traffic?			
Are door on cold storage rooms or and air-tight security room provided with an inside release mechanism which will release the latch and open the door even if it is padlocked or otherwise locked on the outside?			
Where exit doors open directly into any street, or an area where vehicles may be operated, are adequate barriers and warning provided to prevent employees stepping into the path of traffic?			
PORTABLE LADDERS			
Are all ladders maintained in good condition?			
Are non-slip safety feet provided on each ladder?			
Are ladder runs and steps free of grease and oil?			
Are employees prohibited from using ladders that are broken, missing steps, rungs, cleats or other faulty equipment?			
Are employees prohibited from using ladders as braces, skids or other than their intended purpose?			
HAND TOOLS AND EQUIPMENT			
Are all tools and equipment (both Kent County's and employee owned) used by employees in good condition?			
Are broken or fractured handles on hammer, axes and similar equipment replaced promptly			
Are appropriate safety glasses, face shields, etc. used while using hand tools or equipment which might produce flying materials or be subject to breakage?			
Are tool handles wedged tightly in the head of all tools?			
PORTABLE POWER OPERATED TOOLS AND EQUIPMENT			
Are grinders, saws and similar equipment provided with proper safety guards?			
Are shields, guards, or attachments suggested by the manufacturer used?			
Are circular saws equipped with guards above and below the base shoe?			
Are corded operated tools effectively grounded or double insulated type?			
Are effective guards in place over belts, pulleys, chains, sprockets, on equipment such as concrete mixers, air compressors, and hose reels, etc.?			
Are ground fault circuit interrupters provided on all temporary electrical circuits, used during period of construction?			
Are pneumatic/hydraulic hoses checked regularly for deterioration or damage			



ABRASIVE WHEEL EQUIPEMNT - GRINDERS	YES	NO	N/A
Is the work rest used and kept adjusted to within 1/8 inch of the wheel?			
Is the tongue on the top side of the grinder kept to within 1/4 inch of wheel?			
Are bench and pedestal grinders permanently mounted?			
Are goggles or face shields always worn when grinding?			
Are fixed permanently mounted grinders connected to their electrical supply system with metallic conduit or other permanent wiring method?			
Before wheels are mounted, are they visually inspected and ring tested?			
Are coolant guards mounted on grinders to keep the coolant from employees?			
MACHINE GUARDING			
An employee safe method of machine operation training program is utilized?			
Is there a regular program of safety inspection of machinery and equipment?			
Is all machinery and equipment kept clean and properly maintained?			
Is equipment securely placed and anchored?			
Is there a power shut off switch within reach of the operator's position?			
Are all emergency stop buttons colored red?			
Are pulleys and belts within 7 feet of floor or working level properly guarded?			
Are methods provided to protect the operator and other employees in the machine area from hazards created at the point of operation, ingoing nip pints, rotating parts, flying chips, and sparks?			
Are provisions made to prevent machines from automatically starting when power is restored after a power failure?			
If machinery is cleaned with compres3sed air, I air pressure controlled and personal protective equipment or other safeguards utilized to protect operator and other workers from eye and body injury?			
SPRAYING OPERATIONS			
Is adequate ventilation assured before spray operations are started?			
Is mechanical ventilation provided when spraying operations are done in enclosed areas?			
Is the spray area free of hot surfaces?			
Is approved respiratory equipment provided and used when appropriate during spraying operations?			
Is the spray area kept clean of combustibile?			

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HEALTH AND SAFETY AUDIT CHECKLIST [Sample] (Con't)

LOCKOUT / TAGOUT PROCEDURES	YES	NO	N/A
Is all machinery or equipment capable of movement, required to be de-energized or disengaged and locked out/tagged out during cleaning, servicing, adjusting or setting up operations, whenever required?			
Do the power disconnecting means for equipment also disconnect the electrical control circuit?			
Are the appropriate electrical enclosures identified?			
Are means provided to assure the control circuit can be disconnected and locked out?			
Does the lock out procedure require that stored energy be released or blocked before equipment is serviced?			
Are appropriate employees provided with individually keyed personal safety locks and/or devices?			
Is it required that employees check the safety of the lock out by attempting a start up after making sure no one is exposed?			
Are employees instructed to always push the control circuit stop button prior to reenergizing the main power switch?			
Is there a means provided to identify any or all employees who are working on locked out equipment by their locks or accompanying tags?			
Are sufficient number of accident preventive signs or tags and safety padlocks provided for any reasonable foreseeable repair?			
In the event that equipment or lines cannot be shut down, locked out and tagged, is a safe job procedure established and rigidly followed?			
COMPRESSOR AND COMPRESSED AIR			
Are compressors equipped with pressure relief valves, and pressure gauges?			
Are compressor air intakes installed and equipped to ensure that only clean uncontaminated air enters the compressor?			
Are air filters installed on compressor intakes?			
Are safety services on compressed air systems checked frequently?			
Are signs posted to warn of the automatic starting feature of compressors?			
Is the belt system totally enclosed to provide protection from all sides?			
Is it strictly prohibited from pointing compressed air at other employees?			
If compressed air is used for leaning off clothing is it regulated to a safe level?			
Is it prohibited to use compressed air to clean up or move combustible dust if such action could cause the dust to be suspended in the air causing a fire or explosion?			

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HEALTH AND SAFETY AUDIT CHECKLIST [Sample] (Con't)

WELDING, CUTTING AND BRAZING	YES	NO	N/A
Are only authorized and trained personnel permitted to use welding, cutting or brazing equipment?			
Are compressed gas cylinders regularly examined for signs of defects?			
Are precautions taken to prevent the mixture of air or oxygen with flammable gases, except at a burner or torch?			
Are empty cylinders appropriately marked (i.e. "MT") and their valves closed?			
Are liquefied gases stored & shipped valve end up with valve covers in place?			
Is grounding of the machine frame and safety ground connections of portable machines checked periodically?			
Are electrodes removed from the holders when not in use?			
Is it required that the electrical power to the welder be shut off where no one is in attendance?			
Is suitable fire extinguishing equipment available for immediate use?			
When the object to be welded cannot be moved and fire hazard cannot be removed, are shields used to confine heat, sparks and slag?			
Are non-welding employees or general public exposed to the hazards created by welding, cutting, or brazing by shielding, personal protective equipment?			
Are compressed gas/oxygen cylinders prevented from falling over?			
HOIST AND AUXILIARY EQUIPMENT			
Is each overhead electric hoist equipped with a limit device to stop the hook travel at its highest point of safe travel?			
Is the rated load of each hoist legibly marked and visible to the operator?			
Are stops provided at the safe limits of travel for the trolley hoist?			
Are hoist controls plainly marked indicating the direction of travel or motion?			
Is it prohibited to use chains or rope slings that are kinked or twisted?			
Is it prohibited to use slings that are frayed and saturated with oil?			
IDENTIFICATION OF PIPING SYSTEMS			
When non-potable water is piped through a facility, are outlets or taps posted to alert employees that it is unsafe and not to be used for drinking, washing or other personal use?			
When hazardous substances are transported through above ground piping, is each pipeline identified at points where confusion could introduce hazards to employees?			
Is direction of flow, and contents of piping clearly marked and viewable?			

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HEALTH AND SAFETY AUDIT CHECKLIST [Sample] (Con't)

INDUSTRIAL TRUCKS - FORKLEFTS	YES	NO	N/A
Are only employees who have been trained in the proper use of industrial trucks allowed to operate them?			
Is substantial roll over protection system (ROPS), overhead provided for all high lift trucks and all terrain vehicles?			
Does each truck have a warning horn, whistle or other device which can be clearly heard above the normal noise of the areas where operated?			
Are the brakes on each industrial truck capable of bringing the vehicle to a complete and safe stop with a full load?			
Will the trucks' parking brake effectively prevent the vehicle from moving when unattended?			
Are motorized hand and hand rider trucks so designed that the brakes are applied, and power to the drive motor is shut off, when the operator releases his grip on the device that controls travel?			
ENVIRONMENTAL CONTROLS			
Is all work areas properly illuminated?			
Are hazardous substances identified which may cause harm if used normally?			
Is employee exposure to chemicals in the workplace kept at acceptable levels?			
If forklifts and other vehicles are used in building or other enclosed areas, are the carbon monoxide levels kept below acceptable concentration?			
Has there been a determination that noise levels in the building(s) and/or work area(s) are within acceptable levels?			
Are all outlets for water not suitable for drinking clearly identified?			
Are all employees instructed in proper lifting techniques?			
Are exhaust stacks and air intakes so located that contaminated air will not be re-circulated within the building or other enclosed areas?			
FLAMMABLE AND COMBUSTIBLE MATERIALS			
Are combustible scrap, debris and waste materials stored in covered metal receptacles and removed from the workplace promptly?			
Are all lids kept on drums of flammable material when not in use?			
Are drums of flammables grounded while in use?			
Are drums of flammable liquid stored in facilities with ramped door way, explosion proof wiring and non sparking tools etc?			
Is smoking prohibited in areas where flammable materials are stored?			
Are fire extinguishers selected and provided for the types of material in area where they are to be used?			
Are spills of combustible material cleaned up promptly?			

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HEALTH AND SAFETY AUDIT CHECKLIST [Sample] (Con't)

NOISE	YES	NO	N/A
Are workplace areas where continuous noise levels exceed 85 dBA?			
Is there an ongoing preventive health program to educate employees in safe levels of noise, exposures, and effects of noise and use of personal protection?			
Have high noise level work areas been identified and warning posted?			
Have engineering controls been used to reduce excessive noise levels?			
Where engineering controls are not feasible, are administrative controls (i.e., workers rotation) being utilized to minimize employee noise exposure?			
Are employees properly fitted for ear protectors when required or used?			
Are employees in high noise areas given periodic audiometric testing to ensure that Kent County has an effective hearing protection system?			
Is the audiometric testing reviewed by authorized individuals and employee?			
ENTERING CONFINED SPACES			
Are confined spaces thoroughly emptied of any corrosive or hazardous substances, such as acids or caustics, before entry?			
Are all lines to a confined space, valve(d) off and blanked or disconnected and separated before entry?			
Is it required that all impellers, agitators, or other moving equipment inside confined spaces be locked out if they present a hazard?			
Is natural/mechanical ventilation provided prior to confined space entry?			
Are appropriate atmospheric test performed to check for Oxygen deficiency, toxic substances and explosive concentration prior to entry?			
Is adequate illumination provided for the work to be performed?			
Is the atmosphere inside the confined space frequently tested or continuously monitored during the conduct of work?			
Is there an assigned safety standby employee outside of the confined space, when required, whose sole responsibility is to watch the work in progress, sound an alarm if necessary, and render assistance?			
Is standby employee appropriately trained/equipped to handle an emergency?			
Is approved respiratory equipment required if the atmosphere inside the confined space cannot be made acceptable?			
Is all portable electrical equipment used inside confined spaces either grounded and insulated or equipped with ground fault protection?			
If employees will be using oxygen-consuming equipment in a confined space, is sufficient air provided to assure combustion without reducing the level of oxygen below 19.5%			
Is each confined space checked for toxic materials or decaying biological matter prior to entry?			

[illegible]

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PURPOSE

The purpose of this section is to establish traffic control guidelines for the safe and efficient maintenance of traffic within work areas under the jurisdiction of the **Kent County Delaware Governmental Body** (referred to from this point forward as “**Kent County**”). In order to preserve safe and efficient operations of the Kent County facilities, it is necessary to perform routine maintenance and, on occasion, emergency repairs to the roads under the jurisdiction of the **Kent County**. This procedure has been developed to provide guidelines for preparing and implementing maintenance and protection of traffic plans to assure the safety of the **Kent County** employees and the traveling public.

RESPONSIBILITY

The **Director of Departments and/or Divisions** will ensure that all managers, supervisors, foreman, and employees are aware of their duties and responsibilities regarding the maintenance and protection of traffic **and staff**.

The Supervisor or Foremen in charge of an operation requiring maintenance and protection of traffic will be responsible for preparing and implementing the traffic control plan (TCP).

The **Kent County Traffic Engineer or an approved designee** will be responsible for approving the traffic control plan.

Traffic Control Plan shall comply with the current Delaware Manual on Uniform Traffic Control Devices for Streets and Highways.

PROCEDURES

General

- Proper traffic control through work areas is essential for ensuring the safety of the traveling public and of employees. Public safety and that of our employees have the highest priority. The proper application of the approved TCP will provide the desired level of safety.
- All work zones must adhere to the minimum provisions of the documents. Throughout the period(s) of work activity, traffic shall be maintained by implementing the approved TCP.
- No work shall begin on any work activity or work phase until all required traffic control patterns and devices indicated on the TCP for that activity or phase are completely and correctly in place and have been checked for approved usage.
- General and specific warning signs shall only be put into place when specific work tasks and activities are actually underway, or when conditions exist that pose a potential hazard to the public, and when additional signing has been approved by an appropriate Traffic Engineer.
- All traffic control devices required by the TCP shall be kept in good condition.

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- All traffic control devices not required for the safe conduct of traffic shall be promptly removed, completely covered, turned away from traffic, or otherwise taken out of service **and stored in a safe location**. No traffic control device should be in service when there is no clear cut reason for the device. In situations where TCP's are jointly implemented, care shall be exercised to present correct and non-conflicting guidance to the traveling public.
- Throughout this section, speed of traffic means the posted speed or prevailing travel speed, whichever is higher, unless otherwise noted.
- Traffic shall be maintained at all times throughout the entire length of the project, unless otherwise noted. No travel lane(s) other than those designated for possible closure in the TCP shall be closed without obtaining prior approval from the **Delaware Department of Transportation Engineer** or designee. All ingress and egress to the work area shall be performed with the flow of traffic. It is the supervisor's responsibility to see that the approved TCP is properly implemented to protect the work area and ensure public safety.

Pre-Planning Work

Prior to beginning the task, the person responsible for the work should carefully plan the work and arrange for all tools, equipment, material and personnel required to properly and safely accomplish the work. At a minimum, employees should proceed only after the following issues have been addressed:

- Equipment, tools and materials needed to accomplish the task.
- Personnel needed to accomplish the task.
- Procedures to be followed.
- If any unusual situations are anticipated, discussion and approval with supervisory personnel.
- Notification and coordination with Public Relations, **Delaware or local law enforcement** and/or other departments as may be appropriate.

Planning Work In Or Adjacent To Lanes Of Traffic

- Identify the work to be performed.
- Determine whether normal traffic patterns need to be altered or disrupted to accomplish the work.
- Determine if there is a need to establish a TCP to protect the traveling public and/or personnel who will be performing the work.
- Determine when the work will be performed and the duration of the work.

Developing A Traffic Control Plan

Inspect the work area and become familiar with all field conditions. As a minimum, determine the following:

- Sight distance approaching the work area.
- Traffic speed: posted and actual.

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- Geometry of the highway system in the work area and approaching and leaving the work area.
- Are there exit and entrance ramps nearby?
- Are there conditions present that normally require, or encourage motorists to change lanes?
- Are there conditions or activities competing for drivers' attention?
- What will be the ambient light condition when the work is to be performed?
- What are likely to be the climate and roadway surface conditions when the work is performed?
- Are there any planned events or unusual situations not controlled by the municipality that may affect traffic patterns during the period when the work is to be performed?
- Is there any other work being performed in the municipality facilities, or surrounding facilities that can affect traffic conditions?
- Prepare or select a TCP that addresses all traffic, field, and climate conditions. Use the following documents as a guideline:
 - Manual on Uniform Traffic Control Devices (MUTCD)
 - **Occupational Safety and Health Administration (OSHA)**
- These documents **or online address** will be available in the **Personnel/Human Resource** office and provide guidelines and examples of traffic control schemes for situations that will be similar, in many cases, to those encountered by maintenance personnel. In some instances, a combination of TCP's presented in these documents may be required, but in any event, the plan that is developed should be specific to the work being performed and the conditions under which it will be performed.

The plan needs to address the following items:

- The number, type, placement and location of all traffic control and protection devices.
- Distances from the work site to begin placement of warning and control devices to provide adequate notification to traffic of the condition to be encountered.
- Proper merge distances for lane drops.
- A safe and efficient method of setting up and removing the devices.
- The method for checking and maintaining the devices while they are in use.
- The methods for covering signs that is left in place, but not applicable during certain periods or operations.
- Replacement of spare devices or parts for damaged or nonfunctioning devices.

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- Procedures to assess the effectiveness of the maintenance and protection of traffic scheme and devices.
- Identification and availability of staff to perform required tasks.
- Availability of required traffic control devices.
- Need for and availability of State/Local Police involvement.
- Coordination with other Departments who may be affected by or interested in the work to be performed.

Maintenance and Protection of Traffic Plan Approval

The Supervisor prepares and presents the TCP to the **Traffic Engineer** or approved designee for approval.

- Revise the plan as required.

Implementation Of The TCP

- Schedule the repair work.
- Notify **Delaware** Department of **Transportation (DelDOT)** of any work that will disrupt traffic (sufficiently in advance of work to allow for timely notification of media).
- Schedule/reserve all equipment, labor and devices required to implement TCP.
- Notify all other Departments who may be affected by or interested in the work or schedule.
- Arrange for State/Local Police involvement as required.
- Set up per the approved TCP. Devices should be installed in the direction traffic flows. The first device placed is the first advance warning sign. The installation should then proceed in sequence through the traffic control zone.
- Observe the installation and determine if any additions or adjustments are required to improve the safety or effectiveness of the plan. Discuss any proposed changes with the **Traffic Engineer** or approved designee, before alterations are made. If alterations are required immediately, effect them and notify the **Traffic Engineer** or approved designee.
- Check and maintain all traffic control devices as per the TCP.
- Remove the installation as soon as it is no longer required. Traffic control devices should be removed in reverse sequence to that used for installation. This requires moving backwards through the traffic control zone.
- Notify the affected entity or approved designee, Public Relations and other Departments, as required, when the maintenance and protection of traffic has been removed.

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Work Zone Traffic Control Devices

All work zone traffic control devices shall be in accordance with **current** state adopted **DelDOT** edition, of the Uniform Manual Traffic Control Devices.

Traffic control devices used in a work zone should be used uniformly. It is desirable for traffic control device application **to** be uniform across all jurisdictions, but unique circumstances may create the need for some variability.

Flagging

All flaggers working on state-maintained roadways, except for emergency personnel and law enforcement officers, shall be certified by a DelDOT-recognized flagger certification program. All flaggers, except for emergency personnel and law enforcement officers, shall be required to carry a flagger certification card and photo identification on their person at all times.

Because flaggers are responsible for public safety and make the greatest number of contacts with the public of all highway workers, they should be trained in safe traffic control practices and public contact techniques. Flaggers should be able to satisfactorily demonstrate the following abilities:

- Ability to receive and communicate specific instructions clearly, firmly, and courteously in English and other languages as required environment dictates.
- Ability to move and maneuver quickly in order to avoid danger from errant vehicles
- Ability to control signaling devices (such as paddles and flags) in order to provide clear and positive guidance to drivers approaching a Temporary Traffic Control (TTC) zone in frequently changing situations
- Ability to understand and apply safe traffic control practices, sometimes in stressful or emergency situations
- Ability to recognize dangerous traffic situations and warn workers in sufficient time to avoid injury.

For daytime and nighttime activity, flaggers shall wear high-visibility safety apparel that meets or exceeds the Performance Class 3 requirements of the ANSI/ISEA 107–2004 publication entitled “American National Standard for High-Visibility Apparel and Headwear” (see Section 1A.11) and labeled as meeting the ANSI 107-2004 standard performance for Class 3 risk exposure. The apparel background (outer) material color shall be fluorescent orange-red, fluorescent yellow-green, or a combination of the two as defined in the ANSI standard. The retroreflective material shall be orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors, and shall be visible at a minimum distance of 1,000 feet. The retroreflective safety apparel shall be designed to clearly identify the wearer as a person.

Flaggers are provided at worksites to stop traffic intermittently as necessitated by work progress or to maintain continuous traffic past a worksite at reduced speeds to help protect the work crew. For both of these functions the flagger must, at all times, be clearly visible to approaching traffic for a distance sufficient to permit proper response by the motorist to the flagging instructions, and to permit traffic to reduce speed before entering the worksite. In positioning flaggers consideration must be given to maintaining color contrast between the work area background and the flagger's protective garments.

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Hand Signaling Devices

A number of hand signaling devices, such as STOP/SLOW paddles, lights and red flags are used in controlling traffic through work zones. The sign paddle bearing the clear messages STOP and SLOW provide motorists with more positive guidance than flags and should be the primary hand signaling device. Flag use should be limited to emergency situations and at spot locations which can best be controlled by a single flagger.

Sign paddles should be at least 24 inches wide with letters at least 8 inches high on a 6 foot rigid staff. This combination sign may be fabricated from sheet metal or other light semi-rigid material. The background of the STOP face shall be red with white letters and border. The background of SLOW shall be orange with black letters and border. When used at night the STOP face shall be reflectorized red with white reflectorized letters and border, and the SLOW face shall be reflectorized orange with black letters and border.

Flags used for signaling purposes shall be a minimum of 24" x 24" in size, made of good grade of red material securely fastened to a staff approximately 3 feet in length. The free edge should be weighted to ensure that the flag will hang vertically, even in heavy winds.

Hand Signaling Procedures

The following methods of signaling with *sign paddles* should be used:

- ***To STOP traffic.*** The flagger shall face traffic and extend the STOP sign paddle in a stationary position with the arm extended horizontally away from the body. The free arm is raised with the palm toward approaching traffic.
- ***When it is desired to alert or slow traffic.*** The flagger shall face traffic with the slow sign paddle held in a stationary position with the arm extended horizontally away from the body.
- ***When it is safe for traffic to proceed.*** The flagger shall face traffic with the SLOW sign paddle held in a stationary position with the arm extended horizontally away from the body. The flagger motions traffic ahead with the free hand.

The following methods of signaling with *a flag* should be used:

- ***To STOP traffic.*** The flagger shall face traffic and extend the flag horizontally across the traffic lane in a stationary position so that the full area of the flag is visible hanging below the staff. For greater emphasis, the free arm may be raised with the palm toward approaching traffic.
- ***Where it is desired to alert or slow traffic.*** The flagger shall face traffic and slowly wave the flag in a sweeping motion of the extended arm from the shoulder level to straight down without raising the arm above a horizontal position.

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- ***When it is safe for traffic to proceed.*** The flagger shall face traffic with the flag held in a stationary position with the arm extended horizontally away from the body. The flagger motions traffic ahead with the free hand.
- Lights approved by the appropriate highway authority or reflectorized sign paddles or reflectorized flags shall be used to flag traffic at night. Daytime flagging procedures shall be followed whenever such lights, paddles or flags are used at night.
- Whenever practicable, the flagger should advise the motorist of the reason for the delay and the approximate period that traffic will be halted. Flaggers and operators of construction machinery or trucks should be made to understand that every reasonable effort must be made to allow the driving public the right-of-way and prevent excessive delays.

Flagger Stations

- Flagger stations shall be located far enough in advance of the worksite so that approaching traffic will have sufficient distance to reduce speed before entering the work zone. A flagger should be clearly visible to the traffic which is being controlled for a minimum distance equal 10 times the normal regulatory speed limit in MPH.
- The flagger should stand either on the shoulder adjacent to the traffic being controlled or in the barricaded lane. At a "spot" obstruction a position may have to be taken on the shoulder opposite the barricaded section to operate effectively. Under no circumstances should a flagger stand in the lane being used by moving traffic. The flagger should be clearly visible to approaching traffic at all times. For this reason the flagger should stand alone, never permitting a group of workers to congregate around the flagger station. The flagger should be stationed sufficiently in advance of the work force to warn them of approaching danger, such as out-of-control vehicles.
- Flagger stations should be adequately protected and preceded by proper advance warning signs. At night, flagger stations should be adequately illuminated.
- At short construction and maintenance lane closures where adequate sight distance is available for the safe handling of traffic, the use of one flagger may be sufficient.

One-Way Traffic Control

- Where traffic in both directions must, for a limited distance, use a single lane, provision should be made for alternate one-way movement to pass traffic through the constricted section. At a "spot" obstruction, such as an isolated pavement patch, the movement may be self-regulating. However, where the one-lane section is of any length, there should be some means of coordinating movements at each end so that vehicles are not simultaneously moving in opposite directions in the section and so that delays are not excessive at either end.

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- Control points at each end of the route should be chosen so as to permit easy passing of opposing lines of vehicles.
- Where the one-lane section is short enough so that each end is visible from the other end, traffic may be controlled by means of a flagger at each end of the section. One of the two should be designated as the chief flagger for purposes of coordinating movement. They should be able to communicate with each other verbally or by means of signals. These signals should not be such as to be mistaken for flagging signals.
- Where the end of a one-lane section is not visible from the other end, the flaggers may maintain contact by means of radio or field telephones. So that a flagger may know when to allow traffic to proceed into the section, the last vehicle from the opposite direction can be identified by description or license.

High Visibility Vests

During daylight hours every employee shall wear a safety vest or equivalent orange shirt, jacket or coverall when working on or within thirty feet of any ramp, bridge, tunnel or roadway open to traffic.

During hours of darkness every employee shall wear a retroreflective vest that meets ANSI/ISEA 107-1999, Conspicuity Class 3 standards. The retroreflective material shall be orange, yellow, white, silver, strong yellow-green or a fluorescent version of one of these colors and shall be visible at a minimum distance of 390 m (1280 feet). The retroreflective clothing shall be designed to identify clearly the wearer as a person and be visible through the full range of body motions.

CONTRACTORS


Whenever contractors or service personnel are engaged in work which restricts traffic on behalf of **Kent County** they must follow the procedures covered by this program.

At the conclusion of any work performed by a contractor, a post review will be performed and documented to determine if new or previously unidentified hazards have been identified.

Department/Division Safety Coordinator of project(s) will certify that post work reviews have been accomplished. The certification will contain each contractor company's name and dates of the work. Documentation will be filed with **Kent County Health & Safety Officer** and shall be maintained for 12 months from the date on which the elevated work occurred.

PROGRAM EVALUATION

This policy and affected procedures shall be reviewed by **Kent County Health & Safety Officer** and a committee comprised of affected employees within 12 months of the last review dated and will note changes made to this document by a modification to its Revision Number in page header.

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PURPOSE AND SCOPE

These procedures establish requirements for communicating information concerning bloodborne pathogen exposures. This procedure applies to all **Kent County Delaware Governmental Body** (referred to from this point forward as “**Kent County**”) employees who may incur occupational exposure to blood or other potentially infectious materials. The employees that may be expected to incur occupational exposures are listed below:

Job / Position

Department of Public Safety, Public Works Department, Department of Community Services, Department of Planning Services, Sheriff’s Office, Firefighter, EMT, HAZMAT, or other individuals **exposed**, assigned, and trained to provide First Aid or CPR response as part of their role within the organization

Individuals who perform janitorial services.

Employees who may be required to perform decontamination and clean up of equipment or other surfaces after an exposure event.


Tasks

Contact with an injured persons blood or bodily fluids while providing emergency medical or first aid services.

Clean up of surface areas exposed to uncontained blood or body fluids. (i.e.: Vomit or urine not contained within a plastic bags

Decontamination and clean up of equipment or other surfaces after being contaminated with blood or bodily fluids.

Decontamination and clean up of equipment or other surfaces after being contaminated with blood or bodily fluids.

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PROTECTIVE METHODS

All blood or other potentially infectious material will be considered infectious regardless of the perceived status of the source of the individual. Employees will wash their hands immediately, or as soon as feasible, with soap and water after the removal of gloves or other personal protective equipment. Employees must wash their hands and any other skin with soap and water immediately, or as soon as feasible, following contact of such body areas with blood or other potentially infectious materials.

Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas or positions where there is a reasonable likelihood of occupational exposure.

CONTAMINATED EQUIPMENT

Equipment that has become contaminated with blood or other potentially infectious materials will be decontaminated as necessary unless the decontamination of the equipment is not feasible. A readily observable label will be attached to the equipment stating which portions remain contaminated. This information will be conveyed to all affected employees, the servicing representative, and/or the manufacturer, as appropriate, and prior to handling, servicing, or shipping so that appropriate precautions will be taken.

PERSONAL PROTECTIVE EQUIPMENT


Appropriate personal protective equipment will be made available to all employees with potential bloodborne pathogen exposure. This equipment is kept with the first aid supplies **or specific location as designated by the Kent County Health & Safety Officer.**

All garments that are penetrated by blood or bodily fluids will be removed immediately or as soon as feasible. All personal protective equipment will be removed prior to leaving the work area. When personal protective equipment is removed it will be placed in an appropriately designated area or container for storage, washing, decontamination or disposal.

Gloves will be worn where it is reasonably anticipated that employees will have hand contact with blood, other potentially infectious materials, non-intact skin, mucous membranes, and when handling or touching contaminated items or surfaces.

Disposable (single use) gloves will not be washed or decontaminated for re-use. They will be replaced as soon as practical when they become contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised.

Masks in combination with eye protection devices, such as goggles or glasses with solid side shields, or chin length face shields, will be worn whenever splashes, spray, splatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose or mouth contamination can reasonably be anticipated.

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HOUSEKEEPING

All equipment, tools and working surfaces will be cleaned and decontaminated immediately or as soon as feasible after contact with blood or other potentially infectious materials. Decontamination will be performed with a water and chlorine bleach solution mixed at 10 parts water to 1 part bleach.

WASTE DISPOSAL

The majority of the waste anticipated to be generated through first aid treatment will be decontaminated and disposed of in the facility's regular trash. If a situation arises where waste is generated that cannot be decontaminated prior to disposal, then it will be placed in an appropriately labeled red bag located **at the specific location as designated by the Kent County Health & Safety Officer and the facility and/or vehicle Manager** and will be disposed of in accordance with applicable regulations.

HEPATITIS B VACCINATION & POST EXPOSURE EVALUATION AND FOLLOW UP


Kent County offers the Hepatitis B Vaccine to all potentially exposed employees within 10 working days of their entering a position in which occupational exposure is present. Employees who decline to accept the Hepatitis B Vaccination must sign the statement found in the back of this procedure.

If the employee initially declines the Hepatitis B Vaccination, but at a later date, decides to accept the Vaccination, the Vaccination will be made available at that time.

All potentially exposed individuals will have a Hepatitis B vaccine made available to them as soon as possible, but in no event later than 24 hours after the exposure incident. If an exposure incident occurs other post-exposure follow-up procedures will be initiated immediately. Hepatitis B vaccinations and post-exposure evaluations and follow-up will be:

- Made available at no cost to the employee;
- Made available to the employee at a reasonable time and place;
- Performed by or under the supervision of a licensed physician or by or under the supervision of a licensed healthcare professional; and
- Provided according to recommendations of the U.S. Public Health Service current at the time the evaluations and procedures take place.

When the employee incurs an exposure incident, it should be reported to the employee's immediate supervisor. An *Incident Report Form* (located in the back of this Program) will be completed. All employees who incur an exposure incident will be offered a post-exposure confidential medical evaluation and follow-up.

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If the exposed employee requests a post-exposure medical evaluation, the employee will give consent by signing the *Follow-up Report Form* located in the back of this Program. *This Report Form* will be sent along with the employee to his/her medical evaluation, completed by the healthcare provider. A copy of the *Incident Report Form* will be sent along with the exposed employee to his/her medical evaluation.

Information regarding the source individual's infectious status will be made available to the healthcare provider and exposed employee, *if known*. By law, the source individual is *not* required to submit to testing or to disclose information regarding their infectious status.

Healthcare Professional's Written Opinion

Kent County will obtain and provide the employee with a copy of the evaluating healthcare professional's written opinion within 15 days of the completion of the evaluation. The healthcare professional's written opinion for Hepatitis B Vaccination will be limited to whether the hepatitis B vaccine is indicated for an employee, and if the employee has received such vaccination.

The healthcare professional's written opinion for post-exposure evaluation and follow-up will be limited to the following:


- That the employee has been informed of the results of the evaluation; and
- That the employee has been told about any medical conditions resulting from the exposure to blood or other potentially infectious materials which require further evaluation or treatment.

All other findings or diagnoses will remain *confidential* and will not be included in the written report.

TRAINING

Training will be provided to all potentially exposed employees and first-aid responders by a qualified trainer to ensure that facility personnel understand the purpose and the function of the Bloodborne Pathogens Program and that they have the skills and knowledge required to protect themselves from bloodborne pathogens. Training will be provided at the time of initial assignment to a position with occupational exposure and annually thereafter.

The **Personnel Director/Human Resource Manager** will maintain training records including each employee's name and dates of training.

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RECORDKEEPING

An accurate record for each employee with occupational exposure will be established and maintained. This record will include the following:

- The name and social security number of the employee;
- A copy of the employee's Hepatitis B Vaccination status including the dates of all the Hepatitis B Vaccinations and any medical records relevant to the employee's ability to receive the Vaccination;
- A copy of all results of examinations, medical testing, and follow-up procedures;
- The employer's copy of the healthcare professional's written opinion; and
- A copy of the information provided to the healthcare professional.

Kent County will ensure that employee medical records are kept confidential and not disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by law.

Medical records will be maintained for at least the duration of employment plus 30 years.

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EXPOSURE REPORT FORM - BLOOD OR BODILY FLUID

(To be completed by the first aid responder or supervisor following an exposure incident)

Exposed Employee Information:

Name: _____ Department: _____

SSN: _____ Phone (H): _____

Address: _____

City: _____ State: _____ Zip: _____

Exposure Description:

Date of Exposure: _____ Time of Exposure: _____

What bodily fluid(s) was the person in contact with?

<input type="checkbox"/> Blood	<input type="checkbox"/> Feces	<input type="checkbox"/> Saliva	<input type="checkbox"/> Spit
<input type="checkbox"/> Sweat	<input type="checkbox"/> Tears	<input type="checkbox"/> Urine	<input type="checkbox"/> Vomit

Other (describe): _____

What was the method of contact?



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- ☐ Blood or bodily fluids into natural body openings (e.g. nose, mouth, eyes)
- ☐ Blood or bodily fluids into cut, wound, sores, or rashes less than 24 hours old

Please specify: _____

- ☐ Blood or bodily fluids on intact skin
- ☐ Other (describe specifically): _____

How did the exposure occur? Be specific.

What action was taken in response to the exposure to remove the contamination (example: hand washing)?

What personal protective equipment was being used at the time of exposure?

Please describe any other information related to the incident (use a separate piece of paper if needed):

Employee's Signature

Date

Supervisor Signature

Date



OCCUPATIONAL EXPOSURE FOLLOW-UP REPORT

(To be completed by the exposed employee and healthcare provider)

CONSENT FOR EXPOSURE INCIDENT FOLLOW-UP

Employee Signature

Date

Date _____

HEALTHCARE PROVIDER - FOLLOW-UP ITEMS:

- ☐ Discussed employee's blood test results
- ☐ Discussed source individual's blood test results with employee (*If known*)
- ☐ Discussed with employee recommendations for additional testing, evaluation, and treatment

Healthcare Provider Signature	Date
-------------------------------	------

Date _____

HEALTH CARE PROVIDER COMMENTS:[illegible]

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PURPOSE AND SCOPE

These procedures establish requirements for communicating information about hazards to employees who may work with or near hazardous chemicals. They were developed in accordance with the **Delaware Hazardous Chemical Information Act (Emergency Planning and Community Right to Know Act)** which requires Kent County to make employees aware of the hazards and provide them with the information and training needed to work safely ("*Hazardous Chemical Information Act.*" **TITLE 16 CHAPTER 24 64 Del. Laws, c. 344, § 1**). This Delaware Act complements or exceeds items that are not covered by the Occupational Safety and Health Administration (OSHA) Hazard Communication (HazCom) Standard (29 *CFR 1910.1200*). They address the implementation and administration of **Kent County** chemical handling procedures.

RESPONSIBILITIES

All personnel working in **Kent County Delaware Governmental Body** (referred to from this point forward as "**Kent County**"), including contractors and vendors, will be instructed in the requirements of this Right-To-Know Program and will be required to follow these procedures when working with or around hazardous chemicals. The **Kent County Health & Safety Officer or His/Her Assistant with the coordination of the Personnel Director/Human Resource Manager** is the Right-To-Know coordinator and will implement the Program by ensuring that:

- Hazardous chemical inventories are conducted and are documented in accordance with the **Delaware Hazardous Substance Workplace Chemical List (DHSWCL) Survey Form** requirements (See Appendix A).
- Information describing the employee's rights under the Act and the current (**DHSWCL**) are posted on employee bulletin boards at each building containing hazardous chemicals.
- All chemical containers and pipelines are properly labeled.
- Employees are trained prior to working with hazardous chemicals.
- Employees are provided with and use appropriate personal protective measures.
- Contractors are notified of the chemicals used in areas they will work and that they have chemical right-to-know or hazard communication programs in place.
- Training records are maintained.
- An annual program evaluation is conducted by the Safety Committee or other responsible party.

The **Department Director(s)/Manager(s) and/or Division Supervisors'/Managers'** is the Material Safety Data Sheet (MSDS) Coordinator who will:

- Ensure that all chemicals purchased are accompanied with a MSDS and that all chemicals are shipped in labeled containers.
- Contact manufacturers to obtain MSDSs as needed to ensure a complete set are available to employees at all times.
- Maintain a supply of hazard warning labels to ensure containers and pipelines are properly labeled.

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HAZARD DETERMINATION

Kent County will rely on the hazard determinations provided by the product manufacturer in the MSDS. If the MSDS does not provide sufficient hazard information, the manufacturer or distributor will be contacted and additional information will be requested prior to use of the chemical.

EMPLOYEE NOTIFICATION

Information describing the employee's rights under the **Delaware Hazardous Chemical Information Act (Worker Right-to-Know Law)** will be posted in each building at locations where normal employee notifications are posted.

CHEMICAL INVENTORY AND MATERIAL SAFETY DATA SHEETS

An inventory of hazardous chemicals used or stored at each facility was conducted and includes all information required by **Delaware Hazardous Substance Workplace Chemical List (DHSWCL) Survey Form**. These **DHSWCL** forms are posted on employee bulletin boards at each facility.

Any new products purchased will be added to the list, and products that have been discontinued will be deleted from the list. The Right-to-Know Coordinator or authorized designee will review the chemical inventory on an annual basis and make any necessary changes.

Chemical Inventories/ **DHSWCL** and MSDS Binders will be kept in the following locations:

- **Kent County Administrative Complex – Facility Management Office**
- **Kent County Library – Director's Office**
- **Kent County Emergency Services Building – Reference Library Room**
- **Kent County Medic Station South (Harrington) – Reference Library Room**
- **Kent County Medic Station North (Smyrna) – Reference Library Room**
- **Kent County Facility (Milford) – Reference Library Room**
- **Kent County Brecknock Park (Camden) – Break Room/Area**
- **Kent County Big Oak Park (Smyrna)– Break Room/Area**
- **Kent County Browns Branch Park (Harrington) – Break Room/Area**

To ensure that all new chemicals receive proper review before being brought on-site, the person requesting a new chemical will provide the MSDS to the MSDS Coordinator for review prior to allowing it to be used in the department. The MSDS Coordinator will review each MSDS and communicate whether the chemical is approved for use.

If an MSDS is not provided with a hazardous chemical, the MSDS Coordinator will request a MSDS from the manufacturer and will not allow the chemical to be used prior to receiving the MSDS.

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LABELING

All containers of hazardous chemicals will be prominently labeled in English (other languages may be used on labels, as long as it also appears in English) with the following information:

- Name of the hazardous chemical or mixture
- Appropriate hazard warnings
- Name and address of the manufacturer.

If labels provided by the manufacturer do not contain this information, the chemical will be returned to the manufacturer. Transfer of a hazardous chemical to another container for use will be conducted according to one of the following procedures:

- Material will be transferred to a pre-labeled container;
- A label provided by the manufacturer will be placed on the container prior to transfer;
- The transferred chemical will be handled only by the employee making the transfer and will be used in its entirety during the same work shift that the chemical was transferred.

NON-ROUTINE TASKS

When employees are required to perform non-routine tasks that may involve the use of hazardous chemicals, specific instruction will be provided by the employee's supervisor or a properly trained and assigned subordinate, to ensure the employee understands the potential hazards and can conduct the tasks safely.

CONTRACTORS

These procedures will be followed each time an outside contractor is hired:

- An evaluation of the contractor's Hazard Communication Program will be conducted by the hiring party to ensure compliance with the OSHA HazCom Standard.
- The contractor will be required to submit a list of hazardous chemicals that will be used while on the premises and corresponding MSDSs to the responsible manager prior to the commencement of work.
- Employees working in or near the contractor work area will be furnished with information regarding the potential hazards associated with the contracted work.

Subcontractors of general contractors will be required to conform to the general contractor's HazCom Program and abide by the requirements of this procedure. The contractor will be advised of the **Kent County** Policy and of:

- Any hazardous material that might be encountered in the area where they will be working;
- The appropriate actions required should contact be made with any such hazardous material; and
- The location of the nearest MSDS Binder.

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TRAINING

Initial training on “Chemical Right to Know” will be provided to new employees during their orientation/training period and no later than 120 days from hire. Documentation of the training will be registered on a Safety Meeting Sign-In Sheet by the attending employees. This training will consist of:

- An overview of the requirements contained in the **Delaware** Right to Know Law including their rights under the regulation.
- Information regarding any operations in there work-areas where hazardous substances are present.
- Location and availability of the written Chemical Right-To-Know program.
- Physical and health effects of the hazardous substances.
- Methods and observation techniques used to determine the presence or release of hazardous substances in the work area and to whom to report such problems.
- How to lessen or prevent exposure to these hazardous substances through the use of engineered controls, work practices and/or the use of personal protective equipment (PPE).
- Emergency and first aid procedures such as evacuation, spill clean up and reporting, etc., if employees are exposed to hazardous materials or substances.
- Where to obtain MSDS and how to read labels to obtain appropriate hazard information.

PERIODIC TRAINING

Periodic training must be conducted by the Right-To-Know Coordinator or Supervisor when:

- A new hazardous chemical enters into the employees work area; or when there is new information received regarding a hazardous chemical already in the work area.
- Employees are transferred from one work area to another and the work involves changes in the hazardous chemicals with which they will be working.

ANNUAL TRAINING

Annual training will be provided to all employees who work with hazardous chemicals. Documentation of the training will be registered on a **dated** Meeting Record signed by the attending employees, and/or signature on training acknowledgment form.

HAZARDOUS CHEMICAL SPILLS

All spills of hazardous chemicals must be immediately reported to your supervisor or the Right-To-Know Coordinator. A knowledgeable person will determine if the spill can be cleaned up safely. If there is any delay in getting the spill properly cleaned up the following will be done:

- Secure or identify the area to prevent any other individual from being exposed to the spill hazard.
- Contain the spill as much as possible using the materials in the spill kits.
- Wait for further instructions from the Right-To-Know Coordinator.

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ANNUAL PROCEDURE EVALUATION

This Program will be evaluated annually to ensure its effectiveness. The evaluation will be performed to ensure that the procedures are current and practical, and that the requirements are being implemented. The evaluation will be conducted to determine that:

- A complete list of hazardous chemicals is maintained and a MSDS exists for each chemical;
- Each container of hazardous chemical is labeled to identify the hazard and the appropriate warnings;
- Employees have received the required training and can demonstrate knowledge; and
- Contractors are provided information on the Program and its requirements and have provided **Kent County** with the required information.

Modifications will be implemented and incorporated into the Program within one (1) month. When revisions are made to the procedures, employees will be furnished with information regarding modifications through one of the following means:

- Written correspondence;
- General staff meetings conducted by supervisors who will discuss procedure changes; or
- Formalized training that will review each aspect of the procedures.



HAZARDOUS SUBSTANCE WORKPLACE CHEMICAL LIST SURVEY FORM

[illegible]

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PURPOSE

The purpose of the confined space entry procedure is to ensure that proper precautions are taken before any employee enters a confined space and that rescue plans are in place should an emergency occur. These procedures apply to all **Kent County Delaware Governmental Body** (referred to from this point forward as “Kent County”) employees and contractors who are working at sites and on projects that are under the direction of **Kent County**.

RESPONSIBILITIES

All personnel working **for and in Kent County**, including contractors and vendors, will be instructed in the requirements of this Confined Space Entry Procedure and will be required to follow these procedures when working at and around confined spaces. The **Kent County Health & Safety Officer or His/Her Assistant with the coordination of the Personnel Director/Human Resource Manager, Department Director(s)/Manager(s) and/or Division Supervisors’/Managers’** will implement the program by:

- Providing all equipment necessary for compliance with this program, including danger signs for confined spaces, an atmospheric monitor, and any other special equipment required for safe confined space entry
- Ensuring that personnel involved in the confined space entry program are trained regarding their duties and responsibilities
- Ensuring that confined space entry is performed in compliance with this program.
- Monitoring compliance with the elements of this program
- Ensuring that all personnel are trained
- Performing a periodic review of this program

DEFINITIONS

Confined Space: A confined space is defined as a space that: (1) has limited or restricted means of entry or exit; (2) is large enough for an employee to enter and perform assigned work; (3) and is not designed for continuous occupancy by the employee. Confined spaces may include, but are not limited to underground vaults, tanks, storage bins, pits and dike areas, **man holes**, vessels, and working silos.

Permit-Required Confined Space: A permit-required confined space is a confined space that has one or more of the following characteristics:

- Contains or has the potential to contain a hazardous atmosphere
- Contains a material that has the potential for engulfing an entrant
- Has an internal configuration that might cause an entrant to be trapped or asphyxiated by inwardly converging walls or by a floor that slopes downward and tapers to a smaller cross section
- Contains any other recognized serious safety or health hazards.

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HAZARD SIGNS

Danger signs should be posted at permit-required confined spaces to inform employees of the existence, location, and danger posed by the spaces. The following language satisfies the requirements for such a sign:

DANGER-PERMIT-REQUIRED CONFINED SPACE-AUTHORIZED ENTRANTS ONLY

HAZARD ASSESSMENT AND JOB PLANNING

Prior to performing any work in a suspected confined space, an assessment should be performed to identify the possible hazards that may be encountered during entry. Refer to Attachment A for a confined space hazard assessment form. When planning the work to be performed in a given confined space, assess the likelihood of incidents, given the hazards, and determine if the work can be done without entering the space. If entry is necessary, the Confined Space Entry Permit System procedures specified below must be followed.

CONFINED SPACE ENTRY PERMIT SYSTEM

The confined space entry permit system establishes procedures for the preparation, issue, use, and cancellation of confined space entry permits which will be required for entry into confined spaces. No person, whether a **Kent County** employee or a contractor may enter any confined space until an entry permit has been completed and signed, and all of the required precautions have been satisfied.

1. Obtain Confined Space Entry Permit

The initiator of the work must obtain a copy of the confined space entry permit specified in Attachment B. The permit initiator should then complete the "Purpose of Entry Work to be Performed" section of the permit. The permit will be valid only for the location, task, date, and time period specified (time periods shall not exceed 12 hours). If work must continue past the time listed on the permit, the permit initiator must issue another permit for the extended period. A new permit must also be issued if work is discontinued for a period exceeding two hours.

2. Ensure that Precautions are Satisfied

The permit initiator and **Kent County Health & Safety Officer or His/Her Assistant** must jointly review the "Minimum Requirements" section of the permit, and verify that the precautions have been satisfied by placing a check mark in the "Yes" column.

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3. Obtain Approval Signatures

The **Project Foreman** acting as the entry supervisor, as well as the attendant(s) and entrant(s) must sign the permit. By signing the permit, each person indicates that he/she has reviewed applicable permit procedures and precautions, inspected the work area, and that he/she understands his/her duties and emergency responsibilities.

4. Post the Permit

Post the confined space entry permit at worksite entrance at the time of entry so that the entrants can confirm that pre-entry preparations have been completed.

5. Terminate Entry and Cancel Permit

The permit initiator will terminate entry and cancel the entry permit when the work assignment has been completed or when a condition that is not allowed under the permit arises in or near the permit space. Upon permit termination, the permit initiator shall record the time that entrants exited the confined space. Any problems or new conditions must be noted on the canceled permit so that appropriate revisions to the permit space program can be made.

6. Recordkeeping

Confined space entry permits must be kept for at least one year to facilitate the review of the permit-required confined space program. The **Department Director/Manager and/or Division Supervisor/Manager** should retain the original permit.

7. Contractors

Prior to work, contractors working under the direction of **Kent County** shall be informed of the existence of permit-required confined spaces at the work site and that confined space entry is only allowed through compliance with the Kent County confined space entry program. When contractors will be entering confined spaces, they shall take part in the permit process so that they are informed of the hazards associated with the confined space and the precautions and procedures for working in the confined space. Entry shall be coordinated so that contractors and **Kent County** employees do not endanger one another. Contractors shall be debriefed at the conclusion of entry operations regarding the permit space program followed and any hazards confronted or created in permit spaces during entry operations.

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CONFINED SPACE ENTRY PERMIT

The precautions listed on the confined space entry permit must be satisfied before a confined space permit is issued.

- The type of confined space entry must be indicated on the permit along with the potential hazards of entry, the materials last known to be in the space, the names of the entrants, and their times of entry and exit into and from the confined space.
- A hazard communication review should be conducted so that all personnel involved understand the hazards associated with the materials in or previously in the confined space. Precautions and emergency procedures should also be reviewed.
- A hot work permit is required for work involving burning, welding, and cutting. No gas cylinders will be permitted in the confined space.
- Personal protective equipment must be selected for the task and donned by employees entering the confined space at all times. The personal protective equipment required may include eye protection, hearing protection, respiratory protection, and protective clothing.
- The persons(s) regularly in charge of the area should be notified of the plans for confined space entry. The space should then be drained, purged, cleaned or decontaminated, or cooled as required.
- Special tool or equipment requirements, such as the need for non-sparking tools or low voltage tools or lighting must be evaluated.
- The need for equipment required for safe ingress and egress, such as ladders or scaffolds, must be evaluated.
- For vertical entries, authorized entrants should wear a chest or full body harness with a retrieval line attached to the center of their backs near shoulder level, or above their heads. Wristlets may be used if it can be shown that the use of a chest or full body harness is infeasible or creates a greater hazard. In addition, the other end of the retrieval line must be attached to a mechanical device or to a fixed point outside the permit space. Use of a lifeline, harness/tripod, and approved winch type system is required for all vertical entries greater than 5 feet.
- The entrants should be protected from external hazards by placing caution signs and barricades around or near the area as necessary.
- Any work in the area of the confined space which could pose a hazard during confined space entry should be stopped prior to entry.
- All hazardous energy sources, such as electrical/mechanical equipment, valves, and vessels/piping, should be isolated using lockout or tagout. The hazardous energy control procedure should be consulted for lockout/tagout and the checklist on the confined space entry permit should be completed.
- One attendant shall be assigned to monitor the entry outside the confined space at all times. The attendant must not enter the confined space at any time. If an emergency occurs, the attendant should utilize the retrieval system to extricate the employee and summon emergency service.
- The attendant shall be equipped with a radio. Communication between the entrants and attendant shall be maintained at all times.

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- Forced ventilation must be supplied where insufficient oxygen levels exist. Purging should begin at least **30** minutes prior to entry and continue for the duration of the work. The ventilation system should provide approximately 12 air changes per hour. The use of gasoline powered ventilators is prohibited.
- Atmospheric monitoring for oxygen, combustible gases or vapors and/or toxic vapors must be performed prior to entry. Continuous monitoring during entry is required when isolation of the permit space is infeasible (such as a sewer). Testing should be performed in the order given below. Test data must meet acceptable entry conditions for confined space entry to proceed and continue. The acceptable entry conditions are as follows:

Conditions	Acceptable Levels
(1) Oxygen content	19.5% to 23.5% oxygen
(2) Combustible gas or vapor content	0% LEL (Lower Explosive Limit)
(3) Toxic vapor (contaminant) content	Less than TLV (Threshold Limit Value) (ppm).

- For continuous monitoring of oxygen and combustible gases or vapors, a personal oxygen/combustible meter should be assigned to at least one entrant. The monitor should be worn throughout entry. The meter must be set to alarm at oxygen concentrations less than 19.5% oxygen and combustible gas or vapor concentrations at 10% of the lower explosive limit (LEL). If the alarm sounds, all entrants should immediately exit the confined space. All meters must be UL or FM approved. **Department Director/Manager and/or Division Supervisor/Manager** is responsible for the semi-annual calibration of equipment. Calibration records should be kept on file.
- The permit initiator shall inspect the work area prior to entry to ensure that all precautions have been satisfied. Approval signatures can then be obtained and entry can begin.

EMERGENCIES

If an emergency situation arises and rescue is necessary (the entrant needs assistance to escape), the attendant shall perform non-entry rescue. After the entrant has been rescued from permit space hazards, the attendant shall call security for emergency services.

TRAINING

Before the initial work assignment begins, all employees required to work in permit spaces must be properly trained. Training will ensure that employees have acquired the understanding, knowledge, and skills necessary for the safe performance of their duties. The specific duties of the authorized entrant, attendant, and entry supervisor are provided below.

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Authorized Entrants must:

- Know space hazards, including information on the mode of exposure (inhalation or dermal exposure), signs or symptoms, and consequences of the exposure
- Use appropriate personal protective equipment properly (face, eye, **respiratory** protection, and other forms of barrier protection such as gloves, aprons, and coveralls)
- Maintain communication (through telephone, radio or visual observation) with attendants to enable the attendant to monitor the entrant's status as well as to alert the entrant to evacuate
- Alert the attendant when a prohibited condition exists or when warning signs or symptoms of exposure exist
- Exit from the permit space as soon as possible when ordered by an authorized person, when the entrant recognizes the warning signs or symptoms of exposure, when a prohibited condition exists or when an automatic alarm is activated.

Attendants must:

- Know the existing and potential hazards faced during entry, including information on the mode of exposure, signs or symptoms of exposure, consequences of the exposure, and the behavioral and physiological effects of exposure in authorized entrants.
- Maintain communication with and keep an accurate account of those workers entering the permit-required space.
- Remain outside the permit space during entry operations unless relieved by another authorized attendant.
- Communicate with the authorized entrants as necessary to monitor entrant status and to alert entrants of the need to evacuate the space.
- Monitor activities inside and outside of the permit space and order evacuation of the permit space when a prohibited condition exists, when a worker shows signs of behavioral/physiological effects of hazard exposure, when an emergency outside the confined space exists or when the **entrant/employee** cannot effectively and safely perform the required duties.
- Summon rescue and other emergency services as soon as **attendant(s)** determines that the entrants may need assistance to escape from permit hazard.
- Ensure that unauthorized persons stay away from permit spaces or exit immediately if they have entered the permit space.
- Inform authorized entrants and the entry supervisor of entry by unauthorized persons.
- Perform non-entry rescues when specified by the rescue procedure.
- Perform no other duties that interfere with the primary duty to monitor and protect the entrants.

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Entry Supervisor (Permit Initiator) must:

- Know the space hazards that may be faced during entry including information on the mode of exposure, signs or symptoms of exposure, and consequences of exposure.
- Verify that rescue service are available and that the means for summoning them are operable
- Verify emergency plans and specified entry conditions such as tests, procedures, and equipment before endorsing the permit and allowing entry to begin.
- Take appropriate measures to remove unauthorized entrants who enter or attempt to enter the permit space during entry operations.
- Ensure that entry operations remain consistent with the entry permit and that acceptable entry conditions are maintained at intervals dictated by the hazards and operations performed within the space and whenever responsibility for a permit space entry operation is transferred.
- Terminate entry and cancel permits when entry operations are completed or if a new condition exists

Additional training is required when (1) job duties change, (2) there is a change in the permit-required space program or the permit space operation presents a new hazard, and (3) when job performance is inadequate.

Rescue service personnel shall be provided with and trained in the proper use of personal protective and rescue equipment, including respirators. Rescue personnel shall also be trained to perform assigned rescue duties and shall have had authorized entrants training. In addition, all rescuers shall be trained in first aid and CPR and, at a minimum, one rescue team member must be currently certified in first aid, **Automated External Defibrillator (AED)**, and CPR. Practice exercises must be performed yearly and shall include an exercise where rescue personnel are given access to permit spaces so that they can practice rescue operations. Rescuers shall also be informed of the hazards of the permit space.

Upon completion of training, a certificate of training will be given to **an employee that includes** the employee's name, signature or initials of trainer(s), and dates of training. All training documentation will be maintained by **Personnel Director/Human Resource Manager**.

CONFINED SPACE ENTRY PROGRAM REVIEW

To ensure that employees participating in entry operations are protected from permit space hazards, the permit-required confined space program shall be reviewed by [Insert Responsible Position Title] using the canceled permits within one year after each entry. If deficiencies are found, the program should be revised accordingly. If no entry is performed during a 12 month period, no review is necessary.



DRAFT
CONFINED SPACE ENTRY
ATTACHMENT A
Kent County
Confined Space Hazard Assessment Form

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Original Issue Date:

Last Reviewed:

Revision Number:

Date of Survey:		Name of Space:		Permit Required? Yes: <input type="checkbox"/> No: <input type="checkbox"/>	
Location of Space:					
Description of Space:					
Possible Atmospheric Hazards:					
Oxygen Deficiency: <input type="checkbox"/>		Oxygen Enrichment: <input type="checkbox"/>		Flammable (Specific): <input type="checkbox"/>	
				Toxic (Specific): <input type="checkbox"/>	
Comments:					
Possible Content Hazards:					
Previous Contents: <input type="checkbox"/>		Content Fill or Removal: <input type="checkbox"/>		Shifting Contents: <input type="checkbox"/>	
				Fluid Levels: <input type="checkbox"/>	
				Dust: <input type="checkbox"/>	
Comments:					
Potential Energy:					
Electrical: <input type="checkbox"/>		Hydraulic: <input type="checkbox"/>		Pneumatic: <input type="checkbox"/>	
				Mechanical: <input type="checkbox"/>	
				Fire Control System: <input type="checkbox"/>	
Comments:					
Environment in the Space:					
Slippery Surfaces: <input type="checkbox"/>		Ambient Temperature (High or Low): <input type="checkbox"/>		Surface Temperature (High or Low): <input type="checkbox"/>	
				Noise: <input type="checkbox"/>	
Comments:					
Configuration of Space:					
Interior Shape & Slope: <input type="checkbox"/>		Low Overhead Clearance: <input type="checkbox"/>		Drop Offs: <input type="checkbox"/>	
				Complex Layout: <input type="checkbox"/>	
				Stability: <input type="checkbox"/>	
				Structural Integrity: <input type="checkbox"/>	
Comments:					
External Hazards:					
Traffic: <input type="checkbox"/>		Machinery: <input type="checkbox"/>		Equipment: <input type="checkbox"/>	
				Processes: <input type="checkbox"/>	
				Terrain: <input type="checkbox"/>	
Comments:					
Other Hazards:					
Animals: <input type="checkbox"/>		Insects: <input type="checkbox"/>		Biological Organisms: <input type="checkbox"/>	
				Non-ionizing Radiation: <input type="checkbox"/>	
				Ionizing Radiation: <input type="checkbox"/>	
Comments:					
Confined Space			Permit Required Confined Space		
Can be bodily Entered?		Yes: <input type="checkbox"/>	No: <input type="checkbox"/>	Hazardous Atmosphere?	
Limited or Restricted Entry?		Yes: <input type="checkbox"/>	No: <input type="checkbox"/>	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	
Not Designed for Continuous Human Occupancy?		Yes: <input type="checkbox"/>	No: <input type="checkbox"/>	Potential for Engulfment?	
				Yes: <input type="checkbox"/> No: <input type="checkbox"/>	
				Internal Configuration Hazard?	
				Yes: <input type="checkbox"/> No: <input type="checkbox"/>	
				Other Serious Safety Hazard?	
				Yes: <input type="checkbox"/> No: <input type="checkbox"/>	
Notes: Atmosphere unknown					
Reasons for Entering Space and Typical Activities:					
Frequency of Entry:			Number of Entry Points:		
Who usually enters the space?		Maintenance: <input type="checkbox"/>	Production: <input type="checkbox"/>	Contractors: <input type="checkbox"/>	Other: <input type="checkbox"/>
External Connections to Space:					
Eligible for Alternate Procedure?		Yes: <input type="checkbox"/>	No: <input type="checkbox"/>	Eligible for Reclassification?	
				Yes: <input type="checkbox"/> No: <input type="checkbox"/>	
Comments:					



DRAFT
CONFINED SPACE ENTRY
ATTACHMENT B (TWO PAGES)
Kent County
CONFINED SPACE ENTRY PERMIT

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Original Issue Date:
INSERT DATE

Last Reviewed:
INSERT DATE

Revision Number:
INSERT NUMBER

Date of Issue: _____ Time Issued: _____ Authorized Duration of Permit: _____ Space to be Entered: _____

Purpose of Entry and Work to be Performed: _____

Potential Permit Space Hazards: () Oxygen Deficient/Enrichment () Flammable Atmosphere () Mechanical Hazards () Toxic Materials () Entrapment
() Electrical Shock () Other: _____

Hazard Isolation/Elimination Methods: () Purge and Clean () Pipes Blanked or Disconnected () Lockout/Tagout () Mechanical Ventilation () Atmospheric
Testing () Hot Work Permit () Other _____

Note: If hot work is performed a hot work permit is required. Prior approval is required if solvents or hazardous chemicals are introduced into the space. If work involves hazardous energy, lockout/tagout procedures must be followed.

Minimum Requirements to Be Performed and Reviewed Prior To Entry

	YES	NO	N/A
1. Have the contents of the confined space been removed and the space cleaned?	_____	_____	_____
2. Is the oxygen level of the confined space between 19.5 % and 23.5 %?	_____	_____	_____
3. Is the lower flammability level less than 10%?	_____	_____	_____
4. Are toxic substances below the permissible exposure limit (OSHA PEL)?	_____	_____	_____
Note: Be aware of stratified atmospheres in the confined space.	_____	_____	_____
5. Is the area around the confined space secured with perimeter guarding?	_____	_____	_____
6. Are all hazardous energy sources controlled and operating controls checked?	_____	_____	_____
7. List required safety equipment	_____	_____	_____
8. Has a Hot Work Permit been issued if required?	_____	_____	_____
9. Is the non-entry retrieval system in place?	_____	_____	_____
10. Is two-way communication established between Entrant and Attendant?	_____	_____	_____



DRAFT
CONFINED SPACE ENTRY
ATTACHMENT B (TWO PAGES)
Kent County
CONFINED SPACE ENTRY PERMIT

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11. Is the portable ventilation fan in place and operating properly? _____

12. Has a pre-entry briefing been conducted with all attendants and entrants? _____

13. List required protective equipment _____

Explain any NO responses from above: _____

Authorized Personnel

Attendant(s): Name: _____ Signature: _____ Entrant(s): Name: _____ Signature: _____

 Name: _____ Signature: _____ Entrant(s): Name: _____ Signature: _____

MSDSs available for materials/chemicals contained in the space: (Y) (N) Communication procedure to summon emergency personnel: (Y) (N)

Method of transportation to nearest hospital: (Y) (N)

Record Periodic/Continuous Air Monitoring Results At Least Every Hour

	Value	Initials	Time	Value	Initials	Time	Value	Initials	Time
Oxygen Level 19.5-23.5%	_____	_____	_____	_____	_____	_____	_____	_____	_____
Lower Flammable Level 0%	_____	_____	_____	_____	_____	_____	_____	_____	_____
Carbon Monoxide <10PPM	_____	_____	_____	_____	_____	_____	_____	_____	_____
Other : _____	_____	_____	_____	_____	_____	_____	_____	_____	_____

Authorization


Entry Supervisors must review and inspect the area to ensure that all requirements of the entry permit are performed & authorize entry by signature below.

Entry Supervisor Name/Signature

Time Work Completed/Permit Cancelled

NOTE: Permit must be completed before entry. Post entry permit near the opening of the confined space. If conditions exceed permit requirements terminate entry immediately and report to **Health & Safety Officer or His/Her Assistant**. Return completed entry permit to **Department Director/Manager and/or Division Supervisor/Manager**

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PURPOSE

The purpose of the Cranes, Slings, and Hoists Safety Program is to define the work practices and the inspection procedures to help ensure that the operators of the overhead cranes at **Kent County Delaware Governmental Body (referred to from this point forward as “Kent County”)** are protected from potential hazards associated with the movement of equipment and material. This program includes information on the safe operation and inspection procedures of small portable overhead hoists, chains, slings and hoists. The provisions of the Cranes, Slings, and Hoists Safety Program apply to all **Kent County** employees who operate and use overhead cranes, portable hoists, chains and slings.

RESPONSIBILITIES

All personnel working **for Kent County**, including contractors and vendors, will be required to follow these procedures when working with cranes, slings, and hoists. The **Kent County Health & Safety Officer or His/Her Assistant with the coordination of the Personnel Director/Human Resource Manager** will implement the program by:

- Providing or arranging training for the safe operation of overhead cranes, and the inspection procedure for chains, slings and hoists.
- Facilitating training on the requirements of the Cranes, Slings, and Hoists Safety Program.
- Assuring that the requirements of the program are observed, with respect to daily, monthly and annual inspections.
- Maintaining certification record for inspection, including the date of inspection, the signature of the person who performed the inspection and an identifier for the rope.
- Reviewing the Cranes, Slings, and Hoists Safety Program on a periodic basis and revise it as necessary.


All crane and hoist operators will:

- Follow all required safety practices related to the use of overhead cranes, portable hoists, chains and slings.
- Attend training on the requirements of the Cranes, Slings, and Hoists Safety Program and the appropriate inspection procedures for chains, slings and hoists.
- Conduct the appropriate inspections when they are required and complete the required documentation and notify their supervisor of any deficiencies identified during inspections.

DEFINITIONS

Crane: A crane is a machine for lifting and lowering a load and moving it horizontally, with the hoisting mechanism an integral part of the machine. Cranes whether fixed or mobile are driven manually or by power.

Hoist: A hoist is an apparatus which may **or may not** be a part of a crane, exerting a force for lifting or lowering.

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Overhead Crane: An overhead crane is a crane with a movable bridge carrying a movable or fixed hoisting mechanism and traveling on an overhead fixed runway structure.

Rated Load: The rated load is the maximum load for which a crane or individual hoist is designed and built by the manufacturer and shown on the equipment nameplate(s).

Sling: A sling is a loop of material that connects the load to the lifting device. Slings can be made of chain, wire, metal mesh, natural, and synthetic materials.

Competent Person: One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them. (1926.32 Definitions subpart (f) OSHA)

CRANE OPERATION

Operators will not leave their position at the controls while the load is suspended or pass under a suspended load on the hook. Other employees are not permitted to walk under a suspended load.

1. Attaching the Load

The operator must be familiar with the appropriate rigging and hoisting techniques to safely move the load. Additionally, the following items should be used to attach the load:

- The hoist chain or hoist rope should be free of kinks or twists and must not be wrapped around the load.
- The load should be attached to the load block hook by means of slings or other approved devices. The sling should clear all obstacles.

2. Moving the Load

The load should be well secured and properly balanced in the sling or lifting device before it is lifted more than a few inches. Before starting the hoist, the hoist rope should not be kinked and the multiple part lines should not be twisted around each other. The hook should be brought over the load in such a manner as to prevent swinging. There should be no sudden acceleration or deceleration of the moving load. The load should not contact any obstructions.

- While any employee is on the load or hook, there will be no hoisting, lowering or traveling.
- The operator will avoid carrying loads over people.
- The operator will test the brakes each time a load approaching the rated load is handled. The brakes will be tested by raising the load a few inches and applying the brakes.
- The load will not be lowered below the point where less than 3 full wraps remain on the hoisting drum.
- The operator will not leave his position while the load is suspended. The operator needs to be aware of the appropriate chains, hoist, and sling requirements.

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RATED LOAD MARKING

The rated load of the crane will be plainly marked on each side of the crane. If the crane has more than one hoisting unit, each hoist and each hoist attachment should have the rated load clearly marked. The marking will be clearly legible from the ground or the floor. The load will not exceed the rated load of the crane or hoist (a load is defined as the total superimposed weight on the load block or hook and includes any lifting devices such as magnets, spreader bars, chains and slings).

CHAINS, SLINGS AND HOISTS

The following safety practices must be observed:

- Slings that are damaged or defective should be destroyed. Slings must not be shortened with knots, belts or other makeshift devices, and sling legs must not be kinked.
- Slings will not be loaded in excess of their rated capacities. They will be securely attached to their loads.
- Slings should be padded or protected from the sharp edges of their loads.
- Hands or fingers will not be placed between the sling and its load while the sling is being tightened around the load.
- A sling should not be pulled from under a load when the load is resting on the sling.

Alloy Steel Chain Slings:

All steel chain slings should have a permanently affixed durable identification stating size, grade, rated capacity and reach, and inspection date. Worn or damaged alloy steel chain slings or attachments should not be used until it is repaired. All steel chain slings with cracked or deformed master links, coupling links or other components should be removed from service.

Wire Rope Slings:

Wire rope slings should be removed from service if any of the following is present:

- Six randomly distributed broken wires in one rope lay or three broken wires in one strand in one rope lay.
- Wear or scraping of one-third the original diameter of outside individual wires.
- Kinking, crushing, bird caging, or any other damage is noted.
- Corrosion of the rope or end attachments.
- There is evidence of heat damage.
- End attachments are cracked, deformed or worn.
- It is determined that hooks have been opened more than 15 percent of the normal throat opening measured at the narrowest point or twisted more than 10 degrees from the plane of the unbent hook.

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Metal Mesh Slings:

Each metal mesh sling must have permanently affixed to it a durable marking that states the rated capacity for a vertical basket and choker hitch loadings. Metal mesh slings must be immediately removed from service, if any of the following conditions are present:

- A broken weld or brazed joint along the sling edge.
- A reduction in wire diameter of 25 percent due to abrasion or 15 percent due to corrosion.
- Lack of flexibility due to distortion of the fabric.
- A 15 percent reduction of the original cross sectional area of metal at any point around the handle eye.
- Distortion of the female handle so that the depth of the slot is increased more than 10 percent.
- Distortion of either handle so that the width of the eye is decreased more than 10 percent.

Natural and Synthetic Fiber Rope Slings:

Natural and synthetic fiber rope slings will be immediately removed from service if there is:

- Abnormal wear.
- Powdered fiber between strands.
- Variations in the size or roundness of strands.
- Discoloration or rotting.
- Distortion of hardware in the sling.

Synthetic web slings will be immediately removed and destroyed if there are:

- Acid or caustic burns.
- Melting or charring of any part of the sling surface.
- Snags, punctures, tears or cuts.
- Broken or worn stitches.
- Distortion of fittings.


MOBILE CRANES

All **Kent County** employees will adhere to manufacturer's specifications and limitations applicable will be to the operation of mobile cranes. The attachments that are used with a crane must not exceed the capacity, rating or scope recommended by the manufacturer. The rated load capacities, recommended operating speeds, and special hazard warnings or instruction will be conspicuously posted on all equipment.

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The requirements for the use of mobile cranes are:

- A designated competent person will inspect all machinery and equipment prior to each use and during use, to make sure that it is in safe operating condition. If a defective part is found, all parts should be repaired or replaced.
- A thorough annual inspection of the hoisting machinery will be made by a competent person. The dates and the result of the inspections for each hoisting machine and piece of equipment will be documented. The documentation will be maintained by **the Department/Division Director or Designated Supervisor**.
- All accessible areas within the swing radius of the rear of the rotating superstructure of the crane will be barricaded in such a manner as to prevent an employee from being struck or crushed by the crane.
- All exhaust pipes will be guarded or insulated in areas where contact by employees is possible in the performance of normal duties.
- All windows in cabs will be safety glass, or equivalent. There should be no visible distortion that will interfere with the safe operation of the machine.
- Guard rails, handholds, and steps will be provided on cranes for easy access to the car and the cab.
- Platforms and walkways will have anti-skid surfaces.
- An accessible fire extinguisher of 5BC rating or higher will be available at all operator stations or cabs of equipment.
- If the equipment or machinery must be operated next to electrical lines, then the following procedures must be followed:
 - For electrical lines that are rated 50 KV or below, the minimum clearance between the lines and any part of the crane or load will be **20** feet.
 - For lines rated over 50 KV, the minimum clearance between the lines and any part of the crane or load will be 10 feet plus 0.4 inch for each 1 KV over 50 KV, or twice the length of the line insulator, but never less than **20** feet.
 - If the equipment is in transit with no load and boom lowered, the equipment clearance will be a minimum of 4 feet for voltages less than 50 KV and 10 feet for voltages over 50 KV, up to and including 345KV, and 16 feet for voltages up to and including 750 KV.
 - A safety observer will be designated to observe clearance of the equipment and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visual means.
 - Any overhead wire will be considered to be an energized line unless documentation is available to determine that the electrical lines are de-energized.

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INSPECTIONS

Overhead crane inspections are divided into two general classifications: Frequent Inspections and Periodic Inspections.

Frequent Inspections:

- Rope slings, hooks and other lifting equipment will be visually inspected prior to each day's use. All parts including chains, cables, ropes, hooks, etc., on overhead and gantry cranes must be visually inspected daily for deformation, cracks, excessive wear, twists, stretch, or other signs of deterioration that may pose a hazard during use.
- Hooks and chains must be visually inspected daily and monthly. Hooks that have cracks or have more than 15 percent in excess of normal throat opening or more than 10 percent twist from the plane of the unbent hook must be replaced.
- Running ropes must be inspected monthly. Any deterioration which results in appreciable loss of strength must be inspected and a determination made as to whether further use of the rope constitutes a safety hazard. The monthly inspection will consist of noting the following disqualifying conditions:
 - Reduction of rope diameter below a nominal diameter due to loss of core support, internal or external corrosion, or wear of outside wires.
 - Three broken wires in one strand in one lay length or six broken wires in any one lay length.
 - Worn outside wires.
 - Corroded or broken wires at connections.
 - Corroded, cracked, bent, worn or improperly applied end connections on the equipment name plate.
 - Severe kinking, crushing, cutting or un-stranding.


Refer to Appendix A for an inspection checklist to be used for Frequent Inspections.

Periodic Inspections:

Periodic inspections will be conducted by a factory trained employee or a contract certified inspection service. A complete inspection of the crane should be performed at least every 12 months. The inspection should include the following:

- Noting any cracked, corroded, worn or loose members or parts.
- Noting and replacing loose bolts and tightening those bolts.
- Testing the limit indicators (wind, load, etc), power plant and electrical apparatus.
- Load testing must be performed at no more than 125% of the rated load, unless it is otherwise recommended by the equipment manufacturer.
- Examining the electrical apparatus for any signs of pitting, or any deterioration of controller contractors, limit switches and push button stations.
- Travel distance steering.
- Testing the braking system for excessive wear on the lining, pawls and ratchets.

Written documentation of periodic inspections will be prepared by the inspector. The documentation will be maintained by **the Department/Division Director or Designated Supervisor.**

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REPAIR AND MAINTENANCE

All cranes and accessories will be maintained in a condition that will not endanger an operator or other employee. Before adjustments or repairs are made on a crane, all of the following precautions must be taken:

- The crane will be moved to a location where it will cause the least interference with other moving equipment on the track or rails and operations in the area.
- Controllers will be placed in the “off” position.
- The main switch will be placed in the “off” position or “open” position and locked out, except where power is necessary to adjust or service the crane.
- Appropriate signs or warnings will be used to alert affected personnel that the equipment is being repaired or maintained.

If any adjustments have to be made to the unit, the crane will not be operated until all the guards have been installed, all safety devices reactivated, and all maintenance equipment moved. If any defect is found, the crane will not be operated until the repair or the adjustment is made.

PERSONAL PROTECTIVE EQUIPMENT

All employees who handle wire slings and the hoist cables will wear leather gloves to prevent any hand injury.

TRAINING

Employees will be trained on the safe operation of cranes, slings, and hoists prior to the use of any such equipment. The training will be performed by a qualified person and include:

- Maximum rated capacities of equipment and attachments
- Safe crane operations and work practices, including attaching and moving the load
- How to perform Periodic Inspections of cranes, slings, and hoists
- Observation of crane operations

Upon completion of training, a record of the training will be completed by documenting employee's name, signature of trainer(s), and dates of training. All training documentation will be maintained by **the Personnel Director/Human Resource Manager**.

CRANES, SLINGS, AND HOISTS SAFETY PROGRAM REVIEW

Periodic reviews of the Cranes, Slings, and Hoists Safety Program will be performed by **the Department/Division Director or Designated Safety Coordinator** to ensure that the operating practices and inspection procedures remain relevant and effective for the equipment in operation. If deficiencies are identified, the program will be revised accordingly.

	DRAFT CRANES, SLINGS, AND HOISTS Attachment A Periodic Crane Inspection Form		Page 8 of 8
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DATE		INSPECTOR	
LOCATION		SERIAL NUMBER	

KEY: N/A – Not Applicable A – Acceptable D – Deficient

- Crane Rail and Structural Supports:

N/A	A	D	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Intact.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Load Rating posted.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Secured to the floor.
- Hoist body and rail rollers:

N/A	A	D	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No visible cracks.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No leaking fluids.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Load Rating posted.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No excessive wear.
- Control pendant and electrical cord:

N/A	A	D	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Control cord and power cord condition.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Strain relief.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pendant Box Condition
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Push Box Condition.
- Chain:

N/A	A	D	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No excessive wear.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not twisted.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No distorted links interfering with proper function.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No stretching.
- Hook(s):

N/A	A	D	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not deformed or cracked.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Safety latch present and functioning properly.
- Running Ropes:

N/A	A	D	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reduction of rope diameter
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Broken wires in strand, worn outside wires, of severe kinking, crushing, or cutting
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No corroded or broken wires at connections.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No corroded, cracked, bent, worn or improperly applied end connections on the equipment name plate.
- Functional Test:

N/A	A	D	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vertical.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Horizontal.

NOTE: Any parameter marked as (D)-Deficient must be accompanied by a detailed description of the deficiency. The crane must be taken out of service and **Department/Division Director/Manager** must be informed immediately.



HAZARDOUS SUBSTANCE WORKPLACE CHEMICAL LIST SURVEY FORM

[illegible]

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PURPOSE AND SCOPE

This program establishes the training, inspection and operating requirements concerning proper ergonomics for personnel and work sites at Kent County Delaware Governmental Body (referred to from this point forward as “Kent County”). This program applies to all employees and contractors working on any site owned or operated by Kent County

OVERVIEW

Work-related musculoskeletal disorders (MSD) are the most widespread occupational health hazard facing our Nation today

Ergonomics is the science of fitting workplace conditions and job demands to the capabilities of the working population. Effective and successful "fits" assure high productivity, avoidance of illness and injury risks, and increased satisfaction among the workforce. Although the scope of ergonomics is much broader, the term here refers to assessing those work-related factors that may pose a risk of musculoskeletal disorders (MSD) and recommendations to alleviate them. Common examples of ergonomic risk factors are found in jobs requiring repetitive, forceful, or prolonged exertions of the hands; frequent or heavy lifting, pushing, pulling, or carrying of heavy objects; and prolonged awkward postures. Vibration and cold may add risk to these work conditions. Jobs or working conditions presenting multiple risk factors will have a higher probability of causing a musculoskeletal problem. The level of risk depends on the intensity, frequency, and duration of the exposure to these conditions. Environmental work conditions that affect risk include intensity, frequency and duration of activities.

RESPONSIBILITIES

Kent County Health & Safety Officer or His/Her Assistant with the coordination of the Personnel Director/Human Resource Manager, Department Director(s)/Manager(s) and/or Division Supervisors'/Managers' will be responsible for the following:

- Developing specific policies and procedures pertaining to the reducing of ergonomics (MSD) risks for personnel and work sites at Kent County
- Implementation of employee training based on the general principles of proper ergonomic safety and standards.

Managers and supervisors are responsible for:

- Arranging for ergonomic training of employees in their departments.
- Ensuring that work stations/sites are properly inspected and provide a proper ergonomic environment for employees.
- Inspecting employee's work site/areas and completing the inspection form in (Appendix # 1).

Employees are responsible for:

- Using proper ergonomics at their work station/site.
- Reporting ergonomic deficiencies, equipment defects and/or maintenance needs to their supervisors immediately.

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TRAINING REQUIREMENTS

Kent County will provide training to ensure that all managers, supervisors and employees understand the purpose and function of this ergonomic program.

Training will be as follows:

- **Initial Training:** Training that is conducted by Department Director(s)/Manager(s) and/or Division Supervisors'/Managers' for all new employees. This training will be conducted within 5 days of employment.
- **General Refresher Training:** General regulatory overview conducted every three years by Department Director for all managers, supervisors and employees within their department.
- **Training Records:** Training records are filed with Personnel Director/Human Resource Manager and will be maintained for 3 years from the date on which the training occurred.
- **Training Requirements:** Employees will be trained to recognize hazards related to poor or improper ergonomic conditions within their work site/area

EQUIPMENT INSPECTIONS

New or Modified Equipment Safety Inspection: An inspection of new or modified work site arrangements and furnishings is performed by Division Safety Coordinator and/or Supervisor.

Pre-Use Inspections: If items provided to the employee or items utilized by the employee do not meet proper ergonomic standards, the employee will immediately notify his/her supervisor, or the supervisor will notify the employee.

Periodic Inspection: Semiannual inspections are performed for each work station/site in accordance with the recommendations by Division Safety Coordinator and/or Supervisor.

- The results of the new equipment and furnishings inspections will be documented and retained by Division Supervisor for 12 months for recordkeeping purposes.
- Arrangements, furnishings, and equipment with ergonomic defects shall be modified, repaired, or replaced.

PROGRAM REVIEW

This program will be reviewed by the safety committee within 12 months of the last review dated. Any changes made to this document will be noted by a modification to the Revision Number.

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APPENDIX # 1

WORK SITE/AREAS ERGONOMIC INSPECTION FORM

WORKING POSTURES <i>The workstation is designed or arranged for doing computer tasks so it allows</i>	Y	N	N/A
Head and neck to be upright, or in-line with the torso	Y	N	N/A
Head, neck, and trunk to face forward (not twisted)	Y	N	N/A
Trunk to be perpendicular to floor (may lean back into backrest but not forward).	Y	N	N/A
Shoulders and upper arms to be in-line with the torso, generally about perpendicular to the floor and relaxed (not elevated or stretched forward)	Y	N	N/A
Arms and elbows to be close to the body (not extended outward)	Y	N	N/A
Forearms, wrists, and hands to be straight and in-line (forearm at about 90 degrees to the upper arm).	Y	N	N/A
Wrists and hands to be straight (not bent up/down or sideways toward the little finger).	Y	N	N/A
Thighs to be parallel to the floor and the lower legs to be perpendicular to floor (thighs may be slightly elevated above knees).	Y	N	N/A
Feet rest flat on the floor or are supported by a stable footrest	Y	N	N/A
	Y	N	N/A
SEATING <i>Consider these points when evaluating the chair</i>	Y	N	N/A
Backrest provides support for your lower back (lumbar area)	Y	N	N/A
Seat width and depth accommodate the specific user (seat pan not too big/small)	Y	N	N/A
Seat front does not press against the back of your knees and lower legs (seat pan not too long).	Y	N	N/A
Seat has cushioning and is rounded with a "waterfall" front (no sharp edge).	Y	N	N/A
Armrests, if used, support both forearms while you perform computer tasks and they do not interfere with movement	Y	N	N/A
Does chair have a sturdy five-legged base with good chair casters that roll easily over the floor or carpet?	Y	N	N/A
Does the chair swivel 360 degrees so it is easier to access items around workstation without twisting?	Y	N	N/A
Is the backrest at least 15 inches high and 12 inches wide and provide lumbar support that matches the curve of the users lower back?	Y	N	N/A
Most chairs are designed for weights under 275 pounds. Has the chair been designed for extra weight above 275 pounds?	Y	N	N/A
Are armrests large enough (in length and width) to support users forearm without interfering with the work surface?	Y	N	N/A
	Y	N	N/A

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APPENDIX # 1 - WORK SITE/AREAS ERGONOMIC INSPECTION FORM (Con't)

KEYBOARD/INPUT DEVICE <i>Consider these points when evaluating the keyboard or pointing device</i>	Y	N	N/A
The keyboard/input device is designed or arranged for doing computer tasks	Y	N	N/A
Keyboard/input device platform(s) is stable and large enough to hold a keyboard and an input device	Y	N	N/A
Input device (mouse or trackball) is located right next to keyboard so it can be operated without reaching	Y	N	N/A
Input device is easy to activate and the shape/size fits employee's hand (not too big/small).	Y	N	N/A
Wrists and hands do not rest on sharp or hard edges	Y	N	N/A
Does cord allow for a variety of positions/locations	Y	N	N/A
Is employee utilizing a split keyboard which allows them to maintain neutral wrist postures	Y	N	N/A
Is the cord that plugs into the CPU at least six feet long? Should be long enough to allow the user to place the keyboard and the CPU in a variety of positions. At least six feet of cord length is desirable	Y	N	N/A
Is the minimum keyboard tray vertical adjustment range (for a sitting position) 22 inches to 28 inches from the floor?	Y	N	N/A
Does keyboard trays have adjustment mechanisms that lock into position without being difficult to loosen?	Y	N	N/A
MONITOR <i>Consider these points when evaluating the monitor</i>	Y	N	N/A
Is the monitor designed or arranged for computer tasks at least 20 inches away from users eyes	Y	N	N/A
Top of the screen is at or below eye level so you can read it without bending your head or neck down/back.	Y	N	N/A
User with bifocals/trifocals can read the screen without bending the head or neck backward.	Y	N	N/A
Monitor distance allows you to read the screen without leaning your head, neck or trunk forward/backward.	Y	N	N/A
Monitor position is directly in front of you so you don't have to twist your head or neck.	Y	N	N/A
Glare (from windows, lights) is not reflected on your screen which can cause you to assume an awkward posture to clearly see information on your screen.	Y	N	N/A
Screen is large enough for adequate visibility. A 15 - 20-inch monitor is sufficient	Y	N	N/A
Angle and tilt is be easily adjustable	Y	N	N/A
	Y	N	N/A

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APPENDIX # 1 - WORK SITE/AREAS ERGONOMIC INSPECTION FORM (Con't)

WORK AREA	Y	N	N/A
<i>Consider these points when evaluating the desk and workstation</i>			
Thighs have sufficient clearance space between the top of the thighs and your computer table/keyboard platform (thighs are not trapped).	Y	N	N/A
Is the minimum under-desk clearance depth 15 inches for user's knees and 24 inches for user's feet?	Y	N	N/A
	Y	N	N/A
ACCESSORIES	Y	N	N/A
Document holder, if provided, is stable and large enough to hold documents	Y	N	N/A
Document holder, if provided, is placed at about the same height and distance as the monitor screen so there is little head movement, or need to re-focus, when you look from the document to the screen.	Y	N	N/A
Wrist/palm rest, if provided, is padded and free of sharp or square edges that push on your wrists.	Y	N	N/A
Wrist/palm rest, if provided, allows you to keep your forearms, wrists, and hands straight and in-line when using the keyboard/input device	Y	N	N/A
Telephone can be used with your head upright (not bent) and your shoulders relaxed (not elevated) if you do computer tasks at the same time.	Y	N	N/A
	Y	N	N/A
GENERAL	Y	N	N/A
Workstation and equipment have sufficient adjustability so a safe working posture and can make occasional changes in posture while performing computer tasks.	Y	N	N/A
Computer workstation, components and accessories are maintained in serviceable condition and function properly.	Y	N	N/A
Computer tasks allows employee to vary tasks with other work activities, or to take micro-breaks or recovery pauses while at the computer workstation	Y	N	N/A
	Y	N	N/A
TELEPHONES	Y	N	N/A
Does working requirements require a "hands-free" headset?	Y	N	N/A
Does working requirements require a speakererfeature?	Y	N	N/A
	Y	N	N/A
DESK LIGHTING	Y	N	N/A
Is adequate lighting provided for task and user?	Y	N	N/A
Is the location and angle of the light sources, as well as their intensity levels, fully adjustable.	Y	N	N/A
	Y	N	N/A

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APPENDIX # 1 - WORK SITE/AREAS ERGONOMIC INSPECTION FORM (Con't)

NON-OFFICE ENVIROMENTS	Y	N	N/A
Is appropriate ergonomically designed delivery equipment such as hand trucks, stair climbers, conveyors, being utilized?	Y	N	N/A
Are delivery vehicle pull-out step-on platforms, exterior grab handles on all bays and drop down bay shelves installed as needed?	Y	N	N/A
Is light weight plastic pallets being utilized?	Y	N	N/A
Does the work environment require employees to assume awkward or static body postures for a prolonged period of time?	Y	N	N/A
Have psychosocial factors such as job dissatisfaction, monotony, and limited job control been observed or noted?	Y	N	N/A
Are employees exposed to force - the amount of physical effort required to perform a task (such as heavy lifting, pushing, pulling) or to maintain control of the equipment or tools	Y	N	N/A
Has "non-value steps" such as "wasted walking" or "wasted motion" to pick up parts/items been eliminated?	Y	N	N/A
Are employees exposed to repetition - performing the same motion or series of motions frequently for an extended period of time. ?	Y	N	N/A
Are employees exposed to awkward & prolonged static body posture - assuming positions that place stress on the body, such as repeated or prolonged reaching above the shoulder height, bending forward or to the side, twisting, kneeling, or squatting.?	Y	N	N/A
Are employees exposed to contact stress - pressing the body or part of the body (such as the hand) against hard or sharp edges, or using the hand as a hammer?	Y	N	N/A
Are employees exposed to vibration - using vibrating tools such as sanders, chippers, drills, grinders, or reciprocating saws?	Y	N	N/A
Are work assignments expose employees to cold or hot temperatures?	Y	N	N/A
Are employees exposed to whole body vibration?	Y	N	N/A
Are devices that position work between the knees and shoulders and within easy reach utilized?	Y	N	N/A
Are any of the types of employee behavior that may indicate the presence of ergonomics-related problems such as shaking arms and hands or rolling shoulders due to discomfort being observed?	Y	N	N/A
Are tools being arranged so that the most frequently used tools are within easy reach?	Y	N	N/A
When possible, are employees working with hands between waist and shoulder height?	Y	N	N/A
Are motorized pallet jacks being utilized for frequent or distant movement of materials?	Y	N	N/A
Are cart handles located at the rear of the cart and at waist level?	Y	N	N/A

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APPENDIX # 1 - WORK SITE/AREAS ERGONOMIC INSPECTION FORM (Con't)

NON-OFFICE ENVIROMENTS (Con't)	Y	N	N/A
Are cart wheels and floors compatible <i>(for example: wheels should be appropriate to the floor conditions, swivel wheels on both the front and rear make maneuvering in small, cramped areas easier)</i> ?	Y	N	N/A
Are carts being pushed in-lieu-of being pulled?	Y	N	N/A
Do cart load heights obstruct vision?	Y	N	N/A
Are loads balanced and load weight kept under the manufacturer's recommended weight limits?	Y	N	N/A
Are overhead handling system that easily lifts and tilts heavy drums being utilized?	Y	N	N/A
Are overhead devices used to lift and transport heavy items?	Y	N	N/A
Are portable devices used to lift and position heavy objects or tools?	Y	N	N/A
Are machines or reels utilized to coil hoses and cords out of the way?	Y	N	N/A
Are pulleys attached to tools or equipment that assists in manual handling and positioning?	Y	N	N/A
Are tabletops or work surfaces with manual or powered roller systems utilized where needed?	Y	N	N/A
Are stored items on racks which allow them to be easily lifted from mid-thigh level (instead of the floor)?	Y	N	N/A
Are long extension handles for hand tools being utilized to enable the operator to work standing instead of using the tools in awkward postures (e.g., kneeling or crouching).?	Y	N	N/A
Are portable seats, adjustable stools, or creepers being provided and utilized where needed?	Y	N	N/A
Do portable seats, adjustable stools, or creepers have locking casters to prevent them form moving unexpectedly?	Y	N	N/A
Are pads to protect the elbow from contact stress while working in cramped spaces and/or leaning on the elbows being utilized?	Y	N	N/A
Are pads to protect shoulder when carrying objects on the shoulder being utilized?	Y	N	N/A
Are knee support devices that distribute weight and reduce knee strains being utilized?	Y	N	N/A
Are knee pads that reduce pressure within the knee while kneeling and prevent the knee from bending too far while protecting the knee on a hard surface utilized?	Y	N	N/A
Are items lifted by employees within the lifting ability of those employees?	Y	N	N/A
Does the job require standing for most of the shift without anti-fatigue mats?	Y	N	N/A
In areas where filling and emptying liquids from containers guarded from "splash-back"?	Y	N	N/A
When filling and emptying buckets with floor drain arrangements is protection form the risks of spills and slips reduced or eliminated?	Y	N	N/A

Y	N	N/A
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PURPOSE

This purpose of the fall protection procedure is to provide guidelines for protecting employees and contractors from being injured by falls from heights. **Kent County Delaware Governmental Body** (referred to from this point forward as “Kent County”) will take all necessary steps to eliminate, prevent, and control fall hazards.

This procedure applies to all employees and contractors engaged in work activities, which exposes them to falls from heights of 6 feet and more. First consideration will be given to the elimination of fall hazards. If a fall hazard cannot be eliminated, effective fall protection will be planned, implemented, and monitored to control the risks of injury due to falling.

All personnel exposed to potential falls from heights will be trained to minimize their exposures. Fall protection equipment will be provided and used by all employees. **Department/Division Supervisor/Foremen** will be responsible for implementation of a fall protection plan for each job task.

RESPONSIBILITIES

The **Department/Division Supervisor/Foremen** in charge of each job that calls for work at heights will be responsible for identifying fall hazards on the job site.

The **Department/Division Supervisor/Foremen** will evaluate each situation or work procedure where employees may be exposed to a fall of 6 feet or more.

The **Department/Division Supervisor/Foremen** will be responsible for developing a plan to eliminate the exposures, if possible, or to select the appropriate fall protection systems and/or equipment.

EXAMPLES OF SITUATIONS REQUIRING FALL PROTECTION

The following are examples of situations where fall protection will be required. This listing is by no means complete, and there are many other situations where a fall of 6 feet or more is possible. It should be noted that ladders and scaffolding are not included in this list. They are covered by other standards and requirements of our safety program. **All Kent County Employees shall be reminded that the human body can rotate 180 degrees (head over heel) within 18 - 20 inches**

Wall Openings

Any employee working near a wall opening where the outside bottom edge of the wall opening is 6 feet or more from a lower level, or the wall opening is less than 39 inches (1.0 meter) above the walking/working surface below, will be protected from falling by the use of a guardrail system, a safety net system, or a personal fall arrest system.

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Holes

Personal fall arrest systems, covers, or guardrail systems shall be erected around holes (including skylights) that are more than 6 feet above lower levels.

Leading Edges

Each employee who is constructing a leading edge 6 feet or more above lower levels shall be protected by guardrail systems, safety net systems, or personal fall arrest systems.

Excavations

Each employee at the edge of an excavation 6 feet or more deep shall be protected from falling by guardrail systems, fences, barricades, or covers. Where walkways are provided to permit employees to cross over excavations, guardrails are required on the walkway if it is 6 feet or more above the excavation.

Form-work and Reinforcing Steel

For employees, while moving vertically and/or horizontally on the vertical face of reinforcing bar (rebar) assemblies built in place, fall protection is not required when employees are moving. OSHA considers the multiple hand holds and foot holds on rebar assemblies as providing similar protection as that provided by a fixed ladder. Consequently, no fall protection is necessary while moving point to point for heights below 6 feet. An employee will be provided with fall protection when climbing or otherwise moving at a height more than 6 feet, the same as for fixed ladders.

Hoist Areas

Each employee in a hoist area shall be protected from falling 6 feet or more by guardrail systems or personal fall arrest systems. If guardrail systems (chain gate or guardrail) or portions thereof must be removed to facilitate hoisting operations, as during the landing of materials, and a worker must lean through the access opening or out over the edge of the access opening to receive or guide equipment and materials, that employee must be protected by a personal fall arrest system.

Ramps, Runways, and Other Walkways

Each employee using ramps, runways, and other walkways shall be protected from falling 6 feet or more by guardrail systems.

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Low-slope Roofs (a roof having a slope less than or equal to 4V:12H)

Each employee engaged in roofing activities on low-slope roofs with unprotected sides and edges 6 feet or more above lower levels shall be protected from falling by guardrail systems, safety net systems, personal fall arrest systems or a combination of a warning line system and guardrail system, warning line system and safety net system, warning line system and personal fall arrest system, or warning line system. **A Safety Monitoring System may be utilized with the afore listed systems; but will not be utilized exclusively as a fall protection system.**

Steep Roofs

Each employee on a steep roof with unprotected sides and edges 6 feet or more above lower levels shall be protected by guardrail systems with toeboards, safety net systems, or personal fall arrest systems.

ROOF ACTIVITIES

Access Permits: Prior to gaining access to a roof, authorization shall be received from The **Kent County Health & Safety Officer or His/Her Assistant**. At that time there will be a review of:

- The activities to be perform at the time of access.
- The fall hazards to be encountered while performing work on the roof.
- Fall protection requirements.

Prior to accessing the roof, entrants shall refer to 1 (Roof Access Permit) to ensure that all fall protection hazards for a particular roof are identified and controlled.

All roof access permits shall be kept on file with **Department/Division Supervisor/Foremen for a period of one (1) year.**

FALL PROTECTION SYSTEMS

When there is a potential fall of 6 feet or more, **Kent County** will utilize one or more of the following means of providing protection:

Guardrail Systems

Guardrail systems must meet the following criteria:

- Top edge height of top rails, or equivalent guardrail system members, shall be 42 inches (1.1 m) plus or minus 3 inches (8 cm) above the walking/working level. **If** workers are using stilts, the top edge height of the top rail, or equivalent member, must be increased an amount equal to the height of the stilts.

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- Guardrail system must be capable of withstanding a force of at least 300 pounds applied within 2 inches of the top edge in any outward or downward direction.
- Cable top rails and mid-rails of guardrail systems must be at least one-quarter inch nominal diameter or thickness to prevent cuts and lacerations. If wire rope is used for toprails, it must be flagged at not more than 6 feet intervals with a high-visibility material. Steel and plastic banding will not be used as toprails or midrails. Manila, plastic, or synthetic rope used for toprails or midrails must be inspected as frequently as necessary to ensure strength and stability.
- Screens, midrails, mesh, intermediate vertical members, or equivalent intermediate structural members must be installed between the top edge of the guardrail system and the walking/working surface when there are no walls or parapet walls at least 21 inches high. When midrails are used, they must be installed at a height midway between the top edge of the guardrail system and the walking/working level. When screens and mesh are used, they must extend from the top rail to the walking/working level and along the entire opening between top rail supports. Intermediate members, such as balusters, when used between posts, shall not be more than 19 inches apart.
- Other structural members, such as additional midrails and architectural panels, shall be installed so that there are no openings in the guardrail system more than 19 inches.
- The guardrail system must be capable of withstanding a force of at least 300 pounds applied within 2 inches of the top edge in any outward or downward direction. When the 300 pound test is applied in a downward direction, the top edge of the guardrail must not deflect to a height less than 39 inches above the walking/working level.
- Midrails, screens, mesh, intermediate vertical members, solid panels, and equivalent structural members shall be capable of withstanding a force of at least 200 pounds applied in any downward or outward direction at any point along the midrail or other member.
- Guardrail systems shall be surfaced to protect workers from punctures or lacerations and to prevent clothing from snagging.
- The ends of top rails and midrails must not overhang terminal posts, except where such overhang does not constitute a projection hazard.
- When guardrail systems are used at hoisting areas, a chain, gate or removable guardrail section must be placed across the access opening between guardrail sections when hoisting operations are not taking place.

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- At holes, guardrail systems must be set up on all unprotected sides or edges. When holes are used for the passage of materials, the hole shall have not more than two sides with removable guardrail sections. When the hole is not in use, it must be covered or provided with guardrails along all unprotected sides or edges.
- If guardrail systems are used around holes that are used as access points (such as ladder ways), gates must be used or the point of access must be offset to prevent accidental walking into the hole.
- If guardrails are used at unprotected sides or edges of ramps and runways, they must be erected on each unprotected side or edge.

Personal Fall Arrest Systems

Personal Fall Arrest Systems consist of an anchorage, connectors, and a body harness and may include a deceleration device, lifeline, or suitable combinations. **The use of body belts for fall arrest is prohibited and a full body harness is required.** If a personal fall arrest system is used for fall protection it must be capable of the following:

- Limit maximum arresting force on an employee to 1,800 pounds when used with a body harness.
- Be rigged so that an employee can neither free fall more than 6 feet nor contact any lower level.
- Bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet.
- Have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 6 feet or the free fall distance permitted by the system, whichever is less.

Personal fall arrest systems must be inspected (See Attachment 2) prior to each use for wear damage, and other deterioration. Defective components must be removed from service.

Positioning Device Systems include body belt or body harness systems that are to be set up so that workers can free fall no farther than 2 feet. They shall be secured to an anchorage capable of supporting a least twice the potential impact load of an employee's fall or 3,000 pounds, whichever is greater.

Entry Control Point (ECP)

Every Kent County Project (in-house or contracted) that has safety issues discussed in this manual shall have a clearly marked and recognizable entry control point where workers, visitors, inspectors, general public, and unforeseen personnel know and realize they are entering a Controlled Access Zone that has safety issues.

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Controlled Access Zones

A Controlled access zone is 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 including guardrail, personal arrest or safety net, to protect the employees working in the zone.

Controlled access zones are used to keep out workers other than those authorized to enter work areas from which guardrails have been removed. Where there are no guardrails, masons are the only workers allowed in controlled access zones.

Controlled access zones, when created to limit entrance to areas where leading edge work and other operations are taking place, must be defined by a control line or by any other means that restrict access. Control lines shall consist of ropes, wires, tapes or equivalent materials, and supporting stanchions, and each must be:

- Flagged or otherwise clearly marked at not more than 6-foot intervals with a high-visibility material
- Rigged and supported in such a way that the lowest point (including sag) is not less than 39 inches from the walking/working surface and the highest point is not more than 45 inches --nor more than 50 inches when overhand bricklaying operations are being performed—from the walking/working surface
- Strong enough to sustain stress of not less than 300 pounds. Control lines shall extend along the entire length of the unprotected or leading edge and shall be approximately parallel to the unprotected or leading edge.
- Control lines will be connected on each side to a guardrail system or wall.
- When control lines are used, they shall be erected not less than 6 feet nor more than 25 feet from the unprotected or leading edge, except when precast concrete members are being erected. In the latter case, the control line is to be erected not less than 6 feet nor more than 60 feet or half the length of the member being erected, whichever is less, from the leading edge.
- Controlled access zones when used to determine access to areas where overhand bricklaying and related work are taking place are to be defined by a control line erected not less than 10 feet or more than 15 feet from the working edge. Additional control lines must be erected at each end to enclose the controlled access zone. Only employees engaged in overhand bricklaying or related works are permitted in the controlled access zones.
- On floors and roofs where guardrail systems are not in place prior to the beginning of overhand bricklaying operations, controlled access zones will be enlarged as necessary to enclose all points of access, material handling areas, and storage areas.

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- On floors and roofs where guardrail systems are in place, but need to be removed to allow overhand bricklaying work or leading edge work to take place, only that portion of the guardrail necessary to accomplish that day's work shall be removed.

Safety Net Systems

Safety nets must be installed as close as practicable under the walking/working surface on which employees are working and never more than 30 feet (9.1 meters) below such levels. Safety nets shall be installed with sufficient clearance underneath to prevent contact with the surface or structure below.

Items that have fallen into safety nets including but not restricted to, materials, scrap, equipment, and tools must be removed as soon as possible and at least before the next work shift.

Safety nets shall extend outward from the outermost projection of the work surface as follows:

Vertical Distance from Working Level to Plane of the Net	Min. Required Horizontal Distance of Outer Edge of Net from the Edge of the Working Surface
Up to 5 Feet	8 Feet
More than 5 Feet, Up to 10 Feet	10 Feet
More than 10 Feet	13 Feet

The maximum size of each safety net mesh opening shall not exceed 36 square inches nor be longer than 6 inches on any side. All mesh crossings must be secured to prevent enlargements of mesh openings.

Each safety net shall have a border rope for webbing with a minimum breaking strength of 5,000 lbs.

Connections between safety net panels shall be as strong as integral net components and shall be spaced not more than 6 inches apart.

All nets must be drop tested with a 400 lb bag of sand with a diameter of 28-32 inches. This bag must be dropped into the net from the highest walking/ working surface at which employees are exposed to fall hazards.

Safety nets shall be inspected at least once a week for wear, damage, and other deterioration. Defective components shall be removed from service. Safety nets shall also be inspected after any occurrence which could affect the integrity of the safety net system.

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Warning Line Systems

Warning line systems consist of ropes, wires, or chains, and supporting stanchions and are set up as follows:

- Flagged at not more than 6-foot intervals with a high-visibility material.
- Rigged and supported so that the lowest point including sag) is no less than 34 inches from the walking/working surface and its highest point is no more than 39 inches from the walking/working surface.
- Stanchions, after being rigged with warning lines, shall be capable of resisting, without tipping over, a force of at least 16 pounds applied horizontally against the stanchion, 30 inches above the walking/working surface, perpendicular to the warning line and in the direction of the floor, roof, or platform edge.
- The rope, wire, or chain shall have a minimum tensile strength of 500 pounds and after being attached to the stanchions, must support without breaking the load applied to the stanchions as prescribed above.
- Shall be attached to each stanchion in such a way that pulling on one section of the line between stanchions will not result in slack being taken up in the adjacent section before the stanchion tips over.
- Warning lines shall be erected around all sides of roof work areas. When mechanical equipment is being used, the warning line shall be erected not less than 6 feet from the roof edge parallel to the direction of mechanical equipment operation, and not less than 10 feet from the roof edge perpendicular to the direction of mechanical equipment operation.
- When mechanical equipment is not being used, the warning line must be erected not less than 6 feet from the roof edge.

Safety Monitoring Systems

When no other alternative fall protection has been implemented, **Kent County** will implement a safety monitoring system. **Kent County** will appoint a competent person to monitor the safety of workers and shall ensure that the safety monitor is:

- Is competent in the recognition of fall hazards.
- Is capable of warning workers of fall hazard dangers and in detecting unsafe work practices.

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- Is operating on the same walking/working surfaces of the workers and can see them.
- Is close enough to work operations to communicate orally with workers and has no other duties to distract from the monitoring function.

Mechanical equipment shall not be used or stored in areas where safety monitoring systems are being used to monitor employees engaged in roofing operations on low-sloped roofs.

No worker, other than one engaged in roofing work (on low-sloped roofs) or one covered by a fall protection plan, shall be allowed in an area where an employee is being protected by a safety monitoring system.

All workers in a controlled access zone shall be instructed to promptly comply with fall hazard warnings issued by safety monitors.

Covers

Covers located in roadways and vehicular aisles must be able to support at least twice the maximum axle load of the largest vehicle to which the cover might be subjected. All other covers must be able to support at least twice the weight of employees, equipment, and materials that may be imposed on the cover at any one time. To prevent accidental displacement resulting from wind, equipment, or work activities, all covers must be secured. All covers shall be color coded or bear the markings "HOLE" or "COVER."

Protection From Falling Objects

When guardrail systems are used to prevent materials from falling from one level to another, any openings must be small enough to prevent passage of potential falling objects. No materials or equipment except masonry and mortar shall be stored within 4 feet of working edges. Excess mortar, broken or scattered masonry units, and all other materials and debris shall be kept clear of the working area by removal at regular intervals.

During roofing work, materials and equipment shall not be stored within 6 feet of a roof edge unless guardrails are erected at the edge, and materials piled, grouped, or stacked near a roof edge must be stable and self-supporting.

TRAINING

Employees engaged in work that exposes them to falls from heights will receive training in the recognition of applicable fall hazards and the methods and means necessary for the control of such hazards. The training will be conducted within 10 days of job assignment. The training will include the following information:

- The nature of fall hazards in the work area.

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- The correct procedures for erecting, maintaining, disassembling, and inspecting fall protection systems.
- The use and operation of controlled access zones and guardrail, personal fall arrest, safety net, warning line, and safety monitoring systems.
- The role of each employee in the safety monitoring system when the system is in use.
- The limitations on the use of mechanical equipment during the performance of roofing work on low-sloped roofs.
- The correct procedures for equipment and materials handling and storage and the erection of overhead protection.
- The Employees' role in fall protection plans.

Department Director/Manager and/or Division Supervisor/Manager will perform a fall protection training verification evaluation to verify the individual's knowledge of the fall hazards and precautions required to prevent an accident.

Specific Fall Protection Retraining: Retraining will be conducted whenever an inspection reveals there are deviations from, or inadequacies in the employee's knowledge on fall protection issues. Retraining shall also be conducted whenever an employee is observed violating the procedure or when an accident investigation identifies that the procedure has been or needs to be altered.

Training Documentation: Training records shall be filed and maintained for 5 years from the date on which the training occurred.

CONTRACTORS

Whenever contractors or service personnel are engaged in elevated work activities at **Kent County** they must follow the procedures covered by this program.

At the conclusion of any elevated work performed by a contractor, a post review will be performed and documented to determine if new or previously unidentified hazards have been identified.

Department Director/Manager and/or Division Supervisor/Manager will certify that post work reviews have been accomplished. The certification will contain each contractor company's name and dates of the work. Documentation will be filed with **Department Director/Manager and/or Division Supervisor/Manager in charge of the project** and shall be maintained for 12 months from the date on which the elevated work occurred.

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PROGRAM EVALUATION

This procedure will be reviewed by **Kent County Health and Safety Officer or His/Her Assistant** and a committee comprised of affected employees within 12 months of the last review dated and will note changes made to this document by a modification to its Revision Number.

The following criteria will be used to perform the annual evaluation of this procedure:

- Accident reports, number of accidents.
- Management/staff compliance with program components.
- Periodic on-site audits.
- Employee feedback.

DEFINITIONS

Authorized Person: A person approved or assigned by the employer to perform a specific type of duty or duties or to be at a specific location or job site, i.e., building maintenance, roof repair, etc.

Competent Person: A person capable of identifying existing and predictable hazards in the surroundings or working conditions which are hazardous or dangerous to employees and who has the authorization to take prompt corrective action to eliminate them.

Qualified Person: An individual, who by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problem relating to the subject matter, work, or project.

Anchor Point: A secure point of attachment for lifelines, lanyards, or deceleration devices. An anchor point must be capable of supporting at least 5,000 pounds (3,600 pounds if engineered/certified by a qualified person) per person and must be independent of any anchorage being used to support or suspend platforms.

Full Body Harness: Webbing/straps which are secured about an employee's body in a manner that will distribute the fall arrest forces over at least the thighs, pelvis, waist, chest, and shoulders with means for attaching it to other components of a personal fall arrest system, preferably at the shoulders and/or middle of the back.

Connector: A device which is used to couple (connect) parts of the personal fall arrest system together.

Deceleration Device: Any mechanism, such as a rope grab, rip-stitch lanyard, a specially woven lanyard, tearing or deforming lanyards, automatic self-retracting lifelines/lanyards, etc., which serves to dissipate a substantial amount of energy during a fall arrest.

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Fall Distance: The maximum vertical change in distance from the bottom of an individual's feet at the onset of a fall, to the position of the feet after the fall is arrested - including free fall distance and deceleration distance.

Guardrail System: A barrier erected to prevent employees from falling to lower levels. This system includes a midrail and toe board able to withstand 200 pounds applied to the top rail in any direction.

Lanyard: A flexible line of rope or strap that has self-locking snaphook connectors at each end for connecting to body harnesses, deceleration devices, and anchor points.

Entry Control Point (ECP): A clearly marked and recognizable entry control point where workers, visitors, inspectors, general public, and unforeseen personnel know and realize they are entering a Controlled Access Zone that has safety issues.

Leading Edge: The edge of a floor, roof, or other walking/working surface, which changes location as additional floor, roof, etc., is placed or constructed. A leading edge is considered an unprotected side or edge when not under active construction.

Personal Fall Arrest System: A system used to arrest (catch) an employee in a fall from a working level. It consists of an anchorage location, connectors, a body harness, and may include a lanyard, deceleration device, lifeline, or any combination of the before-mentioned items.

Roof Work: The hoisting, storage, installation, repair, and removal of materials or equipment on a roof.

Safety Monitoring System: A safety system in which a competent person is responsible for recognizing and warning employees of fall hazards. All other fall protection systems must be deemed "infeasible" (through infeasibility study/review) to select/use a safety monitoring system.

Snaphook: A connector comprised of a hook-shaped member with a closed keeper which may be opened to permit the hook to receive an object and when released, automatically closes to retain the object. Snaphooks must be self-closing with a self-locking keeper which remains closed and locked until unlocked and pressed open for connection or disconnection, thus preventing the opportunity for the object to "rollout" of the snaphook.

Toeboard: A low protective barrier that will prevent the fall of materials and equipment to lower levels, usually 4" or greater in height.

Unprotected Sides and Edges: Any side or edge of a walking or working surface, e.g., floor, roof, ramp, runway, etc., where there is no guardrail.

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 work can be conducted without the use of guardrails, personal fall arrest systems, or safety nets to protect employees in the area.

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Attachment #1
ROOF ACCESS PERMIT

COPIES OF PERMIT WILL REMAIN AT JOB SITE UNTIL JOB IS COMPLETED THEN
RETURNED TO _____ FOLLOWING COMPLETION OF JOB.

Date and Time Issued: _____ Roof I.D.: _____

Work to be performed: _____

Topics Reviewed:

- Y/N The nature of fall hazards in the work area;
- Y/N The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used;
- Y/N Inspection of all Fall Restraint System Components
- Y/N The role of each employee in the safety monitoring system if this system is used;
- Y/N The correct methods for the handling and storage of equipment and materials
- Y/N Understanding and following all components of this fall protection program.

We have reviewed the work authorized by this permit and the information contained here-in. Written instructions and safety procedures have been received and are understood. Access cannot be approved if any squares are marked in the "No" column.

Permit Prepared By: _____

Permit Approved By: _____

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Attachment #2

FALL RESTRAINT INSPECTION CRITERIA

The following criteria will be utilized to maintain all equipment in good working condition.

[FRONT PAGE]

Full Body Harnesses - Inspect before each use and annually

- Closely examine all of the nylon webbing to ensure there are no burn marks; torn, frayed, broken fibers; pulled stitches, or frayed edges.
- Examine D-ring for excessive wear, pits, deterioration, or cracks.
- Verify that buckles are not deformed, cracked, and will operate correctly.
- Check that all grommets are secure and not deformed from abuse or a fall.
- All rivets should be tight, not deformed.
- Check tongue/straps for excessive wear from repeated buckling.
- Storage will consist of hanging in an enclosed cabinet, to protect from damage.
- All harnesses that are involved in a fall will be destroyed.

Lanyards/Shock Absorbing Lanyards - Inspect before each use and annually

- Check lanyard material for cuts, burns, abrasions, kinks, knots, broken stitches and excessive wear.
- Inspect the snaphooks for hook, locks, and eye distortion.
- Check carabiner for excessive wear, distortion, and lock operation.
- Ensure that all locking mechanisms seat and lock properly.
- Once locked, locking mechanism should prevent hook from opening.
- Visually inspect shock absorber for any signs of damage.
- Verify that points where the lanyard attaches to the snaphooks are free of defects.
- Storage will consist of hanging in an enclosed cabinet, to protect from damage.
- All lanyards that are involved in a fall will be destroyed.

Snaphooks - Inspect before each use and annually

- Inspect snaphook for any hook and eye distortions.
- Verify there are no cracks, pitted surfaces, and eye distortions.
- The keeper latch should not be bent, distorted, or obstructed.
- Verify that the keeper latch seats into the nose without binding.
- Verify that the keeper spring securely closes the keeper latch.
- Test the locking mechanism to verify that the keeper latch locks properly.
- All snaphooks involved in a fall will be destroyed.

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Attachment #2

FALL RESTRAINT INSPECTION CRITERIA

The following criteria will be utilized to maintain all equipment in good working condition.

[BACK PAGE]

Self-Retracting Lanyards - Inspect before each use and monthly

- Visually inspect the body to ensure there is no physical damage to the body.
- Make sure all back nuts or rivets are tight.
- Make sure the entire length of the nylon strap is free of any cuts, burns, abrasions, kinks, knots, broken stitches, and excessive wear and retracts freely.
- Test the unit by pulling sharply on the lanyard to verify that the locking mechanism is operating correctly.
- If manufacturer requires, make certain the retractable lanyard is returned to the manufacturer for scheduled annual inspections.
- Service per manufacturer specifications
- Return to vendor for inspection after every fall.

Tie-off Adaptors/Anchorages - Inspect before each use and monthly

- Inspect for integrity and attachment to solid surface.
- Visually inspect the body to ensure there is no physical damage to the body.
- Inspect for distortion.
- All tie-offs and anchorages will be destroyed and replaced after a fall.

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PURPOSE AND SCOPE

The purpose of this procedure is to protect all **Kent County Delaware Governmental Body** (referred to from this point forward as “Kent County”) employees from hazards associated with forklift operations. This will include any employee who operates a multi-fuel or electric forklift, all-terrain forklift, forklift attachments, manual forklift or electric/manual pallet jack.

RESPONSIBILITIES

The plan administrator will develop and periodically review and revise the Forklift Safety procedure, develop procedures for the operation and maintenance of forklifts, and ensure that operators are trained and certified to safely operate the forklift that they are assigned. The administrator will review and update this procedure as deemed necessary by the review.

The **Department/Division Supervisor/Foremen** will:

- Ensure that pedestrian walkways are clearly defined by painted lines throughout the facility and marked as walkways.
- Ensure that regular maintenance of the forklift vehicles is conducted and that maintenance records are maintained for each vehicle.
- Ensure that all trucks meet national standards and bear a label indicating approval by a testing laboratory.
- Request manufacturer’s approval before any modification is made to the forklift.
- Ensure that battery charging is conducted safely and in locations designated for that purpose, including wearing the appropriate personal protective equipment (PPE).
- Make sure that smoking is prohibited in battery charging areas, and ensure that any spark-producing activities are closely restricted.

Shift supervisors will:

- Strictly enforce all industrial truck **and forklift** operation procedures.
- Ensure that all authorized personnel receive training in forklift operation.
- Train all other employees on the applicable pedestrian safety rules.
- Ensure that overhead guards protect against falling objects.
- Remove any defective trucks from service.

Forklift Operator Trainer. The trainer will conduct training for forklift operators and ensure that they meet all requirements for certification for the forklift they operate. The trainer will also evaluate the effectiveness of the training program and revise the program as needed to ensure the safe operation of forklifts.

Certified forklift operators. All forklift operators will:

- Hold and maintain active operator certificates and operate forklifts safely.
- Inspect and maintain forklifts according to the inspection and maintenance schedule.
- Report equipment problems and unsafe conditions to a supervisor.

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DEFINITIONS

Backrest: Vertical support above the forks that, when a load is tipped back, prevents the load from falling rearward toward the driver.

Carriage: The part of the mast where the forks and backrest are mounted.

Forklift: A powered industrial truck with a power-operated forked platform used to hoist and transport materials by means of steel forks inserted under a load.

Mast: A support member providing guideways that permit vertical movement of the carriage.

Powered industrial truck: An industrial vehicle used to carry, push, pull, lift, or stack material powered by an electric motor or an internal combustion engine, including vehicles commonly called forklift trucks, rider trucks, motorized or powered hand trucks, pallet trucks and tugs. Not included are compressed air or nonflammable compressed gas-operated industrial trucks, farm vehicles, or vehicles intended primarily for earth moving or over-the-road hauling.

Overhead guard: Framework fitted to a truck over the head of a riding operator to guard against falling debris.

Folding Rollover Protection (ROPS): A heavy duty engineered over-head device to protect the operator in case of a vehicle/equipment rollover.

Seat belt: A required use restraint device that will secure the operator in case of a rollover or impact with another object or vehicle/equipment.

Rated capacity: The maximum weight that the truck is designed to lift as determined by the manufacturer.

FORKLIFT OPERATOR SAFETY PROGRAM

The forklifts used at the facility meet the design and construction requirements for powered industrial trucks established in the ANSI/ASME B56.1-[year], "Safety Standard for High Lift and Low Lift Trucks."

Safety Rules and Procedures

Kent County has adopted rules and procedures for operators to safely operate forklifts and for personnel working or passing through areas where forklifts are present.

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Forklift Operation Rules

- No one under the age of 18 may operate a forklift or any other powered industrial truck. Only personnel certified by **Kent County** or its designee are authorized to operate a forklift.
- All forklift operators must obey the following rules for safely operating a forklift:
 - Wear a seat belt.
 - Yield the right of way to pedestrians and emergency vehicles.
 - Never engage in stunt driving or horseplay with a forklift.
 - Never drive a forklift up to a person standing in front of a bench or fixed object.
 - Never stand or pass, or allow someone else to stand or pass, under the elevated forks.
 - Always keep arms, hands, or legs inside the truck.
 - Lift only loads that are within the rated capacity of the truck.
 - Never handle unstable loads.
 - Maintain a safe distance from the edge of ramps or platforms.
 - Slow down and sound the horn at intersections and where the operator's vision is obstructed.
 - **Insure back-up warning alarm is activated when driving in reverse.**
 - Ride in reverse if the load obstructs forward view.
 - Prohibit unauthorized personnel to ride on the trucks.
 - When leaving a truck unattended, lower the forks to ground level, neutralize controls, shut power off, and set brakes.
 - Place chocks on the down-slope side of tires if parked on an incline.
 - Use a load backrest extension to prevent load from falling backward.
- Any time the operator leaves the forklift and his or her view of the forklift is obstructed, or the operator is **10** feet or more away from the forklift, the operator will follow this sequence of precautions:
 - Lower the load to the ground with the forks parallel to the ground surface.
 - Neutralize the controls.
 - Set the brakes.
 - Chock the tires if parked on an incline.

Traveling

Forklift operators will obey the following rules when the forklift is traveling:

- Never exceed the speed limit of two to three (2-3) miles per hour.
- A clear view of the travel route will be maintained; travel with the load behind if it blocks the forward view.
- Carry loads with the forks no more than a few inches above the ground or floor.
- Ensure there is a safe distance along the path of travel from the top of the forklift mast or load and any overhead objects (e.g., lights, pipes, ventilation equipment).
- Loads will not be raised or lowered while traveling.
- Slow down on a wet or slippery floor.

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- Stay at least three truck lengths behind another truck.
- Slow down, stop, and sound the horn at cross aisles and other places where line-of-sight vision is impaired.
- Slow down before making a turn; sharp turns can tip the truck.
- Do not pass at intersections or blind spots.
- Stay a safe distance from the edge of a platform or elevated ramp.
- Cross railroad tracks diagonally if possible.
- Drive slowly and carefully over dockboards or bridgeplates and do not exceed their rated capacity.
- Go up and down grades slowly, keeping the load upgrade and raised only enough to clear the surface on grades of over 10 percent.

Loading and Unloading

Forklift operators will comply with the following rules when loading or unloading materials with a forklift:

- Only handle stable and safely arranged loads; make arrangements to secure an unstable load.
- Never lift loads that exceed the rated capacity listed on the nameplate of the forklift.
- Before entering a trailer with a forklift, ensure that trailer brakes are locked, the rear wheels are chocked, and the dock plate is secure.
- Check the rated capacity of a trailer or railcar before entering it to ensure that it can support the combined weight of the forklift and load.
- Place the forks under the load as far as possible (the load will touch the forklift carriage) and tilt the mast backward enough to stabilize the load.
- Never carry anything on the overhead guard.
- Check the maximum safe height of an area before stacking or tiering a load.
- Never tilt the load forward unless depositing it onto a rack or stack.

Refueling Operations

Operators and forklift maintenance personnel will comply with the following rules when recharging a forklift battery:

- No smoking.
- Turn off the engine.
- Have a fire extinguisher and spill cleanup materials ready.
- Avoid fuel spills—if there is a spill, clean it up immediately.
- Do not operate a forklift with a leak in the fuel system until the leak is fixed.
- Always turn off the engine when filling fuel tanks.
- Perform all fueling operations in well-ventilated areas designated for that purpose.
- Replace the fuel cap before starting the forklift.
- Never use an open flame to check the fuel level.

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Propane-powered forklifts - Take empty propane tanks outside and open the valve to let any leftover propane escape to the open air.

Recharging Operations

Forklift recharging operations may be performed only in assigned ventilated areas. Operators and forklift maintenance personnel must obey the following rules when recharging a forklift:

- No smoking.
- Turn the power switch to the “Off” position and put the brake in the “Park” position.
- Have a fire extinguisher and spill cleanup materials ready.
- Open the vent caps to dissipate heat.
- Do not place metallic objects, including tools, near the top of uncovered batteries.
- Move batteries with [type of equipment], not by hand.
- Properly position and secure the battery in the truck.
- Use proper equipment such as a **carboy tilter or siphon device** to handle the electrolyte.
- Use the eyewash station and flush the eyes for 15 minutes whenever electrolyte or other chemicals splash in the eyes, **seek immediate medical attention.**

Inspection and Maintenance

Forklifts are inspected daily before they are used, and after each shift for a forklift used for more than one consecutive shift. Forklift operators and forklift maintenance personnel will implement the following maintenance precautions:

- Keep forklifts clean and free of lint, excess oil, and grease.
- Clean forklifts with noncombustible agents.
- Have trained, authorized people handle repairs.
- Perform fuel or ignition system repairs that present fire hazards in assigned areas free of ignition sources.
- Disconnect batteries before repairing a truck’s electrical system.
- Keep water mufflers at least 75 percent full.
- Report the following conditions to the supervisor and stop operating a forklift that:
 - Is not in condition to operate safely.
 - Has clogged muffler screens or parts.
 - Sends out hazardous sparks or flames from the exhaust.
 - Has any part that overheats beyond its normal operating temperature.

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Forklift Safety Checklists

Forklift operators will perform pre-start inspections and other safety checks of forklifts and other related equipment using the safety checklists attached to this Plan. A checklist for each category of safety rules and procedures is available to all operators and other personnel that work near forklifts.

Pedestrians

Pedestrians must comply with the following rules when walking in areas where forklifts operate:

- Never ride on trucks.
- Never stand or walk under elevated forks.
- Stay within pedestrian walkways.
- Be aware and listen for truck horns, especially at intersections.
- Cross intersections carefully.

TRAINING

Forklift Operator Training

Department/Division Supervisor/Foremen, who is trained and certified to operate forklifts, will provide training for forklift operators and forklift maintenance personnel. After training is successfully completed, the forklift operator will be issued a Forklift Operator Certification Card.

Previous Operator Training

Operators that have received forklift operator training at a previous job, or on a different type of forklift than the type they are about to be assigned, must complete initial training on the new operating environment and/or the characteristics of the new forklift.

If an operator has previously received training in a topic covered in the initial training, and such training is appropriate to the forklift and working conditions encountered, additional training in that topic is not required if the operator has been evaluated and found competent to operate the forklift safely **by the . Department/Division Supervisor/Foremen**

Initial Operator Training

A prospective operator will be trained and certified before he or she is assigned to operate a forklift. A trainee will operate a forklift only under the direct supervision of a trainer who has the knowledge, training, and experience to train operators and evaluate their competence, and where the operation will not endanger the trainee or other employees.

Training will consist of a combination of formal instruction and demonstrations performed by the trainer, practical exercises performed by the operator, and an evaluation of the operator's performance.

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The forklift operator initial training program must cover at least the following topics:

Characteristics of the forklift:

- Differences from the automobile
- Controls and instrumentation, such as location, what they do, and how they work
- Engine or motor operation
- Steering and maneuvering
- Visibility
- Fork and/or attachment adoption, operation, and limitations of their use
- Vehicle capacity
- Vehicle stability
- Vehicle inspection and maintenance the operator will be required to perform
- Refueling or charging and recharging batteries
- Operating limitations
- Any other operating instruction, warning, or precaution listed in the operator's manual for the type of vehicle the employee is being trained to operate

The operating environment:

- Floor surfaces and/or ground conditions where the vehicle will be operated
- Composition of probable loads and load stability
- Load manipulation, stacking, or unstacking
- Pedestrian traffic
- Narrow aisle and restricted place operation
- Operating in classified hazardous locations
- Operating the truck on ramps and other sloped surfaces that would affect the stability of the vehicle
- Other unique or potentially hazardous environmental conditions that exist or may exist in the workplace
- Operating the vehicle in closed environments and other areas where insufficient ventilation and/or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust

Operator Performance Evaluation

Each forklift operator's performance will be evaluated every **year**.

Refresher Training

Refresher training will be provided when:

- The operator has been observed to operate the vehicle in an unsafe manner.
- The operator has been involved in an accident or near-miss incident.
- The operator has received an evaluation that reveals that the truck is not being operated safely.
- The operator is assigned to drive a different type of truck.
- A condition in the workplace changes in a manner that could affect safe operation of the truck.

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PROGRAM REVIEW AND UPDATE

This procedure will be reviewed and updated:

- Annually
- When the applicable federal or state regulations change
- When operations at the facility change that require a revision to this plan
- When an accident investigation or safety audit warrant a plan revision

RECORDKEEPING


Records of training (dates of training, attendee lists, and trainers) will be maintained at **Department/Division Supervisor/Foremen office and the Personnel/Human Resource Office** for at least 5 years.

Operator Certification and Recordkeeping

Once training is completed, **Department/Division Supervisor/Foremen** will certify that the operator has been successfully trained and evaluated for the specific make and model of forklift he or she will operate. The certificate is not valid for other types of forklifts. The certificate will include:

- The name of the operator
- The date of the training
- The date of the evaluation
- **The type of forklift**
- The identity of the person(s) performing the training or evaluation

Copies of all operator certificates will be maintained at **Personnel/Human Resource Office** for at least 5 years.

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PURPOSE AND SCOPE

This Program covers practices and requirements for hand and portable power tool operation and maintenance. **Kent County Delaware Governmental Body** (referred to from this point forward as “**Kent County**”) will protect its employees from hazards related to hand and portable power tools and equipment through engineering controls, tool safeguards, communication of hazards and solutions, personal protective equipment, and training.

RESPONSIBILITIES

The **Department/Division Supervisor/Foremen Program Administrator** will:

- Read and understand instructional documents provided by the manufacturer before use of any tool
- Provide authorization for employees to use tools and maintain records of authorized employees.
- Provide additional on-the-job training if the employee is not thoroughly familiar with the equipment and/or written procedures.
- Provide safe hand and power tool equipment to employees.
- Remove defective hand and power tools from service.
- Maintain inspection records of hand and power tools.


The Administrator may designate other employees, including managers and supervisors, to implement and enforce the provisions of this Plan.

Employees who use hand and portable power tools will:

- Read and understand instructional documents provided by the manufacturer for the hand and power tool prior to use.
- Recognize the conditions of work that require hand and power tool inspection.
- Understand and follow the hand and power tool safety procedures in this Plan.
- Not tamper with or remove a safety guard.
- Stop using damaged or defective hand and power tools and report such problems to a supervisor.

DEFINITIONS

- **Hand tool** means a tool that is non-powered or operates only through physical exertion by hand and includes anything from axes to wrenches and paper-cutting boards in offices.
- **Point of operation** means the area around a tool where work is actually performed on the material being processed, and the operation exposes an employee or employees to injury.
- **Portable power tool** means a mounted or portable tool that requires a power source to operate, such as electric, pneumatic, liquid fuel, hydraulic, explosive-actuated, and powder-actuated device or power supply. Examples of regulated portable power tools are portable abrasive wheels and grinders, lawn mowers, powered drills, portable circular saws, portable belt sanding machines, explosive-actuated fastening tools, jacks, and abrasive blast cleaning nozzles.

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HAZARD ASSESSMENT

The Administrator or designee will ensure that a hazard assessment is conducted in each work area where hand and portable power tools are or may be used. The assessment will identify sources of hazards that could expose employees to flying objects, shock or electrocution, sparks, punctures, cuts, and crushing forces. For example, sparks produced by iron and steel hand tools can be a dangerous ignition source around flammable substances.

Each hazard assessment will identify hazards, recommend controls, and provide guidance on appropriate personal protective equipment (PPE) selections when a hazard control is not feasible or satisfactory.

The Administrator or designee will use the attached *Job Hazard Analysis Worksheet* and *PPE Hazard Assessment Certificate* for guidance when conducting the assessment(s).


Hazard Assessment Procedure

The following process will be used for evaluating the operations and tasks that present potential hazards to employees who work with hand and portable power tools:

- Conduct a survey of each work area to assess if hazards are present, or are likely to be present, for which hazard controls or PPE is needed. The Administrator will also provide worksite evaluations of any operation at the request of a supervisor or employee.
- Review injury and illness records, the layout of the work areas, and the placement of workers in the work areas.
- Collect and organize the data if available for each work area, and estimate the potential for injuries according to the basic hazard categories and potential sources of injury and illness.
- Determine the type, level of risk, and seriousness of potential injury from each of the hazards found in the work areas, and evaluates the possibility of exposure to several hazards.
- Categorize and record the hazards.
- Determine what type of engineering or administrative control and/or PPE will protect against the hazards.
- Incorporate the results of the assessment and recommendations for protection into this Plan and supplementary documents.

Hearing Protection

If it is determined that any employees are exposed to noise from portable power tools at or in excess of an action level of 85 decibels (dB) for an 8-hour day, then the Administrator or designee will implement a hearing conservation program for exposed employees.

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GENERAL TOOL SAFETY PRACTICES

Condition of Tools

All hand tool and portable power tools and similar equipment, whether furnished by the employer or the employee, will be maintained in a safe condition. Tools will be stored in appropriate storage areas when not in use.

Electric-Powered Tools

Electric power tools will be either three-wire grounded or double-insulated and listed by Underwriters' Laboratories or another recognized listing agency.


Hand Tool Safe Practices

- Floors will be kept as clean and dry as possible to prevent accidental slips with or around dangerous hand tools.
- Saw blades, knives, and other sharp tools will be directed away from aisle areas and other employees working in close proximity.
- Knives and scissors will be kept sharp; dull tools can be more hazardous than sharp ones.
- Spark-resistant tools made from brass, plastic, aluminum, or wood will be used around flammable substances.

Power Tool Safe Practices

To prevent hazards associated with the use of power tools, employees will obey the following general precautions:

- Never carry a tool by the cord or hose.
- Never yank the cord or the hose to disconnect it from the receptacle.
- Keep cords and hoses away from heat, oil, and sharp edges.
- Disconnect tools when not using them, before servicing and cleaning them, and when changing accessories such as blades, bits, and cutters.
- Keep all people not involved with the work at a safe distance from the work area.
- Secure work with clamps or a vise where appropriate, freeing both hands to operate the tool.
- Avoid accidental starting; do not hold fingers on the switch button while carrying a plugged-in tool.
- Maintain tools with care; keep them sharp and clean for best performance.
- Follow instructions in the user's manual for the tool when lubricating and changing accessories.
- Be sure to keep good footing and maintain good balance when operating power tools.
- Do not wear loose clothing, ties, or jewelry when operating portable power tools; such items can become caught in moving parts.
- Remove all damaged or defective portable electric tools from use and tag them: "Do Not Use."
- Always plug cord-connected, hand-held electric tools into ground-fault circuit interrupter (GFCI)-protected receptacles or in compliance with the facility's assured electrical grounding conductor program.

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Guarding Portable Power Tools

All power tools designed with guards will be equipped with such guards when in use. All belts, gears, shafts, sprockets, drums, spindles, fly wheels, chains, pulleys, or other reciprocating, rotating, or moving parts of tools will be guarded if those parts may expose to contact by employees or otherwise create a hazard. Methods of guarding will prevent injuries from points of rotating parts, ingoing nip points, and flying chips and sparks.

Safety input and approval from the Administrator or designee will be obtained when manufacturer recommendations for guarding a specific power tool are not available or cannot be implemented.

Safe Work Practices with Guards

General safe work practices when working with power tools with guards will include the following:

- Guards will not be removed unless the power tool is unplugged or locked out from the power source.
- Notify a supervisor immediately when any unguarded moving parts or dangerous points of operation are observed. Stop work and shut down the tool until the condition is corrected.
- Operate equipment only when the proper tool guards are in place.
- Do not use unauthorized or damaged guards.
- Never leave tools unattended with parts still moving; even after the machine is turned off, some parts may still be moving.
- Never remove or bypass guards.
- Maintain good housekeeping practices by keeping the work area free of debris or other items that can get caught in tools or power equipment.
- Operate power tools only when all guards are in place and properly attached according to the manufacturer's recommendations, and functioning properly.
- Wear proper eye and face protection while operating power tools.
- If a guard is damaged, bypassed, or missing, shut down the tool until the problem is corrected.
- Never wear loose clothing or jewelry while operating power tools.


Safety Switches

All hand-held power tools will be fitted with any one of the following safety switch methods as appropriate for the particular tool:

- A momentary contact "on-off" control
- A lock-on control provided that turnoff can be accomplished by a single motion of the same finger or fingers that turn it on
- A pressure switch that constant pressure is needed to run and will shut off when the pressure is released, such as required for hand-held gasoline-powered chain saws

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Employees using hand and power tools exposed to the hazard of falling, flying, abrasive and splashing objects, or exposed to flying dusts, fumes or mists, vapors or gases will be fitted with the particular PPE necessary to protect them from the specific hazard. Safety eyewear, hard hats, gloves, and appropriate safety shoes are required on all construction sites.

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SPECIFIC HAND AND PORTABLE POWER TOOLS


The Administrator or designee will ensure that employees who perform work using hand and portable power tools are provided with tools that are safe, and that employees will inspect the tool prior to use and use it correctly.

Hand Tools


- ***Wrenches***
Wrenches including adjustable, pipe, box-end, and socket-style wrenches will not be used when the jaws or socket are stripped or sprung in such a way that slippage occurs.
- ***Impact Tools***
Impact tools such as drill pins or punches, wedges, and chisels will be kept free of mushroomed heads.
- ***Wooden, Metal, & Plastic Handles of Tools***
Wooden-handled tools will be kept free of cracks and splinters and will be kept tightly attached to the working end of the tool.

Portable Power Tools


- ***Portable Circular Saws***
 - All cracked saws will be removed from service.
 - All portable, power-driven circular saws that have a blade diameter greater than 2 inches will be equipped with guards above and below the base plate or shoe. The upper guard will cover the saw to the depth of the teeth, except for the minimum arc required to permit the base to be tilted for bevel cuts. The lower guard will cover the saw to the depth of the teeth, except for the minimum arc required to allow proper retraction and contact with the work. When the tool is withdrawn from the work, the lower guard will automatically and instantly return to covering position.
 - Circular saws will be equipped with a constant pressure switch or control that will shut off the power when the pressure is released.
- ***Portable Belt Sanding Machines***
 - Belt sanding machines will be provided with guards at each nip point where the sanding belt runs onto a pulley. These guards will effectively prevent the hands or fingers of the operator from coming in contact with the nip points. The unused run of the sanding belt will be guarded against accidental contact.
- ***Portable Powered Abrasive Wheels***
 - Due to the possibility of a wheel disintegrating (exploding) during start-up, the employee must never stand directly in front of the wheel as it accelerates to full operating speed.
 - Before an abrasive wheel is mounted, it will be inspected closely and sound- or ring-tested to be sure that it is free from cracks or defects. To test, wheels should be tapped gently with a light non-metallic instrument. If they sound cracked or dead, they could fly apart in operation and, so, must not be used. A sound and undamaged wheel will give a clear metallic tone or "ring."
 - Mounting. The wheel must fit freely on the spindle to prevent it from cracking. The spindle nut must be tightened enough to hold the wheel in place without distorting the flange. The manufacturer's recommendations for mounting and use of the wheel must be followed. Care must be taken to assure that the spindle wheel will not exceed the abrasive wheel specifications.

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- Guards. Abrasive wheels will be used only on machine provided with safety guards. A safety guard will cover the spindle end, nut, and flange projections. The safety guard will be mounted so as to maintain proper alignment with the wheel, and the strength of the fastenings will exceed the strength of the guard. Safety guards on all operations where the work provides a suitable measure of protection to the operator may be so constructed that the spindle end, nut, and outer flange are exposed. Where the nature of the work is such as to entirely cover the side of the wheel, the side covers of the guard may be omitted.
- Exceptions to abrasive wheel requirements. The requirements for abrasive wheels do not apply to natural sandstone wheels, and metal, wooden, cloth, or paper discs having a layer of abrasive on the surface.
- **Cup Wheels**
- Cup wheels (Types 6 and 11) will be protected by safety guards or special “revolving cup guards” which mount behind the wheel and turn with it. They will be made of steel or other material with adequate strength and will enclose the wheel sides upward from the back for one-third of the wheel thickness.
- **Portable Power Grinders :** When using a powered grinder, employees must:
 - Always use eye protection.
 - Turn off the power when not in use.
 - Never clamp a hand-held grinder in a vise.
- **Guards.** Portable grinding tools will be equipped with safety guards to protect workers from the moving wheel surface and from flying fragments in case of breakage. Safety guards used on right angle head or vertical portable grinders will have a maximum exposure angle of 180 degrees (°) and the guard will be so located so as to be between the operator and the wheel during use. Adjustment of the guard will be such that pieces of an accidentally broken wheel will be deflected away from the operator.
- The maximum angular exposure of the grinding wheel periphery and sides for safety guards used on other portable grinding machines will not exceed 180° and the top half of the wheel will be enclosed at all times.
- **Electric Power-Operated Tools**
- Portable electric power-operated tools will be of the approved double-insulated type and used with an approved grounding device such as a Ground Fault Circuit Interrupter (GFCI) to prevent the unlikely event of an electrical shock. Such tools will meet the requirements of the federal electrical safety rules.
- **Safe work practices.** Employees will implement the following safe work practices when handling and operating electric power-operated tools:
 - Never use electrical cords for hoisting or lowering tools.
 - Keep cords and hoses away from heat, oil, and sharp edges.
 - Operate electrical tools only within their design limitations.
 - Wear gloves and safety footwear as appropriate during use of electric tools.
 - When not in use, store electrical tools in a dry place.
 - Do not use electrical tools in damp or wet locations without authorization.
 - Ensure work areas are well-lighted.

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- **Ground Fault Circuit Interrupter (GFCI).** All 120-volt, single-phase 15- and 20-ampere receptacle outlets on sites, which are not a part of the permanent wiring of the building or structure and which are in use by employees, shall have approved ground-fault circuit interrupters for personnel protection.
- **Pneumatic-Powered Tools and Hoses**
- Pneumatic tools are powered by compressed air and include chippers, drills, hammers, and sanders.
- **Retainer.** Pneumatic power tools will be secured to the hose or whip by some positive means such as a tool retainer to prevent the tool from becoming accidentally disconnected. Safety clips or retainers will be securely installed and maintained on pneumatic impact (percussion) tools to prevent attachments from being accidentally expelled.
- **PPE.** Eye protection is required and face protection is recommended for employees working with pneumatic tools **on appropriate projects**. Use appropriate hearing protection when working with noisy tools such as jackhammers.
- **Barrier protection.** Screens must be set up to protect nearby workers from being struck by flying fragments around chippers, **grinders, welders**, riveting guns, staplers, or air drills.
- **Air pressure.** The safe operating pressure stated by the manufacturer will not be exceeded.
- Supplied compressed air will not be used for cleaning purposes except when reduced to 30 pounds per square in. (psi) and then only with effective chip guarding and when proper PPE is used.
- **Hoses.** Pneumatic powered tools will be secured to the hose or connection by a positive means to prevent them from being accidentally expelled. A short wire or positive locking device attaching the air hose to the tool will serve as an added safeguard. Hoses will not be used for hoisting or lowering. All hoses exceeding ½ in. inside diameter will have a safety device to reduce pressure should the hose fail.
- **Nailers, staplers, and similar tools.** All pneumatically driven nailers, staplers, and other similar tools provided with automatic fastener feeds which operate at more than 100 psi pressure to the tool will have a safety device on the muzzle end to prevent the tool from ejecting fasteners unless the muzzle is in contact with the work surface. A safety clip or retainer must be installed to prevent attachments, such as chisels on a chipping hammer, from being unintentionally shot from the barrel.
- **Compressed air guns.** Compressed air guns must never be pointed toward anyone. Users must never “dead-end” the gun against themselves or anyone else.
- **Spray guns.** Airless spray guns which atomize paints and fluids and operate at pressure of 1,000 psi or more will be equipped with an automatic or visible manual safety device which prevents the accidental pulling of the trigger to prevent the release of paint or fluid until the device is manually released. [Instead] of the safety device, the gun may be equipped with a diffuser nut which will prevent high pressure and high velocity release while the nozzle tip is removed, plus a nozzle tip guard, or other equivalent protection, which will prevent the tip from coming into contact with the operator.
- **Blasting nozzles.** Abrasive blasting nozzles will be equipped with a valve which must be activated manually for operation and a holding rack for nonoperation. The nozzle will be mounted on a support when it is not in use.

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- ***Hydraulic Power Tools***


The fluid used in hydraulic powered tools will be fire-resistant fluids and must retain its operating characteristics at the most extreme temperatures to which it will be exposed. The manufacturer's safe operating pressures for hoses, valves, pipes, filters, and other fittings will not be exceeded.

- ***Fuel-Powered Tools***


- All fuel-powered tools will be stopped during refueling, servicing, or maintenance.
- Fuel will be transported, handled, and stored in accordance with USEPA and USDOT rules and procedures.
- When fuel-powered tools are used in enclosed spaces, the applicable requirements for toxic gas monitoring and use of PPE will be applied.

- ***Powder-Actuated Tools***

- Powder-actuated tools are also known as "explosive-actuated." Such tools are actuated by explosives or any similar means, and propel a stud, pin, fastener, or other object for the purpose of affixing it by penetration to any other object.
- Powder-actuated tools will be designed in accordance with federal regulatory requirements and operated according to facility and manufacturer's instructions.
- **Employee training.** Only employees who have been trained in the safe operation of the particular powder-actuated tool in use will be allowed to operate a powder-actuated tool.
- **Testing.** The tool will be tested each day before loading to see that safety devices are in proper working condition. The method of testing will be in accordance with manufacturer's recommended procedures.
- **Inspection.** Before using a tool, the operator will inspect it to determine to his or her satisfaction that it is clean, that all moving parts operate freely, and that the barrel is free from obstructions. The tool will be inspected at regular intervals and be repaired in accordance with the manufacturer's specifications.
- **Safe work practices.** Employees will obey the following safe work practices when operating powder-actuated tools:
 - Any tool found not in proper working order, or which develops a defect during use, will be immediately removed from service and not used until properly repaired by an authorized provider.
 - Tools will not be loaded until just prior to the intended firing time. At no time, loaded or unloaded, are the tools to be pointed at any employees.
 - Hands will be kept clear of the open barrel.
 - Loaded tools will not be left unattended.
 - Tools will not be used in an explosive or flammable environment.
 - In case of a misfire, the operator will hold the tool in the operating position for at least 30 seconds and then try to operate the tool a second time. The operator will wait another 30 seconds, holding the tool in the operating position, then proceed to remove the explosive load in strict accordance with the manufacturer's instructions.
 - A tool will never be left unattended in a place where it would be available to unauthorized persons.

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- Fasteners will not be driven into very hard or brittle materials including, but not limited to, cast iron, glazed tile, surface-hardened steel, glass block, live rock, face brick, or hollow tile.
 - Driving into materials easily penetrated will be avoided unless such materials are backed by a substance that will prevent the pin or fastener from passing completely through and creating a flying-missile hazard on the other side.
 - Fasteners will not be driven directly into materials such as brick or concrete closer than 3 in. from the unsupported edge or corner or into steel surfaces closer than ½ in. from the unsupported edge or corner, unless a special guard, fixture, or jig is used. (Exception: Low-velocity tools may drive no closer than 2 in. from an edge in concrete or ¼ in. in steel).
 - When fastening other materials, such as a 2- by 4-in. wood section to a concrete surface, it is permissible to drive a fastener of no greater than 7/32-in. shank diameter not closer than 2 in. from the unsupported edge or corner of the work surface.
 - Fasteners will not be driven through existing holes unless a positive guide is used to secure accurate alignment.
 - No fastener will be driven into a spalled area caused by an unsatisfactory fastening.
 - Driving into materials easily penetrated will be avoided unless such materials are backed by a substance that will prevent the pin or fastener from passing completely through and creating a flying missile hazard on the other side.
 - **Protective systems and PPE.** All tools will be used with the correct shield, guard, or attachment recommended by the manufacturer. Appropriate PPE will be used when operating powder-actuated tools. Eye protection will be required at all times. Head and face protection will be used as required by working conditions.
- **Power Lawnmowers**
- **Guards.** Power lawnmowers of the walk-behind, riding-rotary, and reel power lawnmowers will be guarded in accordance with machine guarding requirements.
 - All power-driven chains, belts, and gears will be so positioned or otherwise guarded to prevent the operator's accidental contact therewith, during normal starting, mounting, and operation of the machine.
 - **Shutoff device.** A shutoff device will be provided to stop operation of the motor or engine. This device will require manual and intentional reactivation to restart the motor or engine.
 - **Operator information.** All positions of the operating controls will be clearly identified. The words, "Caution. Be sure the operating control(s) is in neutral before starting the engine," or similar wording will be clearly visible at an engine starting control point on self-propelled mowers.
- **Jacks**
- A jack is an appliance for lifting and lowering or moving horizontally a load by application of a pushing force. Jacks may be lever and ratchet, screw, and hydraulic.
 - The manufacturer's rated capacity for the jack will be legibly marked on all jacks and will not be exceeded. All jacks will have a positive stop to prevent and stop over-travel.
 - When providing a firm foundation, the jack base, as well as the cap, will be blocked or cribbed to prevent slippage. Where there is a possibility of slippage of the metal cap of the jack, a wood block shall be placed between the cap and the load.

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- **Inspections.** Jacks will be maintained according to the manufacturer's recommendations and inspected at least every 6 months and prior to use. For jacks subjected to abusive conditions such as freezing, load shock, or extreme heat, the jack will be examined for possible defects.
- **Defective jack.** Any jack found damaged or defective will be tagged accordingly and not be used until repaired by a person qualified to perform such repairs.
-

ACCIDENT INVESTIGATION

All incidents that result in injury to workers, as well as near misses, regardless of their nature, will be reported and investigated. Investigations will be conducted by **Kent County Health & Safety Officer or His/Her Assistant** or other authorized person 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 an incident that results in serious injury, this Plan will be reevaluated by the Administrator or designee to determine if additional practices, procedures, or training is necessary to prevent similar future incidents.

CONTRACTORS

Contractors must submit, as part of the contract-required Plan, a hand and power tool program that meets the provisions of this Plan.

Onsite service contractors may train their own employees in specific company policies, procedures, and equipment, as needed, to ensure the safety of their employees. They must maintain authorization records that meet the requirements of this Plan.

PROGRAM REVIEW AND UPDATE


The hand and power tool procedures and employee authorizations will be reviewed annually, and are reviewed and updated whenever:

- New types of electrical systems or equipment for powering portable power tools are introduced into the workplace.
- Evaluations of workplace hazards, injuries, and near-misses demonstrate that the current Plan is outdated or not effective.
- Regulatory or applicable national consensus standards change that require this Plan to be updated.

TRAINING

Only employees who are trained and authorized will perform work using hand and power tools.

Construction contractors are permitted to show written records of equivalent training. The Administrator or designee will provide specific authorization after the employee satisfies the training requirements of this Plan or attachments.

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Training Program Requirements

Training of employees that use hand and power tools must include the safe operation, use, and care of the tool(s) and implements. The employee must be trained to be thoroughly familiar with the equipment (within the context of his/her job function) and with the tool manufacturer's procedures.

Each employee will be provided additional on-the-job training if the employee is not thoroughly familiar with the tools and/or written procedures.

Refresher Training

Hand and power tool refresher training is required when:

- An authorized employee's job changes or if he or she is reassigned.
- A new hand or power tool is introduced to the work area for use.
- New handling procedures are implemented.
- An employee demonstrates inadequate knowledge of hand and power tool procedures or policy.

RECORDKEEPING

Copies of manufacturer specifications and manuals, ANSI consensus standards, and applicable regulations will be kept **by the Division Supervisor/Manager or his/her agent in the working area accessible to all employees..**

The Administrator or designee will maintain records of authorized employees and the type of on-the-job training, if any, that was given.

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PURPOSE AND SCOPE

It is the policy of **Kent County Delaware Governmental Body** (referred to from this point forward as “**Kent County**”) to protect the hearing of all workers whose noise exposures equal or exceed an action level of 85 decibels (dB) for an 8-hour day. This program applies to all persons working in areas or with equipment that have average noise levels of 85 decibels, A weighting (dBA) or higher.

RESPONSIBILITIES

The **Kent County Health & Safety Officer or His/Her Assistant (Program Administrator)** with the assistance of the **Department/Division Supervisor/Foremen** will:

- Administer the Hearing Conservation Program.
- Conduct and document noise surveys areas/activities where potential noise exposures may equal or exceed an 8-hour time-weighted average (TWA) of 85 dBA.
- When notified by employee or employee supervisor, perform a sound-level survey in areas where a change in activity, process, equipment, or controls may have resulted in either an increase or a decrease in employee exposure.
- Identify noise hazard areas and post appropriate signs.
- Provide employees access to noise monitoring records.
- Notify supervisors and affected employees when monitoring indicates an exposure at or above action level (85 dBA), and participate in the Hearing Conservation Program when it becomes mandatory.
- Recommend appropriate engineering and/or administrative noise controls.
- Develop a training program and ensure annual training of employees enrolled in the HCP in hearing conservation issues and practices.
- Maintain access to sound-level meters, noise dosimeters, and field calibration equipment in accordance with manufacturers’ instructions and perform or provide for required calibrations
- Maintain records of all noise monitoring and instrument calibration.

The **Audiometric Testing Coordinator** will:

- Ensure that baseline audiograms and annual audiometric testing is conducted for employees enrolled in the hearing conservation program.
- Notify **Personnel Director/Human Resource Manager** of employee complaints of potential noise hazard exposures.
- Ensure the proper selection and fit of hearing protection devices (HPDs.)
- Ensure appropriate certification of those responsible for audiometric testing, interpretation of audiometric results, selection and fit of HPDs, and employee hearing conservation training.
- Identify employees with Standard Threshold Shift (STS), subsequent retesting, employee notification, management of those employees with STS, and possible referrals.
- Assist as needed with the annual training of employees in the Hearing Conservation Program.
- Maintain audiometric testing equipment in accordance with manufacturers’ instructions and perform or provide for required machine calibrations
- Maintain records of audiometric test results (audiograms), employee training, and noise monitoring results for the duration of employment for each employee plus 30 years.

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Supervisors will:

- Notify **Department/Division Director/Manager** of potential noise hazard areas.
- Evaluate the feasibility of engineering and/or administrative noise controls.
- Identify employees exposed to sound levels equaling or exceeding the action level, and report such information to **Personnel Director/Human Resource Manager**.

Employees will:

- Wear HPDs when entering or working in identified noise hazard areas in accordance with the posted warning.
- Report potential noise hazard exposures to the supervisor.
- Comply with Hearing Conservation Program requirements when identified as being exposed to sound levels equaling or exceeding the action level.

Employees who do not comply with the provisions of this program will be disciplined in accordance with **Kent County** policy of progressive discipline.

DEFINITIONS

Action Level: A sound level equaling an 8-hour time-weighted average (TWA) of 85 decibels on an A-weighted level (dBA), or equivalently a noise dose of 50 percent.

Audiogram: A chart, graph, or table that results from an audiometric test. An audiogram shows an individual's hearing threshold level as a function of frequency (hertz).

Audiologist: A professional specializing in the study and rehabilitation of hearing who is certified by the American Speech-Language-Hearing Association or licensed by a state board of examiners.

Baseline Audiogram: Reference audiogram against which future audiograms are compared.

Decibel (dB): Unit of measurement of sound level.

dBA (decibels on an A-weighted level): A measurement of noise intensity obtained using a sound-measuring instrument commonly used to define degrees of auditory risk. The A-weighting is a measurement that closely parallels the auditory characteristics of normal human hearing.

Dosimetry: A technique of sound measurement that integrates cumulative noise exposure over time and directly indicates a noise dose.

Hearing Conservation Program (HCP): An annual audiometric testing and hearing conservation training program for employees exposed to sound levels equaling or exceeding the action level.

Hearing Protection Device (HPD): Personal protective equipment worn by an individual for the purpose of reducing noise exposure, including reusable and disposable earplugs, ear muffs, and similar noise attenuating devices.

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Noise dose: A measure of the noise exposure to which a person is subjected in the workplace.

Standard Threshold Shift (STS): A change in hearing threshold, relative to the baseline audiogram, of an average of 10 dB or more at 2000, 3000, and 4000 Hz in either ear, taking into account any changes due to presbycusis (age-related hearing loss).

Time-Weighted Average (TWA): Noise exposure averaged over a designated period of time (example: 8-hour TWA).

ENGINEERING AND ADMINISTRATIVE CONTROLS

When noise exposure levels exceed the permissible limits, **Kent County** will implement engineering controls as the primary mechanism to reduce noise levels. The following engineering controls will be or have been implemented:

- Install controls on vibrating surfaces.
- Enclose machinery.
- Install barriers or insulation between noise sources and operators.

The following administrative controls will be implemented in conjunction with engineering controls to limit the amount of time that an employee works in areas where the 8-hour TWA equals or exceeds 90 dBA:

- Employee rotation
- Scheduling equipment operation

Administrative controls will neither be used as a substitute for nor replace applicable requirements for a Hearing Conservation Program.

HEARING CONSERVATION PROGRAM

Monitoring

- A noise survey will be conducted to identify the areas where employee noise exposure may exceed an 85 dB 8-hour TWA.
- Workers will be monitored in questionable areas with a calibrated noise dosimeters that will measure all continuous, intermittent, and impulsive sound levels between 80–130 decibels on the “A-weighted” scale (slow response).
- Each employee will be notified of the monitoring results if exposed at or above the 85 dB TWA

Additional monitoring will be conducted if changes in production, equipment, processes, or controls suggest that noise exposures may have increased. Employees identified with exposure levels at or above an 8-hour TWA of 85 dB will be notified with the results of the monitoring and will be required to enroll in the Hearing Conservation Program.

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Below is the table of permissible noise exposures.

Hours per day	Permissible sound level dBA
8	90
6	92
4	95
3	97
2	100
1½	102
1	105
½	110
1/4 or less	115

Audiometric Testing

Baseline audiogram: Audiometric tests will be performed by a licensed or certified audiologist, otolaryngologist, qualified physician, or qualified technician responsible to the audiologist or physician. A baseline audiogram (i.e., hearing test) will be obtained for all employees with noise exposures equal to or greater than an 85 dB TWA. The baseline audiogram will be obtained within 6 months of an employee's first exposure to noise above the action level. In the case that a mobile van is used for testing, the audiogram will be obtained within 1 year. Employees will use hearing protection 6 months after their first exposure until a baseline audiogram is obtained.

Both a preemployment and termination audiogram will be obtained for all employees. Workers will be informed that baseline audiometric testing must be preceded by at least 14 hours without exposure to noise levels above 80 dB. Workers may use hearing protection to meet this requirement.

All audiometric testing and evaluation will be provided free of charge to our employees.

Annual audiogram: Annual audiograms will be conducted for all employees with noise exposures equal to or greater than an 85 dB TWA. An annual audiogram may be substituted for the baseline audiogram when the audiologist or physician evaluating the program declares:

- An STS is persistent, or
- The hearing threshold in the annual audiogram indicates a significant improvement over the baseline audiogram.

Standard Threshold Shift (STS): If a comparison of the annual audiogram with the baseline audiogram indicates that an STS has occurred, a retest within 30 days will be conducted, and the second test may be considered the annual audiogram. If an STS is confirmed, the employee will be:

- Informed in writing within 21 days of the determination
- Referred to an audiologist, otolaryngologist, or qualified physician for further evaluation
- Provided with both the baseline and the most recent audiogram of the employee and the required records on the audiometer and the audiometric test room
- Fitted or refitted with adequate hearing protectors, shown how to use them, and required to wear them

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Unless the audiologist or physician determines that the STS is not work-related or aggravated by noise exposures in the workplace, the worker will be required to use suitable hearing protection. For workers exposed to noise levels below 90 dB TWA, the use of hearing protection will continue until subsequent audiometric testing indicates that the STS is not permanent.

Hearing Protection

Hearing protectors will be provided at no cost to employees, and a variety of suitable types will be available for their selection. Hearing protectors will be evaluated for their ability to adequately reduce the noise exposures in the workplace to a 90 dB TWA or below (or an 85 dB TWA for those workers who have experienced an STS).

Hearing protectors will be required and provided for all employees with noise exposure:

- Greater than a 90 dB TWA; or
- Equal to or greater than an 85 dB TWA and who have experienced an STS; or
- Equal to or greater than an 85 dB TWA for 6 months or more and who have not obtained a baseline audiogram.

Hearing protectors will be available to all employees for use with noise exposures between an 85 and 90 dB TWA who have not experienced an STS.

TRAINING

Workers included in the Hearing Conservation Program will receive noise protection training that covers the following topics:

- The effects of noise on hearing
- The purpose of hearing protectors
- The advantages, disadvantages, and noise reduction capabilities of the various types of hearing protectors
- Instructions on the selection, fitting, use, and care of hearing protectors
- The purpose of audiometric testing and an explanation of the test procedures

Employees already using hearing protectors and who have experienced an STS must be refitted and retrained in their use and be provided with hearing protectors offering greater attenuation if necessary.

Department/Division Supervisor/Foremen will post a copy of the noise exposure regulations and any informational materials related to the regulations that are supplied to the employer.

Annual Refresher Training

The training program will be repeated annually for each employee included in the Hearing Conservation Program. Information provided in the training program will be updated to be consistent with changes in protective equipment and work processes.

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Training Records

Personnel Director/Human Resource Manager will maintain all records of employee training for at least 5 years.

PROGRAM REVIEW AND UPDATE

This program will be reevaluated:

- Annually, when the annual audiogram testing is done.
- Whenever there is a change in production, process, equipment, or controls that might have questionable noise levels.

RECORDKEEPING

Injury and Illness Log

An STS of 10 dB or greater will be recorded on the log if caused or aggravated by exposure to occupational noise.

Records Maintenance


Hearing Conservation Program records will be maintained in the office and are available on request to our employees. All audiometric test records will be retained for the duration of each worker's employment. Each record will include:

- Audiogram with the name and job classification of the worker, date of the audiogram, and the examiner's name
- Measurements of the noise levels in the audiometric test booth and the date of the last acoustic or exhaustive calibration of the audiometer
- Employee's most recent noise exposure measurement

Noise sampling/exposure records will be retained for at least 2 years.

Transfer of Records

If Kent County ceases to exist, all Hearing Conservation Program records will be transferred to its successors or agents. The records of a new employee who formerly worked in a high noise exposure location will be kept in his or her current file. A copy of a new employee's audiometric records, particularly if he or she is to work in a high noise area, will be transferred to the new record.

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PURPOSE AND SCOPE

This Heat Stress Prevention procedure applies to any work operations at **Kent County Delaware Governmental Body** (referred to from this point forward as “**Kent County**”) involving high air temperatures, radiant heat sources, high humidity, direct physical contact with hot objects, or strenuous physical activities that have a high potential for inducing heat stress in employees engaged in such operations.

This procedure applies to all employees who are exposed to heat or hot conditions at or above the threshold levels for work areas and activities identified in the heat stress hazard assessment.

RESPONSIBILITIES

Program Administrator: The Program Administrator (**Kent County Health & Safety Officer or His/Her Assistant with the coordination of the Personnel Director/Human Resource Manager, Department Director(s)/Manager(s) and/or Division Supervisors’/Managers’**) is responsible for implementing the Heat Stress Prevention Program, monitoring work area heat conditions and worker physiological parameters, and for ensuring that employees are trained to recognize the signs and symptoms of heat stress illnesses or injury and what to do if these occur.


Supervisors: Supervisors are responsible for encouraging employees to frequently consume water or other acceptable beverages to ensure hydration.

Employees: Employees are responsible for monitoring their own personal factors for heat-related illness including consumption of water or other acceptable beverages to ensure hydration.

HEAT-RELATED ILLNESSES

Heat Illness is generally not instantaneous and occurs some time (hours or days) after the initial exposure to an occupational hazard. For example, an instantaneous reaction such as a burn after touching a hot surface is considered an injury; whereas a delayed reaction to a hot environment such as heat exhaustion that occurs hours after the initial exposure is considered an illness.

Heat collapse is a condition where the brain does not receive enough oxygen because blood pools in the extremities, resulting in a loss of consciousness (fainting or syncope). This reaction is similar to that of heat exhaustion and does not affect the body’s heat balance. However, the onset of heat collapse is rapid and unpredictable. Heat syncope is a fainting episode or dizziness that usually occurs with prolonged standing or sudden rising from a sitting or lying position. Factors that may contribute to heat syncope include dehydration and lack of acclimatization.

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Heat cramps are usually caused by performing hard physical labor in a hot environment. These cramps have been attributed to an electrolyte imbalance caused by sweating. Cramps can be caused by both too much and too little salt. Cramps appear to be caused by the lack of water replenishment. Because sweat is a hypotonic solution ($\pm 0.3\%$ sodium chloride), excess salt can build up in the body if the water lost through sweating is not replaced. Thirst cannot be relied on as a guide to the need for water; instead, water must be taken every 15 to 20 minutes in hot environments. Under extreme conditions, such as working for 6 to 8 hours in heavy protective gear, a loss of sodium may occur. Recent studies have shown that drinking commercially available carbohydrate-electrolyte replacement liquids is effective in minimizing physiological disturbances during recovery.

Heat exhaustion is a condition with symptoms of headache, nausea, vertigo, weakness, thirst, and giddiness. Fainting associated with heat exhaustion can be dangerous because the victim may be operating machinery or controlling an operation that should not be left unattended; moreover, the victim may be injured when he or she faints. Also, the signs and symptoms seen in heat exhaustion are similar to those of heat stroke, a medical emergency.

Heat fatigue is a temporary state of discomfort and mental or psychological strain arising from prolonged heat exposure. It is generally caused by fluid loss. Workers unaccustomed to the heat are particularly susceptible and can suffer, to varying degrees, a decline in task performance, coordination, alertness, and vigilance. There is no treatment for heat fatigue except to remove the heat stress before a more serious heat-related condition develops. The severity of transient heat fatigue will be lessened by a period of gradual adjustment to the hot environment (heat acclimatization).

Heat rash is “prickly” heat manifested as red papules (i.e., small, inflammatory, irritated spots on skin) and usually appears in areas where the clothing is restrictive. It is the most common problem in hot work environments. As sweating increases, these papules give rise to a prickling sensation. Prickly heat occurs on skin that is persistently wetted by unevaporated sweat, and heat rash papules may become infected if they are not treated. In most cases, heat rashes will disappear when the affected individual returns to a cool environment.

Heat stroke is a condition when the body’s system of temperature regulation fails and body temperature rises to critical levels. This condition is caused by a combination of highly variable factors, and its occurrence is difficult to predict. Heat stroke is a medical emergency. The primary signs and symptoms of heat stroke are confusion, irrational behavior, loss of consciousness, convulsions, a lack of sweating (usually), hot and dry skin, and an abnormally high body temperature (e.g., a rectal temperature of 41°C (105.8°F)). If body temperature is too high, it causes death. The elevated metabolic temperatures caused by a combination of work load and environmental heat load, both of which contribute to heat stroke, are also highly variable and difficult to predict.

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HAZARD ASSESSMENT

The Administrator or designee will conduct an initial inspection and hazard assessment of all work areas and environments where hot conditions are anticipated or may occur. He or she will periodically conduct follow-up inspections to ensure compliance with this Plan and to evaluate the effectiveness of heat stress control measures.

During the assessment the inspector will:

- Determine building and facility operating characteristics that may cause, contribute to, or alleviate hot conditions.
- Determine whether engineering and administrative controls are functioning properly.
- Verify information obtained from employee interviews.
- Perform temperature measurements and make other determinations to identify potential sources of heat stress.

Investigators will discuss any operations that have the potential to cause heat stress with engineers or other knowledgeable personnel. A walk-around inspection will cover all affected areas. Heat sources such as furnaces, ovens, and boilers, and relative heat load per employee will be noted.


Heat Stress Factors

The following workplace factors will be considered in the assessment for heat stress:

- Air temperature
- Radiant heat sources
- Conductive heat sources
- Humidity
- Direct physical contact with hot objects
- Workload activity and duration
- Semi-permeable or impermeable protective clothing

The following worker heat sensitivity factors will also be considered in evaluating the potential for heat stress:

- Age
- Weight
- Degree of physical fitness
- Degree of acclimatization
- Metabolism
- Use of alcohol or drugs
- Medical conditions such as hypertension
- Prior heat injury (predisposes an individual to additional injury)

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HEAT STRESS MONITORING

Every worker who works in extraordinary conditions that increase the risk of heat stress will be personally monitored. Extraordinary conditions include wearing semi-permeable or impermeable clothing when the temperature exceeds 21°C (69.8°F), and working at extreme metabolic loads greater than 500 kilocalories/hour. Personal heat stress monitoring techniques include physiological tests such as:

- Heart rate
- Recovery heart rate
- Oral temperature
- Extent of body water loss

Monitoring Personal Heat Stress

Personal monitoring of physiological stress will be conducted to alert employees and their supervisors to potential heat stress illness. The Administrator or designee will conduct initial monitoring at the beginning of the work shift prior to entry into the work zone. Reentry and readjustment of the work/rest cycle will be determined based on the guidelines listed in the *Physiological Monitoring Table*.

Personal Monitoring Table


Type of monitoring	Monitoring location	Action levels (vital signs)	Work/Rest Modification

Physical signs and symptoms of heat stress will be discussed with employees every **two hour time interval or sooner as needed** and reviewed as necessary. Employees will be trained and directed to monitor each other's actions, speech, and appearance for signs and symptoms of heat-related illnesses.

Heart rate. To check the heart rate, count the radial pulse for 30 seconds at the beginning of the rest period. If the heart rate exceeds 110 beats per minute, shorten the next work period by one third and maintain the same rest period.

Recovery heart rate. The recovery heart rate can be checked by comparing the pulse rate (i.e., number of beats in 30 seconds x 2) taken at the beginning of the rest period (P1) with the pulse rate taken 3 minutes (P3) after the beginning of the rest period. The two pulse rates can be interpreted using the *Heart Rate Recovery Table* in this section.

Oral temperature. Oral temperature can be checked with a clinical thermometer after work but before the employee drinks water. If the oral temperature taken under the tongue exceeds 37.6°C (100°F), shorten the next work cycle by one-third.

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Body water loss. Body water loss can be measured by weighing the worker on a scale at the beginning and end of each work day. The worker's weight loss should not exceed 1.5% of total body weight in a work day. If a weight loss exceeding this amount is observed, fluid intake should be increased.

Heart Rate Recovery Table

Heart rate recovery pattern	P3	Difference between P1 and P3
Satisfactory recovery	Greater than 90	None
High recovery (Conditions may require further study)	90	10
No recovery (May indicate too much stress)	90	Greater than 10

Monitoring Hot Conditions

Portable heat stress meters will be used to measure heat conditions. These instruments will calculate both the indoor and outdoor Wet Bulb Globe Temperature (WBGT) index according to established American Conference of Industrial Hygienists (ACGIH) Threshold Limit Value (TLV) equations. The WBGT for continuous all-day or several hour exposures will be averaged over a 60-minute period. Intermittent exposures are averaged over a 120-minute period. With this information and information on the type of work being performed, heat stress meters can determine how long a person can safely work or remain in a particular hot environment.

HEAT STRESS PREVENTION PROGRAM

This Heat Stress Prevention Program describes controls and work practices to protect employees from heat stress while working in hot conditions.

Program Implementation Criteria


The Administrator or designee will implement the Heat Stress Prevention Program when the action levels for hot conditions in the **Personal Monitoring Table** and/or the WBGT are exceeded.

Heat Stress Engineering Controls

The following engineering controls will be implemented before and in combination with work practices.

General Ventilation

General ventilation will be used where feasible and practical to dilute hot air with cooler air. Portable or local exhaust systems will be provided for small areas where general ventilation is not feasible or practical. If the dry bulb temperature is higher than 35°C (95°F) and the air is dry, evaporative cooling may be improved by air movement. When the dry bulb temperature exceeds 35°C and the relative humidity is 100%, air movement will make the worker hotter and forced ventilation will not be used to alleviate heat stress.

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Fans

Fans will be provided where general ventilation is insufficient or impractical and when evaporative cooling will be improved by air movement.

Air Cooling or Conditioning

Air cooling or conditioning systems will be provided where feasible and practical.

Shields

Shields may be used to reduce radiant heat (i.e., heat coming from hot surfaces) for surfaces that exceed 35°C (95°F) within the worker's line of sight. Cooler surfaces surrounding the worker assist in cooling because the worker's body radiates heat toward them. The reflective surface of the shield will be kept clean to maintain its effectiveness.

Insulation

Heating pipes will be insulated or otherwise shielded to reduce radiant heat.

Cool Room

Cool rooms will be used as a recovery area near hot jobs.


Heat Stress Prevention Work Practices

Work practices will be implemented to reduce the risk of elevating an employee's core body temperature. Heat stress prevention practices that may be implemented individually or in combination include:

- Employee work and rest intervals.
- Continual personal monitoring of physiological signs of heat stress.
- Provide cool liquids.
- Establish and implement acclimatization schedules.
- Use warm-weather cooling garments.
- Reduce the physical demands of work, e.g., excessive lifting or digging with heavy objects.
- Provide recovery areas such as air-conditioned enclosures and rooms.
- Use shifts such as early morning, cool part of the day, or night work.
- Use intermittent rest periods with water breaks.
- Use relief workers.
- Use worker pacing.
- Assign extra workers and limit worker occupancy, or the number of workers present, especially in confined or enclosed spaces.
- Schedule work in hot conditions for the cooler part of the day.
- Schedule routine maintenance and repair work in hot areas for the cooler seasons of the year.

EMERGENCY RESPONSE

The **Personnel Director/Human Resource Manager** will implement the following emergency response procedures for the type of heat stress indicated.

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Heat Stroke

If a worker shows signs of possible heat stroke, professional medical treatment will be obtained immediately. The supervisor or co-workers will take the following steps to treat a worker with heat stroke:

- Call 911 and notify the supervisor.
- Move the sick worker to a cool, shaded area.
- Cool the worker using methods such as soaking his or her clothes with water, spraying, sponging, or showering him or her with water, and fanning his or her body.
- The worker should be placed in a shady area and the outer clothing should be removed. The worker's skin should be wetted and air movement around the worker should be increased to improve evaporative cooling until professional methods of cooling are initiated and the seriousness of the condition can be assessed. Fluids should be replaced as soon as possible. The medical outcome of an episode of heat stroke depends on the victim's physical fitness and the timing and effectiveness of first-aid treatment. Regardless of the worker's protests, no employee suspected of being ill from heat stroke should be sent home or left unattended unless a physician has specifically approved such an order.

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Heat Exhaustion

Heat exhaustion responds readily to prompt treatment. A worker suffering from heat exhaustion should:

- Rest in a cool, shaded, or air-conditioned area.
- Drink plenty of water or other cool, nonalcoholic beverages.
- Take a cool shower, bath, or sponge bath.
- Workers suffering from heat exhaustion will be removed from the hot environment and given fluid replacement. They will also be encouraged to get adequate rest. **Regardless of the worker's protests, employee suspected of heat exhaustion should stop all activity, and sit in a cool place, seek medical attention as needed**

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Heat Syncope (Fainting)

Workers who exhibit signs of heat syncope will be instructed by a supervisor or co-workers to:


- Sit or lie down in a cool place when they begin to feel symptoms.
- Slowly drink water, clear juice, or a sports beverage.
- Workers suffering from heat syncope (fainting) will be removed from the hot environment and given fluid replacement. They will also be encouraged to get adequate rest.
- **Regardless of the worker's protests, employee suspected of heat syncope (fainting) should stop all activity, and sit in a cool place, seek medical attention as needed**

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Heat Cramps

Workers with heat cramps should:

- Stop all activity, and sit in a cool place.
- Drink clear juice or a sports beverage.
- Not return to strenuous work for a few hours after the cramps subside, because further exertion may lead to heat exhaustion or heat stroke.
- Seek medical attention if the worker has heart problems, the worker is on a low-sodium diet, or the cramps do not subside within one hour.

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Heat Rash

Workers experiencing heat rash will be treated according to the following procedures:

- Directed to work in a cooler, less humid environment when possible.
- Keep the affected area dry.
- Use dusting powder to help increase comfort.

TRAINING

All employees who are exposed or potentially exposed to heat stress will receive training regarding heat stress-related injuries and illnesses and prevention measures at the time of assignment to work activities that involve hot conditions. The following topics will be covered during safety training for heat stress:

- Knowledge of the hazards of heat stress, including environmental factors that might contribute to the risk of heat-related illness (temperature, humidity, radiant heat, air movement, conductive heat sources, workload activity and duration, and personal protective equipment).
- Recognition of predisposing factors, danger signs, and symptoms (e.g., age, degree acclimatization, medical conditions, consuming alcohol, caffeine use, nicotine use, and use of medications that affect the body's response to heat).
- The importance of frequent drinking of small quantities of water.
- Awareness of first-aid procedures for heat stroke and other heat stress-related illnesses.
- The procedure for reporting signs and symptoms of heat-related illness in themselves and co-workers.
- Employee responsibilities in avoiding heat stress.
- The importance of acclimatization.
- Dangers of using drugs, including therapeutic ones, and alcohol in hot work environments.
- Use of protective clothing and equipment, including the importance of removing heat-retaining PPE, such as non-breathable chemical resistant clothing, during breaks.
- First aid and other emergency response procedures


Refresher Training

Personnel covered by this Program will receive refresher heat stress training at least once per year, and whenever there is a change in work assignment or hot conditions, or when a new heat source is introduced to a work area.

RECORDKEEPING

Heat stress-related illnesses that are relieved by first aid and do not require additional medical treatment will not be recorded in injury and illness records.

Heat stress-related illnesses that require medical treatment beyond first aid will be recorded as an illness on injury and illness recordkeeping forms. For example, the administration of fluids by intravenous injections is recordable as medical treatment, and more serious cases of heat disorders involving such injections will be entered into the injury and illness records. In addition, any diagnosis by a physician or other licensed healthcare professional of heat syncope (fainting due to heat) will be recorded.

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DEFINITIONS

Acclimatization or acclimate is the physiological (i.e., physical, mechanical, and biochemical) change that allows the human body to adapt or get used to the effects of a new physical environment or climate. After a period of acclimatization, the same physical activity will produce fewer cardiovascular demands. The worker will sweat more efficiently, causing better evaporative cooling, and thus will more easily be able to maintain normal body temperatures.

Calorie is the amount of heat required to raise 1 gram of water 1°Celsius (C) (based on a standard temperature of 16.5 to 17.5°C).

Conduction is the transfer of heat between materials that contact each other. Heat passes from the warmer material to the cooler material. For example, a worker's skin can transfer heat to a contacting surface if that surface is cooler, and vice versa.

Convection is the transfer of heat in a moving fluid. Air flowing past the body can cool the body if the air temperature is cool. On the other hand, air that exceeds 35°C (95° Fahrenheit (F)) can increase the heat load on the body.

Dry bulb (DB) temperature is the measurement of the heat content of freely exposed air measured by a thermal sensor that is shielded from direct radiant energy sources.

Evaporative cooling takes place when sweat evaporates from the skin. High humidity reduces the rate of evaporation and thus reduces the effectiveness of the body's primary cooling mechanism.

Globe temperature is the temperature inside a blackened, hollow, thin copper globe.

Heat is a measure of energy that is transferred by a difference in temperature.

Metabolic heat is a by-product of the body's activity.

Natural wet bulb (NWB) temperature is measured by exposing a wet sensor, such as a wet cotton wick fitted over the bulb of a thermometer, to the effects of evaporation and convection. The term "natural" refers to the movement of air around the sensor.

Radiation is the transfer of heat energy through space. A worker whose body temperature is greater than the temperature of the surrounding surfaces radiates heat to these surfaces. Hot surfaces and infrared light sources radiate heat that can increase the body's heat load.

PRGORAM REVIEW AND UPDATE

This Plan will be periodically reviewed and updated when:

- New activities or equipment that creates heat stress are introduced into the workplace.
- Evaluations of heat stress hazards, injuries, and illnesses demonstrate that the current Plan is outdated or not effective.
- Regulatory or applicable national consensus standards change that require this Plan to be updated.

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PURPOSE AND SCOPE

This program establishes the training, inspection and operating requirements concerning the use of portable ladders used at **Kent County Delaware Governmental Body** (referred to from this point forward as “**Kent County**”). This program applies to all employees and contractors working on any site owned or operated by **Kent County**

RESPONSIBILITIES

Kent County Health & Safety Officer or His/Her Assistant with the coordination of the Personnel Director/Human Resource Manager, Department Director(s)/Manager(s) and/or Division Supervisors’/Managers’ will be responsible for the following:

- Developing specific policies and procedures pertaining to the operation and maintenance of company ladders.
- Implementation of employee training based on the general principles of ladder safety and their inspections.

Managers and supervisors are responsible for:

- Arranging for training of employees who use portable ladders in their departments.
- Ensuring that the ladders under their responsibility are properly inspected and maintained in a safe operating condition using the form below.

Employees are responsible for:

- Using portable ladders in a safe manner.
- Inspecting ladders in their areas and completing the inspection form in (Appendix # 2).
- Reporting equipment defects and/or maintenance needs to their supervisors immediately.

TRAINING REQUIREMENTS

Kent County will provide training to ensure that all managers, supervisors and employees understand the purpose and function of this program and general Ladder Safety.

Training will be as follows:

- **Initial Training:** Training that is conducted by **Department Director(s)/Manager(s) and/or Division Supervisors’/Managers’** for all new employees. This training will be conducted within 5 days of employment.
- **General Refresher Training:** General regulatory overview conducted every three years by **Department Director for all** managers, supervisors and employees **within their department**.
- **Training Records:** Training records are filed with **Personnel Director/Human Resource Manager** and will be maintained for 3 years from the date on which the training occurred.
- **Training Requirements:** Employees will be trained to recognize hazards related to ladders. In addition, employees will be trained on the maximum intended load-carrying capacities of ladders; the proper placement of ladders and inspection criteria.

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EQUIPMENT INSPECTIONS

New or Modified Equipment Safety Inspection: An inspection of new or modified ladder is performed by **Division Safety Coordinator and/or Supervisor**.

Pre-Use Inspections: Portable ladders will be inspected prior to use to verify the equipment is safe to operate. If at any time the ladder is found to be in unsafe, the employee will immediately notify his/her supervisor and remove the equipment from service.

Periodic Inspection: Annual inspections are performed for each ladder in accordance with the manufacturer's recommendations by **Division Safety Coordinator and/or Supervisor**.

- The results of the new equipment and periodic inspections will be documented and retained by **Division Supervisor** for 12 months for recordkeeping purposes.
- Ladders identified with defects **shall be withdrawn from service for manufactures authorized repairs. If manufacture authorized repairs cannot be preformed the ladder shall be destroyed.** Any requirements for repair or replacement of the equipment or its components will need to be rectified prior to that ladder being returned for use.

PROGRAM REVIEW

This program will be reviewed by the safety committee within 12 months of the last review dated. Any changes made to this document will be noted by a modification to the Revision Number.

[illegible]


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(Appendix # 2)

PORTABLE LADDER INSPECTION GUIDE

Date		Employee		Department	
Ladder#		Type			
					Comments

- ☐ Are all the rungs, cleats, or steps in good condition?
- ☐ Are the side rails intact without any cracks, bends, or breaks?
- ☐ Do the rungs, cleats, or steps fit snugly into the side rails?
- ☐ Is the ladder free of corrosion?
- ☐ Are the side rails and steps free of oil or grease?
- ☐ Are the ladder's hardware and fittings secure and undamaged?
- ☐ Do moveable parts operate freely without binding or excessive play?
- ☐ Are the ropes on extension ladders intact without fraying or excessive wear?
- ☐ Are damaged ladders removed from service that are beyond manufactures authorized repairs and destroyed?

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PURPOSE AND SCOPE

This Program applies to the control of hazardous energy (lockout/tagout) during the servicing and/or maintenance of machines and equipment used at Kent County Delaware Governmental Body (referred to from this point forward as “Kent County”). This program applies to all employees and contractors working on any site owned or operated by Kent County. The purpose of this Program is to provide procedures that will ensure employees are not injured due to the unexpected start-up of machinery and equipment during servicing and/or maintenance. All authorized and affected employees, as defined below, are covered by the scope of this procedure.

RESPONSIBILITIES

Authorized Employees are responsible for following the necessary Lockout/Tagout Procedures when servicing or maintaining equipment.

Affected and Other Employees are responsible for observing all warning tags and for not attempting to operate any machinery or equipment that is being serviced and is in a lockout condition.

Department/**Division** Supervisors are responsible for enforcing this procedure, making sure that authorized and/or affected employees in their departments understand and follow this procedure.

DEFINITIONS

Hazardous Energy: Potentially harmful and/or dangerous sudden uncontrolled released or activated stored energy from a number of power sources (i.e.: electrical, hydraulic, powder, pneumatic, gas, water, steam, fuel, pressurized systems, compressed metal coil/spring, etc.).

Authorized Employee: A person who locks out or tags out machines or equipment in order to perform servicing or maintenance.

Affected Employee: An employee whose job requires him/her to operate or use or work in an area where a machine or equipment is serviced or maintained under lockout/tagout.

Energy Isolating Device: A device that physically prevents the transmission or release of energy. Examples include electrical circuit breakers, disconnect switches, line valves, etc. Push buttons, selector switches, etc. are not energy isolating devices.

Lockout Device: A device that uses a positive means, such as a lock, to hold an energy isolating device in a safe position and prevent the energizing of a machine or equipment.

Lockout: The placement of a lockout device on an energy isolating device ensuring that the equipment being controlled can not be operated until the lockout device is removed.

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GENERAL PROCEDURE


Equipment specific lockout/tagout procedures have been developed and will be used when working on or servicing equipment. The equipment specific procedures follow the General Procedure defined below and will have additional information relevant to that particular piece of equipment.

De-Energization

- Review Machine-Specific Lockout/Tagout Procedure for the machine to be serviced and locked out.
- Notify the Machine/**Equipment** Operator and other Affected Employees that the machine is to be locked out for service.
- Shut down the machine/**equipment** using the normal stopping methods (e.g. depress stop button, etc.).
- De-activate the energy isolating device(s) so that the machine is isolated from its power source(s).
- Apply locks/lockout devices to each energy-isolating device(s). All authorized employees working on the machine/**equipment** must apply their own lock, remove the key and keep the key in their possession for the duration of the lockout.
- Dissipate, release, restrain, block, and bleed, etc. any residual or stored energy as indicated in the Machine-Specific Energy Control Working Standard for the machine to be serviced.
- Sign and date a warning tag and place one at each point of energy isolation.
- Verify that the energy source is de-energized by attempting to operate the machine/**equipment** using the normal operating controls (start button, etc.), by observing appropriate drops in pressure gauges, or by using a voltage meter to measure the voltage present.
- After verifying that the machine/**equipment** does not operate, return the operating controls to the “neutral” or “off” position and service the machine as required.

Re-Energization

- Once servicing is complete, remove all tools, spare parts, etc. from the machine/**equipment**.
- Re-install all machine/**equipment** guards.
- Make sure all employees are clear of the **machine/equipment**.
- Notify all affected employees that the lockout is about to be removed and the machine/**equipment** is about to be re-energized.
- All authorized employees remove their own lock(s). No one may remove another employee’s lock with the following exception. If the authorized employee who installed the lock is not available when the work is completed, the **Department/Division Supervisor** may remove this lock only after all of the following conditions have been met:
 - It is verified that the employee is not on site
 - All reasonable efforts are made to contact the employee and notify him/her that the lock is being removed
 - The employee is made aware of the removal of the lock before he/she resumes work on site
- The authorized employee(s) re-energize the machine at the main power source(s).

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SHIFT OR PERSONNEL CHANGES

Whenever one authorized employee takes over for another authorized employee during a lockout situation (i.e. shift change), the person who is taking over the job shall apply his/her lock(s) before the employee who is leaving the job removes his/her lock(s).

Exchanging keys and using the same locks is not an acceptable means to comply with this section.

LOCKOUT/TAGOUT EQUIPMENT

A number of Authorized Employees are assigned individually identifiable locks (see sample List of Authorized Employees at end of document). These locks are for use only by the person to whom it has been assigned and only for lockout purposes. It is each Authorized Employee's responsibility to store and use these locks properly. Additional locks can be obtained from the Lockout Stations.

CONTRACTORS

When an outside contractor needs to perform service or maintenance on equipment that needs to be locked out, the manager authorizing the contract work must first review this Lockout/Tagout procedure, with the contractor.

The manager is then responsible for making sure that the contractor complies with the minimal requirements of this procedure. When appropriate, the manager will provide the equipment specific procedures to the contractor.



OUT OF SERVICE EQUIPMENT

If a piece of equipment is not under repair, but is out of service, a lock and an “Out-of-Service” tag will be applied. The out of service locks will not be the same locks used for lockout. Out of Service tags will be black and yellow letters on yellow background and have the words “Out-of-Service” printed on both sides.

TRAINING

Upon initial job assignment, Authorized Employees shall receive training on the proper use of energy control procedures. Training will include;

- The recognition of applicable hazardous energy sources
- The type and magnitude of the energy available in the workplace
- The methods and means necessary for energy isolation and control

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Affected Employees and other employees who may be in areas where energy control procedures are used shall be instructed in;

- The purpose of this procedure
- The means to recognize lockout situations
- The prohibition relating to attempts to restart or reenergize machines or equipment which are locked out or tagged out

When tagout systems are used, employees will be trained on the limitations of these systems. Training will include;


- Tags are warning devices that may evoke a false sense of security and do not provide the physical restraints of a lock
- Tags are not to be removed except by the authorized person responsible for attaching the tag
- Tags are not to be defeated, removed or bypassed
- Tags must be legible and understandable
- Tags and their means of attachment must be durable to withstand the environmental conditions encountered in the workplace
- Tags must be securely attached to energy isolating devices

Training is conducted:

- At the time of initial job assignment
- When changes in job assignments present new hazards
- When there are changes in the energy control procedures
- When the Annual Audit reveals inadequacies in employees' use or knowledge of the energy control procedures

SAMPLE (Page 3)

AUTHORIZED EMPLOYEES ARE ASSIGNED INDIVIDUALLY IDENTIFIABLE LOCKS				
EMPLOYEE NAME	LOCK NO.	KEY NO.	LOCK/KEY COLOR	EMPLOYEE PHOTO

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MINIMUM LOCKOUT/TAGOUT PROCEDURES CHECKLIST

- ☐ Is all machinery or equipment de-energized or disengaged and blocked or locked out during cleaning, servicing, adjusting, or setting up operations?
- ☐ Is equipment disconnected form the electrical control circuit?
 - ☐ Are all appropriate electrical enclosures identified?
 - ☐ Has all control circuits been disconnected and locked out?
- ☐ Are all equipment control valve handles provided with a means of locking out?
- ☐ Has all Hazardous Stored Energy been released or blocked before equipment is locked out?
- ☐ Are all appropriate employees provided with individually keyed personal safety locks?
- ☐ Does employee who installed the lock(s) have control of their key(s)?
- ☐ Can quick identification of employees who are working on locked-out equipment be made?
- ☐ Has safety of lockout procedure been checked (tested) by attempting a startup after making sure no one is exposed?
 - ☐ Return operating control(s) to “neutral” or “off” position after the test
- ☐ Has the “Control Circuit Stop Button” been pushed before re-energizing the main power switch?
- ☐ Are a sufficient number of accident prevention signs or tags and safety padlocks on had for emergency repairs?
- ☐ Do all tagout device attachment meet the following requirements:
 - ☐ Be able to be affixed by hand?
 - ☐ Be non-reusable?
 - ☐ Be self-locking?
 - ☐ Requires a minimum unlocking strength of 50 pounds?
- ☐ Have guards have been reinstalled before the removal of all lockout or tagout devices?

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PURPOSE AND SCOPE

The purpose of this procedure is to protect all **Kent County Delaware Governmental Body** (referred to from this point forward as “**Kent County**”).employees from injury caused by machinery by ensure that all machines and machine guarding conforms to the standards set forth by **Occupational Safety & Health Administration (OSHA)** and **American National Standards Institute (ANSI)** and industry groups. Any machine part, function, or process that may cause injury will be safeguarded. Guarding should protect the operator and other employees in the machine area from hazards such as those created by point of operation, ingoing nip points, rotating parts, flying chips, and sparks.

RESPONSIBILITIES

New Equipment: Before purchase any new equipment the **Kent County Department Director/Manager with the coordination of the Health & Safety Officer or His/Her Assistant** will review all specifications to ensure that the guards are suitable and that there are no unguarded moving parts. They will also determine whether the equipment meets all regulatory requirements. When they are satisfied, they will sign off on the purchase of the equipment.

Existing Equipment: The **Department Director/Manager or Division Supervisor** will keep all specifications and designs for each machine on file. If a machine needs to be modified or retrofitted with new guards, the manufacturer will be contacted for guidance on correct procedures. If the changes are to be made in-house, the **& Safety Officer or His/Her Assistant will approve and sign in-house request for changes.**

Supervisors will ensure that:

- Employees do not remove or bypass any machine guards. If a machine guard is damaged, bypassed, or missing, the *supervisor* will ensure that the machine is taken out of service until the problem is corrected.
- Employees wear proper PPE while operating the machines.
- Employees receive initial training on the machine operations and additional training when there are any changes or as needed.

Employees should never bypass or remove machine guards. *Employees* are not permitted to wear loose clothing or jewelry while operating the machines.

Employees should immediately notify their supervisors if they notice any unguarded moving parts or dangerous points of operation. Work must stop and the machine shut down until the condition is corrected.

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PROCEDURES

Guards

- Machine guards must prevent any part of an operator's body from coming in contact with moving parts and must prevent chips or pieces of material from flying off of the machine.
- Guards should be affixed to the machine whenever possible.
- Guards should not be an impediment that would encourage employees to bypass the system.
- Employees should be able to perform minor maintenance tasks, such as lubricating, without removing the guards.
- Overhead belts, pulleys, or fans 7 feet or less above ground must be guarded.
- Pressure sensing device initiation (PSDI) must be certified and validated.

Machines

- All electrical machinery must be properly grounded.
- Machinery should be bolted to the floor, if possible, to prevent movement.
- Power controls and operating controls should be located within easy reach of the operator.
- Foot pedals, levers, and other start-up controls must be protected to prevent unintentional start-up of the machine.

INSPECTIONS

Machines and guards will be inspected by the operator prior to use. In addition, the **Safety Coordinator** will conduct a monthly inspection of machine and safe guards to ensure that they are in place and positioned properly to ensure protection of operators and those work in the surrounding area.

TRAINING

Employees who work on or around machines will be trained on the proper operation and inspection of the equipment and guards. This training will include how to handle minor servicing tasks, such as oiling or clearing a jam, without endangering themselves and others.

All training shall be documented and documentation shall be maintained by the supervisor for three years. Documentation shall consist of the printed name of trainer, trainee, date of training, type of training and signature of trainee and trainer.

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PURPOSE AND SCOPE

The purpose of the Personal Protective Equipment (PPE) procedure is to protect **Kent County Delaware Governmental Body** (referred to from this point forward as “Kent County”) employees from the risk of injury by creating a barrier against workplace hazards. PPE is not a substitute for engineering or administrative controls or work practices, but should be used in conjunction with these controls to ensure the safety and health of employees. PPE will be provided **and/or replaced by Kent County, utilized by employees**, and maintained **and inspected by employees** when it has been determined that its use is required to lessen the likelihood of occupational injury and/or illness.

This program addresses **body**, eye, face, head, foot, and hand protection. It does not include hearing protection or respiratory protection, since these items are covered under separate programs.

RESPONSIBILITIES

Department Director(s)/Manager(s) and/or Division Supervisors’/Managers’ are responsible for the development and administration of the PPE program that includes the following:

- Ensuring that workplace hazard assessments are conducted to determine the presence of hazards that necessitate the use of PPE.
- Ensuring the workplace hazard assessments are evaluated at least every **two** years.
- Ensuring that employee training is provided.
- Ensuring that an annual review, update, and evaluation on the overall effectiveness of the PPE program is conducted.

Division Supervisor/Manager is responsible for the implementation of the program including the following items:

- Obtaining the appropriate PPE and making it available to employees.
- Ensuring that employees are properly trained in the use and care of PPE.
- Ensuring that the PPE program elements are followed.
- Seeking assistance to evaluate workplace hazards, if needed.
- Ensuring that defective or damaged equipment is immediately replaced.

Employees are responsible for:

- **Insuring PPE that has been issued to an individual employee and subsequently contacts with bodily fluids (salvia, perspiration, urine, etc.) from that same employee is not utilized by other employees; but is only utilized by the originally issued employee.**
- Wearing PPE, as required;
- Attending required training sessions;
- Caring for, cleaning, and maintaining PPE; and
- Informing supervisors if repairs or replacement are necessary.

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PERSONAL PROTECTIVE EQUIPMENT HAZARD ASSESSMENTS

A hazard assessment of each work area has been **and shall be** conducted to identify sources of hazards and the required PPE. The assessment **shall be** documented (See Appendix A) and identifies the work area evaluated, the person conducting the evaluation, the findings of potential hazards, the required PPE, and date of the evaluation. The Hazard Assessment will be updated when new hazard are introduced or at least every **two** years.

INSPECTION, STORAGE, AND MAINTENANCE

Before using protective clothing these procedures should be followed:

- Determine if the PPE is appropriate for the specified task at hand.
- Visually inspect the PPE for **proper size**, imperfect seams, tears or holes, signs of shelf deterioration, or stiffness that may have resulted from exposure to chemicals.
- Protective clothing should also be periodically inspected during use for evidence of chemical attack such as discoloration, swelling, stiffening and softening; tears; punctures; or torn seams.

Clothing and other PPE must be stored properly to prevent damage or malfunction due to dust, moisture, sunlight, chemicals, extreme temperatures, and impact. Many equipment failures can be directly attributed to improper storage. All PPE will be stored according to the manufacturer's recommendation.

CLEANING

It is important that all PPE be kept clean and properly maintained. Cleaning is particularly important for eye and face protection where dirty or fogged lenses could impair vision. PPE should be inspected, cleaned, and maintained at regular intervals so that the PPE provides the required level of protection. It is also important to ensure that contaminated PPE is disposed of in a manner that protects employees from exposure to hazards.

REUSE OF PPE

If protective clothing is to be reused, it should be noted that chemicals that have begun to permeate the material might not be removable during decontamination. As a result, the chemicals may continue to diffuse through the clothing. This could present the hazard of direct skin contact to the next person who uses the PPE.

To prevent the reuse of contaminated clothing, the material should be examined thoroughly for discoloration or any other evidence of contamination. Samples of clothing intended for reuse can also be submitted for laboratory testing to verify visual observations.

In some instances, contaminated protective clothing can be stored for reuse without cleaning. This assumes that the contaminants pose no threat to the workers health or safety. Clothing meeting these criteria should be stored in a separate area with adequate ventilation.

Generally, reuse decisions must be based on known permeation rates as well as the toxicity of the contaminants(s). Extreme care must be taken to ensure that the contaminants are harmless or that the clothing is properly decontaminated without being damaged.

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TRAINING

Any worker required to wear PPE will receive training in the proper use and care of PPE. The training will include, but not be limited to, the following subjects:

- When PPE is necessary
- What PPE is necessary
- How to properly wear PPE
- Limitations of PPE
- Proper care, maintenance, useful life and disposal of PPE

When there is reason to believe that an employee who has already been trained, does not demonstrate that they understand the components of the PPE program and how to use the PPE properly, then that employee will be retrained. Circumstances where retraining is required include, but are not limited to situations where:

- Changes in the workplace render previous training obsolete
- Changes in the types of PPE to be used render previous training obsolete
- Inadequacies in an affected employee's knowledge or use of assigned PPE indicate that the employee did not retain the requisite understanding or skill.

A written certification that verifies that each affected employee has received and understood the required training will be maintained for a period of 5 years. The records will include employee name and date of training.



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PERSONAL PROTECTIVE EQUIPMENT

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(Appendix A)
PPE HAZARD ASSESSMENT

Location:

Date of Assessment:

Date Verified:

Task	Hazards Identified	Controls	PPE	Notes
	Eyes:			
	Hands:			
	Feet:			
	Head:			
	Hearing:			
	Resp:			
	Other:			
	Eyes:			
	Hands:			
	Feet:			
	Head:			
	Hearing:			
	Resp:			
	Other:			


I certify that the above PPE Hazard Assessment was completed and is true and accurate to the best of my knowledge.

Name:

Title:

Signature:

Date:

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PURPOSE AND SCOPE

This program is designed to ensure that **Kent County Delaware Governmental Body (referred to from this point forward as “Kent County”)** employees are provided with a safe and healthy work environment. This will be accomplished by ensuring that all equipment and processes have feasible safeguards incorporated into their design. Respiratory protection will be used only when effective **engineering or administrative controls or work practices** are not feasible. This program has been developed to assure appropriate respiratory protection for **Kent County** employees. **Kent County’s Program follows or exceeds the Occupational Safety and Health Administration (OSHA) Respiratory Protection Standards (29 CFR 1910.134 and 29 CFR 1926.103).**

Kent County shall provide respirators when such equipment is necessary to protect the health of Kent County employees. The respirator provided must be suitable for its intended purpose.

RESPONSIBILITIES

Program Administrator:

The program administrator **(Department Director/Manager and/or Division Supervisor/Manager) under the oversight of the Kent County Health & Safety Officer or His/Her Assistant** is responsible for establishing and maintaining a respiratory protection program **within their field of control**. The program administrator will implement a Respiratory Protection Program **that is approved by the Kent County Health & Safety Officer or His/Her Assistant** and designed and organized to ensure respirators are properly selected, used, and maintained.


The program administrator is also responsible for evaluating those tasks for which respiratory protection may be needed, determine whether engineering or administrative controls are feasible, and will specify which respiratory protection device that is to be used for each task. In addition, the program administrator will ensure that personnel receive training in the selection and use of respiratory protective devices, ensure employees are physically capable of wearing a respirator, will conduct fit testing, and will issue necessary protective devices as needed.

Respirator Users:

It is the responsibility of each respirator user to wear his/her respirator in the manner in which they were trained. Respirator wearers must report any malfunctions of the respirator to his/her supervisor immediately. The wearer must also guard against mechanical damage to the respirator, clean the respirator as instructed, and store the respirator in a clean, sanitary location.

Respiratory Protection Equipment

Respirators are devices that protect employees from inhaling harmful substances, including chemical, biological, and radiological agents. These substances can be in the form of airborne vapors, gases, dust, fogs, fumes, mists, smokes, or sprays. Some respirators also ensure that employees do not breathe air that contains dangerously low levels of oxygen or that is otherwise immediately dangerous to life or health (IDLH), (e.g., life-threatening exposures during interior structural firefighting.) Respirators may be used to provide protection during routine operations where engineering controls and work practices are not able to provide sufficient protection from these hazards, or in emergencies.

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In situations in which employees are exposed to harmful airborne hazards, respirators must “seal off” and isolate the user’s respiratory system from the contaminated environment. The risk that a user will experience an adverse health outcome when relying on respiratory protection is a function of the toxicity or hazardous nature of the air contaminants in the air, the duration of exposure and the degree of isolation provided by the respirator. When respirators fail or do not provide the degree of protection expected by the user, the user is placed at an increased risk of any adverse health effects that are associated with exposure to the respiratory hazards present. Furthermore, the margin for error in immediately dangerous to life or health atmospheres is slight or nonexistent because an equipment malfunction or employee mistake can, without warning, expose the employee to an atmosphere incapable of supporting human life. Such exposure may disable the employee and require an immediate rescue if the employee’s life is to be saved. Therefore it is critical that respirators are properly selected and used in compliance with the OSHA Respiratory Protection standard (29 CFR 1910.134).

Respirators provide protection from respiratory hazards only when they are properly selected and used in compliance with the OSHA Respiratory Protection Standard (29 CFR 1910.134 and 29 CFR 1926.103)

Medical Evaluation

Kent County’s Administrator will provide a medical questionnaire to employees who are required or request to wear an elastomeric type facepiece respirator (half or full face). An Occupational Health Provider will make a determination, based on the questionnaire, as to whether that employee is physically capable to wear a respirator. This may require a physical examination if deemed appropriate by the Occupational Health Provider. Records of all medical evaluations will be kept on file.

Kent County shall provide a medical evaluation before the employee is fit tested and uses a respirator in any workplace for the first time. When an employee voluntarily wears a dust mask (filtering facepiece respirator), no medical examination is required.

Accepted Fit Test Protocols

Kent County’s Personnel/Human Resource Director/Manager shall provide fit testing using the following procedures.

The test subject shall be allowed to pick the most acceptable respirator from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.

Prior to the selection process, the test subject shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine an acceptable fit. A mirror shall be available to assist the subject in evaluating the fit and positioning of the respirator. This instruction may not constitute the subject’s formal training on respirator use, because it is only a review.

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The test subject shall be informed that he/she is being asked to select the respirator that provides the most acceptable fit. Each respirator represents a different size and shape, and if fitted and used properly, will provide adequate protection.

The test subject shall be instructed to hold each chosen facepiece up to the face and eliminate those that obviously do not give an acceptable fit.

The more acceptable facepieces are noted in case the one selected proves unacceptable; the most comfortable mask is donned and worn at least five minutes to assess comfort. Assistance in assessing comfort can be given. If the test subject is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.

Assessment of comfort shall include a review of the following points with the test subject and allowing the test subject adequate time to determine the comfort of the respirator:

- Position of the mask on the nose
- Room for eye protection
- Room to talk
- Position of mask on face and cheeks


The following criteria shall be used to help determine the adequacy of the respirator fit:

- Chin properly placed
- Adequate strap tension, not overly tightened
- Fit across nose bridge
- Respirator of proper size to span distance from nose to chin
- Tendency of respirator to slip
- Self-observation in mirror to evaluate fit and respirator position.

The test subject shall conduct a user seal check, either the negative and positive pressure seal checks recommended by the respirator manufacturer which provide equivalent protection to the procedures. Before conducting the negative and positive pressure checks, the subject shall be told to seat the mask on the face by moving the head from side-to-side and up and down slowly while taking in a few slow deep breaths. Another facepiece shall be selected and retested if the test subject fails the user seal check tests.

The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface, such as stubble beard growth, beard, mustache or sideburns which cross the respirator sealing surface. Any type of apparel which interferes with a satisfactory fit shall be altered or removed.

If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician or other licensed health care professional, as appropriate, to determine whether the test subject can wear a respirator while performing her or his duties.

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If the employee finds the fit of the respirator unacceptable, the test subject shall be given the opportunity to select a different respirator and to be retested.

Exercise regimen. Prior to the commencement of the fit test, the test subject shall be given a description of the fit test and the test subject's responsibilities during the test procedure. The description of the process shall include a description of the test exercises that the subject will be performing. The respirator to be tested shall be worn for at least 5 minutes before the start of the fit test.

The fit test shall be performed while the test subject is wearing any applicable safety equipment that may be worn during actual respirator use which could interfere with respirator fit.

Test Exercises. (The respirator shall not be adjusted once the fit test exercises begin. Any adjustment voids the test, and the fit test must be repeated.)

(a) Employers must perform the following test exercises for all fit testing methods Kent County must ensure that employees perform the test exercises in the appropriate test environment in the following manner:

Normal breathing. in a normal standing position, without talking, the subject shall breathe normally.

Deep breathing. In a normal standing position, the subject shall breathe slowly and deeply, taking caution so as not to hyperventilate.

Turning head side to side. Standing in place, the subject shall slowly turn his/her head from side to side between the extreme positions on each side. The head shall be held at each extreme momentarily so the subject can inhale at each side.


Moving head up and down. Standing in place, the subject shall slowly move his/her head up and down. The subject shall be instructed to inhale in the up position (i.e., when looking toward the ceiling).

Talking. The subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The subject can read from a prepared text such as the Rainbow Passage, count backward from 100, or recite a memorized poem or song.

Rainbow Passage: *When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow.*

Grimace. The test subject shall grimace by smiling or frowning

Bending over. The test subject shall bend at the waist as if he/she were to touch his/her toes. Jogging in place shall be substituted for this exercise

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HAZARD ASSESSMENTS

Kent County Health & Safety Officer or His/Her Assistant will conduct *annual* industrial hygiene studies to ensure that employee exposure levels remain below recommended Threshold Limit Value established by the American Conference of Governmental Industrial Hygienists (ACGIH). Based upon previous industrial hygiene studies conducted at **Kent County Employment Location**, it has been determined that exposure levels *may or may not exceed threshold limit values* established by ACGIH. The program administrator will maintain a record of all air-monitoring results.

The program administrator will ensure that additional air monitoring studies are conducted whenever processes, equipment, or chemical **or environmental** applications change, or when there is reason to believe exposure levels may be in excess of established safe levels.

VOLUNTARY RESPIRATOR PROGRAM

Based upon previous hazard assessments it has been determined that employee exposure levels are *(as of this publication date)* well below those established by ACGIH. Although respiratory protection is not required, **Kent County** recognizes that employees may request respiratory protection on a voluntary basis to eliminate and control nuisance level odors. Employees shall be provided with the information contained Appendix “D” of the Respiratory Protection Standard. (See Tab in this Policy)


Although no chemical overexposure exists, **Kent County** will implement a voluntary respiratory protection program to ensure the highest levels of safety and comfort for all employees. The voluntary protection program will consist of the following:

Filtering Face Piece Respirators (i.e. Dust Masks)

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If Kent County provides respirators for voluntary use, or if the employee provides their own respirator, the employee needs to take certain precautions to be sure that the respirator itself does not present a hazard. The employee should do the following:

Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.

Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell the employee what the respirator is designed for and how much it will protect.

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Employee shall not wear a respirator into atmospheres containing contaminants for which the respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.

An employee is to keep track of their respirator so that they do not mistakenly use someone else's respirator.

Elastomeric Facepiece Respirators (i.e. Full & Half Face Respirators with Straps)

Employees requesting full or half face respirator, or any type of respirator with an elastomeric (rubber) facepiece will be provided with a medical evaluation, fit-testing and training consistent with **Accepted Fit Test Protocols**

TRAINING

For the purposes of this voluntary protection program employees will be instructed / trained on the following prior to being given a respirator:


- Provide the employee with the information contained in Appendix D (See Tab in this policy)
- Respirator capabilities and limitations
- How to test for proper fit and seal each time the mask is worn. *(Although the employee is not being exposed to levels in excess of Permissible Exposure Levels a seal check is recommended)*
- How to properly clean, store, and maintain the respirator so the respirator itself does not pose a hazard.

In addition, **Kent County** will provide training on respiratory protection during personal protective equipment training on an annual basis.

PROGRAM EVALUATION

The overall respiratory protection program at **Kent County** will be reviewed annually. Any program faults will be corrected immediately. The program administrator will ensure that the program is updated to reflect any necessary changes.

The status of the voluntary protection program as defined in this policy will be reviewed each year in accordance with Industrial Hygiene Survey results and recommendations.


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Appendix D to Sec. 1910.134 (Mandatory) Information for Employees Using Respirators When Not Required Under the Standard

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.
2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.


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PURPOSE AND SCOPE

This Welding and Hot Work Safety Plan addresses welding, cutting, brazing, and related hot work operations capable of initiating fires or explosions, creating toxic fumes, or generating heat or molten flying objects that could injure workers at **Kent County Delaware Governmental Body** (referred to from this point forward as “Kent County”). This Plan does not cover additional requirements for hot work operations in confined spaces or lockout/tagout procedures during hot work. See the **Confined Space Entry Plan** and **Lockout/Tagout Plan** for more information about such operations.

RESPONSIBILITIES

- **Plan Administrator.** The Plan Administrator **as assigned by Personnel Director/Human Resource Manager** or designee is responsible for the safe operation of welding and related hot work activities, and developing and maintaining this written Plan. The Administrator or designee will:
 - Conduct hazard assessments for all work areas where hot work is performed and welding, cutting, and brazing equipment is used and stored, and ensure that hazard assessments conducted by contractors or consultants submit them to the Administrator or designee.
 - Establish **safe** areas for cutting and welding, and establish procedures for cutting and welding in other areas on the basis of fire potential **and/or personnel harm within** the facilities.
 - Designate an individual responsible for authorizing cutting and welding operations in areas not specifically designed for such processes.
 - Ensure that cutters, welders, and their supervisors are suitably trained in the safe operation of their equipment and the safe use of the process.
 - Advise all contractors about flammable materials or hazardous conditions of which they may not be aware.
- **Supervisor.** The Supervisor will:
 - **Mark safe areas for cutting and welding, that were establish within the facilities and/or operation area.**
 - Be responsible for the safe handling of the cutting or welding equipment and the safe use of the cutting or welding process.
 - Determine whether combustible materials are present or likely to be present in the work location.
 - Protect combustibles from ignition according to safe practices described in this Plan.
 - Secure authorization for the cutting or welding operations from the Administrator or designated representative.
 - Ensure that the cutter, welder, or hot work operator secures the approval of the Supervisor that conditions are safe before going ahead.
 - Determine that fire protection and extinguishing equipment are properly located at the site.
 - Ensure fire watch personnel are available at the site when required.

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- **Operators of welding, cutting, or other hot work equipment.** The cutter, welder, or hot work operator will:
 - Conduct hot work only after specific written approval from the Administrator or designee.
 - Handle all hot work and related equipment safely and perform work so as not to endanger lives and property.
 - Cease hot work operations if unsafe conditions develop.
 - Notify the Administrator or designee for reassessment of the situation in the event of suspected unsafe conditions or concerns expressed by affected persons.

DEFINITIONS


- Fire watch means an individual or individuals whose primary responsibility is the surveillance of all exposed areas to ensure that safe conditions are maintained during hot work.
- Hot work means any work involving burning, welding, cutting, brazing, or similar operations capable of initiating fires, explosions, noxious fumes, or molten flying objects.
- Hot work permit means written authorization to perform hot work operations (for example, riveting, welding, cutting, burning, **grinding**, and heating) capable of providing a source of ignition.

HAZARD ASSESSMENT

- The Administrator or designee will ensure that a hazard assessment is conducted in each work area where welding or other hot work operations are or may be performed. The assessment will identify sources of hazards that could expose employees to high heat, light radiation, fumes, molten flying objects, and combustion from sparks.
- Each hazard assessment will identify hazards, recommend controls, and provide guidance on appropriate personal protective equipment (PPE) selections when a hazard control is not feasible or satisfactory.
- **Hazard Assessment Procedure**

Following is the process for evaluating the operations and tasks that present potential hazards to employees conducting or working near welding or other hot work operations:

- Conduct a survey of each work area to assess if hazards are present, or are likely to be present, for which hazard controls or PPE is needed. The Administrator will also provide worksite evaluations of any operation at the request of a supervisor or employee.
- Review injury and illness records, the layout of the work areas, and the placement of workers in the work areas.
- Collect and organize the data if available for each work area, and estimate the potential for injuries according to the basic hazard categories and potential sources of injury and illness.
- Determine the type, level of risk, and seriousness of potential injury from each of the hazards found in the work areas, and evaluate the possibility of exposure to several hazards.
- Categorize and record the hazards.
- Determine what type of engineering or administrative control and/or PPE will protect against the hazards.
- Incorporate the results of the assessment and recommendations for protection into this Plan and supplementary documents.

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GENERAL REQUIREMENTS FOR HOT WORK PERSONNEL

- **Hot Work Operator**

The hot work operator will:

- Be trained in the safe operation of his or her equipment and the safe use of the process.
- Have an awareness of the inherent risks involved and understand the emergency procedures in the event of a fire.
- Handle the equipment safely and use it as described in this Plan and according to manufacturer's instructions so as not to endanger life or property.
- Get Administrator or designee approval before starting hot work operations and comply with the requirements of this Plan or hot work permit.
- Cease hot work operations if unsafe conditions develop and notify the supervisor or the Administrator for reassessment of the situation.

- **Fire Watch Personnel**

Fire watch personnel will:

- Be present during hot work operations and remain for a minimum of 30 minutes after completion of hot work in order to detect and extinguish smoldering fires.
- Be aware of the inherent hazards of the worksite and of the hot work.
- Ensure that safe conditions are maintained during hot work operations.
- Have the authority to stop the hot work operations if unsafe conditions develop.
- Have fire-extinguishing equipment readily available and be trained in its use.
- Be familiar with the facilities and procedures for sounding an alarm in the event of a fire.
- Watch for fires in all exposed areas surrounding the hot work operation and try to extinguish them only when the fires are obviously within the capacity of the equipment and fire-fighting skills available.
- Immediately contact **professional fire fighting personnel (911)**, then contact Supervisor and/or the Administrator if he or she determines that the fire may **potentially become out of control**.


HOT WORK AREAS

- **Designated **Safe** Area**

A designated **safe** area will be a specific area approved for **indoor and/or outdoor** welding or other hot work, such as a maintenance shop or a detached outside location that is of noncombustible or fire-resistive construction, essentially free of combustible and flammable contents, and suitably segregated from adjacent areas. These designations are generally long-term for facilities in which specific hot work operations are repeatedly performed. A fire watch is not normally required in a Designated **and Marked Safe** Area.

- **Marked Designated Safe Area**

An active Welding and/or Hot Work Location or locations clearly visible to ground personnel and/or equipment operators by signage, floor-markings, and shielding (if shielding is required).

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- **Hot Work Permit-Required Area**


A permit-required area will be a **non-marked** designated area that is made fire-safe by removing or protecting combustibles from ignition sources and where protective controls and ventilation are adequate to control worker exposure to heat, intense light, fumes, and flying objects.

HOT WORK PERMIT

- **Authorization.** Only designees authorized by the Administrator may issue hot work permits.
 - Before hot work operations begin in a **non-marked designated** area, a completed hot work permit is required. Based on local conditions, the Administrator or designee must determine the length of the period for which the hot work permit is valid.
- **Posting.** A signed and dated copy of the hot work permit must be posted at the entrance to the area where hot work operations are conducted under the permit.
- **General Hot Work Permit Requirements**

The following standard safe work practices and site conditions must be confirmed by the Administrator or designee before permitting hot work to begin:


- All hot work and related equipment (e.g., welding equipment, shields, PPE, fire extinguishers) must be in satisfactory operating condition and in good repair.
- The floor **and/or working area** must be swept clean for a radius of 35 feet (ft) if combustible materials such as paper or wood shavings are on the floor **and/or working area**.
- Combustible floors except wood on concrete must be kept wet or be covered with damp sand. Where floors have been wet down, personnel operating arc welding or cutting equipment must be protected from possible shock or be protected by noncombustible or fire **and/or arc flash**-retardant shields.
- **Combustible work areas outdoors must be protected from ground vegetation becoming the source of an outdoor fire. A fire watch must remain vigilant and be aware of changing weather conditions.**
- All combustible materials must be moved at least 35 ft away from the hot work operation. If relocation is impractical, combustibles must be protected with fire-retardant covers, shields, or curtains. Edges of covers at the floor must be tight to prevent sparks from going under them, including where several covers overlap when protecting a large pile.
- Openings or cracks in walls, floors, or ducts within 35 ft of the site must be tightly covered with fire-retardant or noncombustible material to prevent the passage of sparks to adjacent areas.
- If hot work is done near walls, partitions, ceilings, or roofs of combustible construction, fire-retardant shields or guards must be provided to prevent ignition.
- If hot work is to be done on a wall, partition, ceiling, or roof, precautions must be taken to prevent ignition of combustibles on the other side by relocating combustibles. If it is impractical to relocate combustibles, a fire watch on the opposite side from the work must be posted.
- Hot work must not be attempted on a partition, wall, ceiling, or roof that has a combustible covering or insulation, or on walls or partitions of combustible sandwich-type panel construction.

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- Hot work that is performed on pipes or other metal that is in contact with combustible walls, partitions, ceilings, roofs, or other combustibles must not be undertaken if the work is close enough to cause ignition by conduction.
- Fully charged and operable fire extinguishers that are appropriate for the type of possible fire must be available immediately at the work area. These extinguishers should be supplied by **Kent County** or the group/**contractor** performing the hot work. The fire extinguishers normally located in a building are not considered to fulfill this requirement.
- Special precautions must be taken to avoid accidental operation of automatic fire detection or suppression systems (for example, special extinguishing systems or sprinklers).
- Nearby personnel must be suitably protected **and shielded** against heat, sparks, and slag.

FIRE PREVENTION AND PROTECTION

- All welding and other hot work operations will be conducted in compliance with the National Fire Protection Association (NFPA) Standard 51B, *Standard for Fire Prevention During Welding, Cutting, and Other Hot Work*.
- **General Procedures**
Following procedures must be completed before welding or other hot work operations begin:
 - All movable fire hazards within 35 ft of a welding or other hot work operation must be moved to a safe place if the object to be welded or cut cannot readily be moved.
 - If the object to be welded or cut cannot be moved and if all the fire hazards cannot be removed, then guards must be used to confine the heat, sparks, and slag, and to protect the immovable fire hazards.
 - Combustible material must be protected from exposure to sparks wherever there are floor openings or cracks in the flooring, cracks or holes in walls, open doorways, and open or broken windows that cannot be closed.
 - Fire extinguishers or extinguishing equipment must be ready and available for instant use; such equipment may consist of pails of water, buckets of sand, or hose or portable extinguishers, depending on the nature and quantity of the combustible material exposed.
- **Prohibited Conditions for Hot Work**
Hot work must not be permitted in the following areas until the conditions prohibiting hot work have been modified:
 - In the presence of explosive atmospheres, or in situations where explosive atmospheres may develop inside contaminated or improperly prepared tanks or equipment which previously contained flammable liquids
 - In areas with an accumulation of combustible debris, dust, lint, and oily deposits
 - In areas near the storage of exposed, readily ignitable materials such as combustibles
 - On a container such as a barrel, drum, or tank that contained materials that will emit toxic fumes when heated
 - In a confined space, until the space has been inspected and determined to be safe
- **Administrative Precautions**
Plant operations that might expose combustibles to ignition must not be scheduled to start during welding and other hot work operations.

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- **Conditions for Fire Watch**

Fire watchers are required whenever welding or cutting is performed in locations where other than a minor fire might develop, or any of the following conditions exist:


- Appreciable combustible material is closer than 35 feet to the point of operation.
- Appreciable combustibles are more than 35 ft away but can be easily ignited by sparks.
- Wall or floor openings within a 35-foot radius expose combustible material in adjacent areas including concealed spaces in walls or floors.
- Combustible materials are adjacent to the opposite side of metal partitions, walls, ceilings, or roofs and are likely to be ignited by conduction or radiation.

- **Housekeeping**

Welders must place welding cable and other equipment so that it is clear of passageways, ladders, and stairways.

INSPECTIONS

- Before welding or other hot work operations are permitted, the work area must be inspected by the Administrator or designee responsible for authorizing such operations. The inspector must indicate in writing (e.g., checklist or hot work permit) that:
 - Hot work equipment is in good condition.
 - Compressed gas cylinders are stored and handled according to safety procedures outlined in this Plan or supplemental documents.
 - Electrical systems associated with hot work operations are in good condition and operated according to safety procedures outlined in this Plan or supplemental documents.
 - Flammable and combustible materials such as trash, rags, and open containers of solvents have been removed from the area.
 - Flammable, combustible, or toxic residues have been removed or are adequately covered.
 - All movable fire hazards in the vicinity have been removed from the hot work area.
 - Ventilation is adequate to maintain a safe atmosphere during hot work.
 - Adjacent spaces have been inspected and meet requirements for hot work.
 - Operators and other affected workers are wearing required **their issued** PPE
 - Fire watch personnel are on duty when required
 - Flammable, combustible, or toxic coatings (preservative coatings or insulation) have been removed from hot work surfaces.
 - Toxic preservatives on surfaces where hot work is performed are stripped back at least 4 inches (in.); otherwise airline respirators must be used.
- **Hot work permit inspection requirements.** The inspector must following any additional inspection requirements prescribed in a hot work permit.
- **Recordkeeping.** Inspection records must be maintained according to the **Recordkeeping** requirements of this Plan.

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PERSONAL PROTECTIVE EQUIPMENT (PPE)

- **Kent County issued** PPE is required for all workers who use hot work equipment and/or perform hot work operations.
- All **Kent County** employees and contractors operating welding equipment must wear eye protection **and other appropriate PPE**.
- Eye and face protection devices must meet the specifications of the American National Standards Institute (ANSI) Z87.1, *Occupational and Educational Eye and Face Protection Devices*, for all filter lenses and plates. (See last page for 1910.133(a)(5) **Filter Lenses for Protection Against Radiant Energy**)

- **General PPE Requirements**

The degree of PPE will vary with size, nature, and location of work to be performed.

- **Hot work permit areas.** The operator of any hot work equipment and work areas covered under a hot work permit must be equipped with **Kent County issued** protective devices and/or PPE as indicated in the permit before any work begins.
- **Designated areas (hot work permit not required).** The operator of any hot work equipment in work areas designated for hot work must be equipped with **Kent County issued** protective devices and/or apparel as indicated below:
 - Portable and/or mechanical ventilation capable of keeping the levels of fumes, dust, and gases below the thresholds established in regulations for permissible exposure limits (PELs) for hazardous and toxic substances. If local exhaust or general ventilation is not available and fume, dust, and gas generation is high, respirators must be used.
 - Respiratory protection where required. NOTE: No employee will be issued or required to use a respirator until that employee has satisfied the criteria for medical evaluation, donning, doffing, and fit testing in the **Respiratory Protection Plan**.
 - Gloves, apron, and/or jacket that are made of a material that is an insulator from heat and electricity.
 - Welder's helmets equipped **and/or Cutting Goggles** with proper filter plate and cover lenses. See the **Filter Lens Shade Number Table** for more information.
 - Screens to protect persons not properly protected from the visual effects of viewing arc (**Arc Flash**) welding or cutting and during gas or oxygen cutting or welding.
 - Lifelines and harnesses for work in confined spaces as prescribed in the **Confined Space Entry Plan**.
- **Arc Welding or Cutting PPE**
Kent County issued helmets or hand shields must be used during all arc welding or arc cutting operations except submerged arc welding. Helpers or attendants must be provided with proper eye **and body** protection.
- **Gas Welding or Oxygen Cutting PPE**
Goggles or other suitable eye protection must be used during all gas welding or oxygen cutting operations. Spectacles with side shields and suitable filter lenses are permitted for use during gas welding operations on light work, for torch brazing, or for inspection.

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- **Resistance (Spot, Seam, Projection & Butt) Welding PPE**
Operators and attendants of resistance welding or resistance brazing equipment must use transparent face shields and properly shaded safety glasses or goggles, depending on the particular job, to protect their faces and eyes from welding hazards to protect their faces or eyes.

HAZARD NOTIFICATION

- Employers must include the following information on health hazard notices:
 - All filler metals and fusible granular materials must carry the following notice, as a minimum, on tags, boxes, or other containers:
“CAUTION—Welding may produce fumes and gases hazardous to health. Avoid breathing these fumes and gases. Use adequate ventilation. See ANSI Z49.”
 - Filler metals containing cadmium in significant amounts must carry the following notice on tags, boxes, or other containers:
“WARNING—CONTAINS CADMIUM—POISONOUS FUMES MAY BE FORMED ON HEATING—Do not breathe fumes. Use only with adequate ventilation such as fume collectors, exhaust ventilators, or air-supplied respirators. See ANSI Z49.1. If chest pain, cough, or fever develops after use call 911 and/or a physician immediately.”

SPECIAL OPERATIONS

- **Confined Spaces**
For the purposes of identifying a confined space in welding, cutting, and brazing operations, a confined space is a relatively small or restricted space such as a tank, boiler, pressure vessel, or compartment. See the **Confined Space Entry Plan** for detailed information about work in a confined space.
 - ***Fire prevention in confined spaces***
 - When arc welding is to be suspended for any substantial period, such as during lunch or overnight, all electrodes must be removed from the holders and the holders carefully located so that accidental contact cannot occur and the machine be disconnected from the power source.
 - Whenever the torch is not to be used for a substantial period such as during lunch hour or overnight, the torch valves must be closed and the fuel-gas and oxygen supply to the torch positively shut off at some point outside the confined area. Where practicable, the torch and hose must also be removed from the confined space.
 - ***Work in confined spaces***
 - Ventilation is a prerequisite to work in confined spaces. For ventilation requirements see the General Provisions subsection in this analysis.
 - Gas cylinders and welding machines must be left outside the confined space when welding or cutting is performed.
 - Before operations are started, heavy portable equipment mounted on wheels must be securely blocked to prevent accidental movement.

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- Where a welder must enter a confined space through a manhole or other small opening, means must be provided for quickly removing him in case of emergency.
- When safety **harness** and lifelines are used for this purpose, they must be attached to the welder's body so that his body cannot be jammed in a small exit opening.
- An attendant with a preplanned rescue procedure must be stationed outside to observe the welder at all times and be capable of putting rescue operations into effect. However, a tapping procedure on the walls of tanks as a means of communication in lieu of direct observation of the welder by the attendant is an acceptable way to communicate **if absolutely necessary**.
- After welding operations are completed, the welder must mark the hot metal or provide some other means of warning other workers about the hot metal.
- ***Ventilation in confined spaces***
 - All welding and cutting operations carried on in confined spaces must be adequately ventilated to prevent the accumulation of toxic materials or possible oxygen deficiency. This applies not only to the welder but also to helpers and other personnel in the immediate vicinity. Air replacement must be clean and safe to breathe.
 - Oxygen must never be used for ventilation.
- ***Respirators in confined spaces***
 - In circumstances for which it is impossible to provide such ventilation, airline respirators or hose masks approved for this purpose by NIOSH must be used.
 - In areas immediately hazardous to life, a full-facepiece, pressure-demand, self-contained breathing apparatus or a combination full-face piece, pressure-demand supplied-air respirator with an auxiliary, self-contained air supply approved by NIOSH must be used.
 - Where welding operations are carried on in confined spaces and where welders and helpers are provided with hose masks, hose masks with blowers, or self-contained breathing equipment, a worker must be stationed on the outside of such confined spaces to insure the safety of those working within.
- **Fuel-Gas Welding**


Employers must adopt procedures to prevent mixtures of fuel gases and air or oxygen that may explode. Mixtures of air or oxygen with flammable gases prior to consumption except at the burner or in a standard torch, are not allowed unless approved for the purpose.

 - **Portable cylinders.** All portable cylinders used for the storage and shipment of compressed gases must be constructed and maintained in accordance with the regulations of the U.S. Department of Transportation, 49 CFR parts 171–179.

Compressed gas cylinders must be legibly marked with either the chemical or the trade name of the gas. Markings must be a stencil, stamp, or label, and must not be readily removable. Whenever practical, the marking must be located on the shoulder of the cylinder.

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- ***Oxy-acetylene Welding***
Oxy-acetylene welders must:
 - Check to make sure the safety fuse plug or disk is functioning.
 - Never use oxygen or fuel gas directly from the cylinder. There has to be a regulator attached to the valve.
 - Stand to one side of the regulator (in case it malfunctions), open the cylinder valve slowly, and do no more than 1½ turns.
 - Use 3 - 7 psi for oxygen and 1 - 12 psi for acetylene, but never over 15 psi.
 - Purge oxygen and acetylene lines and light the acetylene using a striker, not a lighter.
 - Store oxygen and acetylene separately, secured in an upright position, with valves closed, and at least 20 ft or more from combustibles.
 - **Tape, Mark, and Cap all empty cylinders with the letters “MT” and store in empty cylinder designated location. Do not mix empty and full cylinders together. Exchange empty cylinders for full cylinders as quickly as possible.**
- **Arc Welding**
 - Operators and supervisors of arc welding equipment and operations must strictly follow the printed rules and instructions covering operation of equipment supplied by the manufacturers.
 - Supervisors must ensure that operators follow the procedures for fire prevention and protection, protection of personnel, and health protection and ventilation.
 - Arc welders must:
 - Ensure welding machines are grounded.
 - Avoid wet or damp areas to prevent electric shock.
 - Check that connections are tight.
 - Ensure cables are maintained and conductors are well insulated.
 - Ensure cable splices are not within 10 ft of a holder.
 - Use flash screens to protect others in the area from the **arc flash and welding slag.**
- **Resistance Welding**
 - Periodic inspection must be made by qualified maintenance personnel, and a certification record maintained. The certification record must include the date of inspection, the signature of the person who performed the inspection and the serial number, or other identifier, for the equipment inspected. The operator must be instructed to report any equipment defects to his supervisor and the use of the equipment must be discontinued until safety repairs have been completed.
 - Workers designated to operate resistance-welding equipment must have been properly instructed and judged competent to operate such equipment.

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EMERGENCY RESPONSE

- **Injured Person**

In case of an accident that results in a serious injury (i.e., requires medical attention):

- Attend the injured person(s), give standard first aid, make the situation safe, and comfort the injured.
- Call 911 from a cell phone, phone in crane cab, or other nearest location.
- Send a person, if available, to the office to coordinate help.
- Set up rescue rigging if the situation requires (trained staff only).
- Wait for the emergency medical service to arrive.
- Notify the **Personnel Director/Human Resource Manager** or designated personnel by phone or radio.

TRAINING

- **Fire Watchers**

Fire watchers must have fire extinguishing equipment readily available and be trained in its use. They must be familiar with the equipment and procedures for sounding an alarm in the event of a fire. They must watch for fires in all exposed areas, try to extinguish them only when obviously within the capacity of the equipment available, or otherwise sound the alarm. A fire watch must be maintained for at least a half hour after completion of welding or cutting operations to detect and extinguish possible smoldering fires.

- **Oxygen-Fuel Gas Welders and Cutters**

Workers in charge of the oxygen or fuel-gas supply equipment, including generators, and oxygen or fuel-gas distribution piping systems must be instructed and judged competent by their employers for this important work before being left in charge. Skilled mechanics must be properly instructed to repair regulators or parts of regulators, including gages.

- **Arc Welders and Cutters**

Workers who operate arc-welding equipment must be instructed and qualified to operate and maintain such equipment.


- **Resistance Welders**

Workers designated to operate resistance-welding equipment must be properly instructed and judged competent to operate such equipment.

PLAN REVIEW AND UPDATE


This Plan will be reviewed and updated:

- Annually
- Whenever there is a change in federal, state, or **Kent County** rules related to welding, cutting, brazing, or other hot work operations
- Whenever there is a change in facility operations related to the use, handling, or storage of welding equipment and supplies
- Whenever equipment operators demonstrate a lack of understanding or skill to perform welding or other hot work operations safely

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RECORDKEEPING

- The Administrator or designee will maintain all records related to this Plan. Unless otherwise noted, the records will be kept **in the Division Hot Work & Welding location and transferred to the Office of the Personnel Director/Human Resource Manage upon request or every three (3) years**. All records will be available for regulatory agency review on request.
- The Administrator or designee will maintain the following written records:
 - Job hazard assessments
 - An updated list of designated locations allowed to perform welding or other hot work operations without requiring a permit
 - Hot work permits
 - Inspection reports and checklists
 - Accident or incident reports and investigations
 - Training records
- **Record retention time.** All records, including employee training records (e.g., curricula, written or electronic materials, sign-in sheets, individual employee records) will be retained for 30 years.

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1910.133(a)(5) - Kent County shall ensure that each affected employee uses equipment with filter lenses that have a shade number appropriate for the work being performed for protection from injurious light radiation. The following is a listing of appropriate shade numbers for various operations.

Filter Lenses for Protection Against Radiant Energy

Operations	Electrode Size 1/32 in	Arc Current	Min. (*) Protective Shade
Shielded metal arc welding	Less than 3	Less than 60	7 (*)
	3-5	60-160	8 (*)
	5-8	160-250	10 (*)
	More than 8	250-550	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 (TIG)		Less than 50	8 (*)
		50-150	8 (*)
		150-500	10 (*)
Arc 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 (*)
Carbon arc welding			14 (*)

Filter Lenses for Protection Against Radiant Energy

Operations	Plate thickness - inches	Plate thickness - mm	Min. (*) Protective Shade
Gas Welding:			
Light	Under 1/8	Under 3.2	4 (*)
Medium	1/8 to 1/2	36.2 to 12.7	5 (*)
Heavy	Over 1/2	Over 12.7	6 (*)
Gas Cutting:			
Light	Under 1	Under 25	3 (*)
Medium	1 to 6	25 to 150	4 (*)
Heavy	Over 6	Over 150	5 (*)

Footnote (*) As a rule of thumb, start with a shade that is too dark to see the weld zone. Then go to a lighter shade which gives sufficient view of the weld zone without going below the minimum. In oxy-fuel 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.

Footnote (**) 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.