SAFETY MANUAL

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CHANGE / REVISION RECORD			
Date	**Page/Paragraph**	**Description of Change**	**Made By:**
10/29/19	WHOLE DOCUMENT	ENTIRE DOC. REVISION	JK
11/6/19	DISCIPLINARY SECTION	ADDED ENTIRE SECTION	JK

Northwest Kent Mechanical Company Safety Policy

POLICY STATEMENT

This policy has been developed by Northwest Kent Mechanical to provide a guideline for maintaining a safe work environment. Job site safety is of the highest priority for the management of Northwest Kent Mechanical and they are dedicated to the implementation of this policy. It is imperative that all employees and subcontractors adhere to the guidelines set out in this policy; it is also of vital importance that any infractions to our safety guidelines be reported immediately to the proper authority in order that appropriate action may be taken. Job site management and Safety Representatives are authorized to strictly enforce this policy.

Northwest Kent Mechanical has been able to maintain an excellent rating for job injuries to date. I would urge all employees and subcontractors to support this program so that we may continue to provide a safe workplace. We encourage any suggestions that may in any way improve our program and the safety of our employees.

EMERGENCY CONTACTS/INFORMATION

- **Medical Emergency Facility**
  - **Name:**
  - **Address:**
  - **Phone Number:**

- **Local Police Department:**
  - **Name:**
  - **Phone Number:**

- **Local Fire Department:**
  - **Name:**
  - **Phone Number:**

- **Miss Dig (If Applicable):**
  - (800) 482-7171

- **Hazmat (For Chemical Spills and/or Toxic Releases)**
  - **Name:**
  - **Phone Number:**

- **Job Superintendent Contact**
  - **Name:**
  - **Phone Number:**

- **Northwest Kent Mechanical Office Contact:**
  - **Name:** Krisha Wainright
  - **Phone Number:** (616) 696-9026

SAFETY POLICY

Northwest Kent Mechanical has a strict policy with regard to safety. This policy is for the protection of all employees and subcontractors who are involved in any projects of the company. Should any employee or subcontractor of Northwest Kent be found not to be observing company safety policies, they shall be subject to disciplinary action.

Disciplinary action may include suspension, dismissal, or any other penalty appropriate under the circumstances.

All persons shall follow these safe practice rules, render every possible aid to safe operations and report all unsafe conditions or practices to the proper authority.

It is the responsibility of the jobsite foremen to insure that all employees are observing and following company safety policies and shall take action as is necessary if they are not in compliance.

Project Foreman and/or a Safety Representative shall be responsible for inspecting work areas regularly for both unsafe physical conditions, including methods and processes, and the unsafe actions of employees and subcontractors. Should any Foreman or Safety Representative deem any work to be unsafe or observe that safety procedures are deficient in any way, all work affected shall immediately cease until such deficiency is corrected. This information should be relayed to the head office so that it can be recorded on file.

ACCIDENTS/INJURIES

The hazards and safety precautions applicable to the type of work being done specific to their job requirements. Should an Accident or Near Miss occur, an Accident Report shall be completed immediately and turned into Krisha or Northwest Kent Mechanical's office so that a complete investigation can be performed, and so that corrective actions can be initiated to reduce the likelihood of repeat occurrence. All injuries shall be reported promptly to an authorized representative of the general contractor and the jobsite foreman so that arrangements can be made for the first aid treatment.

The following shall be provided at each job site:

a. A properly stocked First Aid Kit
b. Posted phone numbers of nearest receiving hospital and ambulance service
c. Clear directions to the nearest emergency center

Following an emergency, the foreman shall complete the Accident Investigation form and send it to the head office for review.

SUBSTANCE ABUSE

Northwest Kent Mechanical has a strict policy which prohibits substance abuse or impairment by substance abuse. "Impairment" means that an employee or subcontractor's normal physical or mental abilities, or faculties, while at work have been detrimentally affected by the use of substances. Any employee or subcontractor of Northwest Kent Mechanical who is taking prescription drugs is under a duty to report this to the job site Foreman. This policy is for the protection of the employee or subcontractor and for safety purposes in the event of an adverse reaction to the drug while at work, and to prevent the employees or subcontractors from being falsely accused of taking an illegal substance.

Anyone suspected to be under the influence of intoxicating liquor or drugs shall not be allowed on the job site. Should any employee or subcontractor be found to have a liquor and/or drug dependency of any type, they shall be in violation of company policy and shall be subject to disciplinary action. Disciplinary action may include suspension, dismissal, or any other penalty appropriate under the circumstances.

TOOLBOX TALKS

Toolbox Talks shall be conducted on each job site every week. These Toolbox Talks shall include all employees of Northwest Kent Mechanical and any and all subcontractors on the job at the time. The Jobsite Foreman and/or Safety Representative shall meet at least monthly to discuss safety problems and/ or accidents that may have occurred on site.

CONFINED SPACE

(See Confined Space Policy)

No unauthorized workers shall enter manholes, underground vaults, chambers, silos, or other similar places unless specifically trained and certified in confined space entry. No workers shall enter these areas if they are inadequately ventilated, unless such area has been tested and determined to contain no flammable or toxic gases or vapors. If no means of testing is available, the area must be adequately ventilated and a self-contained breathing apparatus must be handy prior to entry.

MACHINE/TOOL GUARDING

All workers are responsible for making sure that all guards and other protective devices are in the proper place and are adjusted; this applies particularly to safety glasses and face guards. All deficiencies shall be reported to the Foreman or Safety Representative.

ELECTRICAL SAFETY

All temporary electrical outlets shall be GFCI type. GFCI electrical outlets are class A outlets, which means that they are made to protect and save people's lives. GFI's are better than nothing, but GFI's are considered class B electrical outlets, which are intended to protect the equipment only. All electrical cords must be UL listed and properly grounded with a three prong type plug. If an extension cord is found to be worn or the plug has pulled away from the insulation it shall be removed from service until it can be properly repaired. Simply taping damaged areas of cords will not be considered properly fixed.

PERSONAL PROTECTIVE POLICY (PPE)

(See PPE Policy)

Safety Glasses and Hard Hats are required at all times on construction job sites, particularly where overhead work is being performed. This applies to visitors as well as workers.

HOUSEKEEPING

All crating, boxes, scrap and debris of all kinds shall be kept clear of work areas and disposed of in an appropriate place.

General Safety & Health Policy

GENERAL HEALTH & SAFETY POLICY

MANAGEMENT COMMITMENT

Every employee is entitled to a safe and healthful place in which to work. Employees, including top management, supervisors, foreman, and office workers express the Company's attitude toward workplace safety and health by the daily example they set. We will provide and maintain safe and healthful working conditions and have established and insist upon safe work methods and practices at all times.

Chief Executives Signature: _____

1.) It is the responsibility of the Safety Coordinator of the HR Department to develop all health and safety policies and procedures, to facilitate training, and maintain all required records.

2.) The Safety and Health Committee will record safety and health goals with projected progress dates at a minimum offence per quarter.

3.) The company will have safety and health suggestion forms available to all employees. These forms will be dated by the employee making the suggestion and be retained by a safety and health committee member until the next safety and health meeting where they will be addressed and answered by the committee.

4.) A safety or health concern should never be ignored. An employee with a concern should contact their Supervisor or a Management Staff Member. This concern should be investigated with appropriate action taken, including communication to the concerned employee regarding the results.

5.) In order to provide a safe and appropriate environment for all employees and the clients whom we serve, Northwest Kent Mechanical is committed to maintain a drug-free workplace. Please see the Employee Manual for further details.

6.) The following are the Company's safety and health rules. These rules will be enforced and followed by every employee within the Company. This not only includes employees, but also executives, managers, office staff, and the ownership of the company.

GENERAL SAFETY GUIDELINES

- **Reporting Unsafe Conditions or Acts**: Most on-the-job accidents are avoidable and preventable. If you see or suspect an unsafe act or condition, report *it* to your supervisor or management immediately. Accident prevention is important to a successful safety program. You will not be disciplined for reporting an unsafe condition. Safety is everyone's responsibility.

- **Visitors:** Visitors are not allowed on work sites without permission from management. All visitors must be escorted while at a job site or while on company property. All visitors MUST wear appropriate personal protective equipment and obey all safety rules and warnings.

- **Safety Signs and Warnings:** All signs and warnings must be followed. Never remove a safety sign, signal, barricade, tag, or tape unless authorized by management to do so. No employee shall remove, displace, damage or destroy any safety device, fire extinguisher, first aid kit, or any other safeguard furnished or provided for use on the job site.

- **Horseplay:** Horseplay will not be tolerated.

- **Smoking, Eating, and Drinking:** Restricted to designated areas only. Ask your supervisor.

- **Glass bottles:** These are not permitted at job sites, unless authorized.

- **Weapons and Firearms:** All weapons and fire arms are not permitted on company property or a designated company worksite, at any time, for any reason.

- **Accident Investigation Procedure**
  Accident investigations shall be performed by a supervisor at the location where the accident occurred if it is safe to do so.
  The safety coordinator is responsible for seeing that the accident investigation reports are filled out completely, and that the recommendations are being addressed.
  Supervisor or Jobsite Foreman will, on an as needed basis.
    - Implement temporary control measures to prevent any further injuries to employees.
    - Review the equipment, operations and processes to gain an understanding of the accident situation.
    - Identify and interview each witness and any other individuals who might provide clues to the accident's cause.
    - Investigate causal conditions and unsafe acts and make conclusions based on facts
    - Complete an accident investigation report, provide recommendations for corrective action and indicate recommended changes or additions to the workplace safety rules.
    - Indicate the need for additional or refresher safety training.

EMPLOYEE SAFETY INSTRUCTIONS

Supervisors will initially train employees on how to perform assigned job tasks safely. Supervisors will review with employees the applicable safety rules, policies, and procedures that are described in the Employee Handbook. Supervisors will observe employees performing the work. If necessary, the supervisor will provide a demonstration using safe work practices or remedial instruction to correct training deficiencies before employees are permitted to do. The work without supervision. All employees will receive safe operating instructions on seldom- used or new equipment before using the equipment. Supervisors will review safe work practices with employees before permitting new, non-routine, or specialized procedures to be performed.

Each employee will be instructed regarding the safeguards of tools and equipment necessary to perform the job.

OPERATING PROCEDURES

- No employee shall operate machines or equipment with which he/she is unfamiliar.
- The employee shall consult with appropriate supervision for proper guidance if tools or equipment are unfamiliar.

HAZARDS

- Employees will be instructed on the recognized hazards of tools and equipment.
- Tools and equipment will not be operated without appropriate guards intended for the tool or equipment.
- Cracked handles, mushroom heads or hand tools in poor condition shall not be used.
- Hand held electrical tools above 50V shall not be used without ground fault interruption in construction or wet areas. Other hand tools shall use three-wire ground or be insulated against electric shock.
- Instructions, training and personal protective equipment will be provided when exposed to hazardous chemicals.

SAFEGUARDS

- Guarding furnished on tools or equipment shall not be bypassed or rendered ineffective.
- If an apparent fall hazard exists, fall protection shall be furnished.
- Caution must be exercised when working with conductive tools or equipment within 10 feet of 50 kv and less than 10 feet with energized electric line, gear or equipment over 50 kv.
- Employees must be instructed not to work within the above stated clearances unless specifically trained to do so.

All employees will be updated periodically on safety rules, policies, and procedures and when changes are made to the workplace safety manual. Individual employees will be retrained after a work related injury caused by an unsafe act or work practice occurs and when a supervisor

Office Safety

An office environment can be just as hazardous as a factory. Although accidents in offices occur less frequently than in plants, many office and clerical employees suffer injuries on the job. Use caution in and the around office and storage areas.

- Close drawers and doors immediately after use.
- Use handles when closing doors, drawers, and files.
- Do not block your view by carrying large or bulky items; use a dolly or hand truck, or get assistance from a fellow employee.
- Use a ladder or step stool to retrieve or store items that are located above your head.
- Use a cord cover or tape down the cord when running electrical or other cords across aisles, between desks, or across entrances and exits.
- Use handrails when using stairs or ramps.
- Clean up spills or leaks immediately.
- Store sharp objects, such as pens, pencils, letter openers, or scissors in drawers or with the points down in a container.
- Do not connect multiple electrical devices into a single outlet.
- Do not tilt the chair you are sitting in on its back two legs.
- Keep doors in hallways fully opened or fully closed.
- Use a staple remover, not your fingers, for removing staples.
- Open one file cabinet drawer at a time.
- Put heavy files in the bottom drawers of office cabinets.
- Turn off all electrical equipment at the end of each day (portable heaters, fans, etc).
- Observe applicable ergonomics rules and use equipment as assigned.

BUILDING EXITS & AISLE WAYS

- Aisles must be uncluttered and free of obstructions.
- Avoid storing flammable substances along major egress routes and exit doors.
- Emergency exits must be marked, unobstructed, and unlocked during building occupancy.
- Doors that could be mistaken as an exit, must be labeled (NOT AN EXIT).
- Employees must be instructed as to appropriate exit procedures in cases of emergency.
- Aisles should be of sufficient width for employee travel.

INJURY PREVENTION

Hand, foot, arm and leg injuries can be painful and debilitating. We depend on our hands and feet for our most basic needs. When injury does occur, our work process can be affected, and in some cases, the injury can be so severe we are unable to continue working.

To prevent such injuries, the following recommendations are offered:

- **Select and use the proper tools for the job.**
- **Defective tools should be removed from service.**
- **Avoid nip points on machinery. All nip points should be guarded.**
- **Extreme caution must be used when handling sharp or pointed objects. Lacerations from sharp objects can be avoided by using proper gloves including Kevlar®. Other hand injuries can be avoided by proper glove selection and the use of sleeves.**
- **When slivers, either metallic or non-metallic, are created as a by-product of an operation, appropriate hand protection is recommended. Expanded metal container bottoms or open mesh type plastic containers may be helpful in reducing sliver potential.**
- **Install and use proper guards at the point of operation.**
- **Avoid taking unsafe positions where a slip or misstep could place an extremity at risk.**
- **Utilize expendable hand tools at the point of operation. These tools shall not be in lieu of other required guarding**
- **When hazardous chemicals are handled, a proper selection of impervious gloves appropriate to the exposure should be utilized.**
- **Proper foot wear is important which may include steel toed foot wear or additional guards. Composite material can also be used for foot protection and long as it meets ASTM impact rating.**
- **Where protruding nails or other sharp objects create a problem underfoot, special foot wear which includes puncture resistant layers in the sole and heel area are recommended.**
- **Proper lockout/tagout procedures must be established and utilized in the control of hazardous energy when machinery and/or equipment is shut down for adjustment or repair and when an employee is at risk.**
- **Guards or barriers, when affixed to machinery and equipment, shall not be bypassed, removed, or rendered ineffective when equipment is in the production run mode.**
- **The wearing of jewelry in the workplace should be evaluated to assure that jewelry does not place the employee .at risk, i.e. rings, watches, bracelets, etc.**

FALL HAZARDS

(See fall protection policy for Site Applications)

- One of the most common causes of serious injury, both at home and at work, are falls.
- Falls can be caused by working at high elevations, or by slipping, tripping or stumbling over objects, either at floor levels or elevations.
- In the United States alone, according to the National Safety Council, in 2016 just over 9.2 million people were injured in falls. Of those injured, almost 35,000 of those people died from their injuries. It may come to a surprise to some, but falls account for the third most unintentional work related deaths per year.
- Most falls are preventable. Poor housekeeping conditions, such as wire banding or trash on the floor, can contribute. Liquids either spilled or from a leak, can cause fall hazards to employees.
- Employees should be protected from falls from heights not protected by handrails and/or guardrails.
- It is extremely important that ladders both step and straight, are inspected on a regular basis. Ladders found defective should be immediately removed from service.
- The straight sides of a ladder should never be painted, as paints can hide ladder defects.
- It is important that ladders made from conductive material, such as steel or aluminum, not be utilized while working on or near electrical service. This type of ladder offers an excellent ground. Serious or deadly shock can result.
- Extension ladders must be equipped with appropriate feet or spikes to prevent accidental slipping at the base of the ladder.
- The proper distance from the area of work to the base of the ladder is extremely important. As an example, a ladder is eight feet in length; the base of the ladder should be a minimum of two feet from a wall.
- Extension ladders must be equipped with appropriate feet or spikes to prevent accidental slipping at the base of the ladder.
- The proper distance from the area of work to the base of the ladder is extremely important. This distance should always remain a 4:1 ratio. As an example, a ladder is eight feet in length; the base of the ladder should be a minimum of two feet from a wall.

COMPANY VEHICLE USE

(See Company Driving Policy)

- A state issued driver's license is required to operate company vehicles.
- Initial and periodic review of each driver1s driving record is required.
- Seat belts and safety belts, must be worn by anyone operating or riding in company vehicles.
- Routine inspection of every company vehicle is recommended before using each day (shift).
- If vehicle operation involving long distance, over-the-road, or operation which is controlled by Interstate Commerce is being conducted, a physical examination of the driver (as described by the Department of Transportation) is required.
- A commercial driver's license may be required if a driver is hired as described above.

DRESS CODE

Clothing is a very important component of the safety and health program. The following guidelines in conjunction with the PPE hazard assessment, and the employee handbook should be followed.

- Tank tops and shorts are prohibited. Long pants and work-type shirts offer protection to the skin from oils, grease, and dirt that may otherwise contaminate the skin and cause dermatitis type conditions. Dresses and skirts should be discouraged in industrial settings. Review the employee handbook for clothing requirements.
- Clothing should not be loose or flowing to prevent clothing from becoming entangled in reciprocating and revolving equipment. Snagging of clothing on equipment is also reduced.
- Long dress ties should not be worn around revolving or reciprocating equipment unless they are the breakaway kind, thus preventing trapping of the loose tie.
- Personal jewelry such as rings, metal watch bands, long necklaces/chains should not be worn around revolving or reciprocating tools or equipment if there is a danger of entanglement. Further, rings, metal watch bands and metal necklaces can "short out" on DC batteries causing severe burns and in case of AC current at higher voltage can cause arcing where serious burns or lethal shock can result.
- Long hair should not be worn around revolving or reciprocating tools or equipment if there is a danger of entanglement. Long hair should be tied up or contained within a hair net to eliminate this danger.
- Cotton, wool and certain other natural fiber clothing is preferred around weld sparks or other sources of ignition versus nylon or rayon which are manmade fibers. These materials, when exposed to sparks or high heat, can melt and adhere to the skin compounding a bum situation.
- The selection of footwear by employee is important. Sandals and open-toed shoes should are NOT permitted. "Tennis shoes", if allowed, must be of substantial construction. The wearing of well-constructed leather shoes is preferred, and if possible, safety shoes. In certain "heavy" industries, safety shoes may be required because of the nature of the work.

HOUSEKEEPING

All work areas will be clean and orderly at all times. For jobs that create large amounts of process related debris cleaning should be done at regular intervals.

- **All forms of scrap, waste materials, and debris will be kept clear of the work area, including passageways, stairs, exits, emergency evacuation routes, and in and around buildings or other structures.**
- **All items on the rooftops or elevated platforms shall remain secure at all times as high winds could blow off materials.**
- **Scrap and debris shall be removed at regular intervals. A safe means of disposal will be provided.**
- **All solvent waste, used oily rags, and combustible trash will be stored in fire resistant, covered containers until removed from the work site.**
- **When materials are dropped outside the perimeter area of buildings or structures, an approved method of containment such as a dumpster will be used.**
- **Special care should be taken at all times to protect individuals and property from injury or damage as a result of debris being dropped from any height.**
- **All materials, supplies, and equipment shall be arranged in an orderly fashion to eliminate congestion that would contribute to tripping or falling hazards and interfere with work performance.**
- **All protruding nails, staples, and spikes in scrap or used lumber must be removed or backed out as soon as possible after use.**
- **Sweep up Floor Dry or other absorbent and dispose of it on a regular basis.**
- **Do not store or leave items on stairways.**
- **Do not block or obstruct stairwells, exits, or accesses to safety and emergency devices, such as fire extinguishers or fire alarms.**
- **Return tools and cleaning supplies to their storage places after use.**
- **Use caution signs/cones to barricade slippery and wet areas.**
- **Do not use flammable liquids such as gasoline, acetone, or paint thinner to clean floors.**
- **Store liquid containers labeled "Flammable" only in approved cabinets, rooms, or buildings labeled "Flammable Storage".**

SAFE WORK PRACTICES

- Supervisors shall insist on employees observing and obeying every rule, regulation, and order as is necessary to the safe conduct of the work. Disciplinary action procedures will be followed in response to willingly disobeying safety rules.
- All employees shall be given accident prevention instructions.
- Horseplay, scuffling, and other acts which have an adverse influence on the safety or well- being of the employees shall be prohibited.
- Work shall be well planned and supervised to prevent injuries in the handling of materials and in working together with equipment.
- No one shall knowingly be permitted or required to work while the employee's ability or alertness is so impaired by fatigue, illness, or other causes that it might unnecessarily expose the employee or others to injury.
- Employees shall not enter voids, chambers, tanks, or other similar places that receive little ventilation, unless it has been determined that it is safe to enter.
- Employees shall be instructed to ensure that all guards and other protective devices are in proper places and adjusted, and shall report deficiencies promptly.
- Employees shall not handle or tamper with any electrical equipment, machinery, air or water lines in a manner not within the scope of their duties, unless they have received instructions from their supervisor.
- All injuries shall be reported promptly to the supervisor so that arrangements can be made for medical or first aid treatment.
- When lifting heavy objects, the large muscles of the leg instead of the smaller muscles of the back shall be used.
- Inappropriate footwear or shoes with thin or badly worn soles shall not be worn.
- Employees shall wash thoroughly after handling hazardous substances, and follow special instructions for those products.
- Before leaving any job, be sure it is in a safe condition.
- Work shall be so arranged that employees are able to face ladder and use both hands while climbing.
- Gasoline or other flammable materials shall not be used for cleaning purposes.
- No burning, welding, or other source of ignition shall be applied to any enclosed tank or vessel, even if there are some openings, until it has first been determined that no possibility of explosion exists. Authority for the work must be obtained from their supervisor.
- Any damage to scaffolds or other supporting structures shall be immediately reported to the supervisor and repaired before use.

RECORD KEEPING

Management with clerical support will maintain the following records for the time duration required by state and federal statutes.

- **The company shall maintain employee medical records for the term of employment for a minimum of 30 years.**
- **The company shall maintain employee exposure records for 30 years.**
- **The Safety Coordinator shall maintain a permanent record of SDS.**
- **Industrial Hygiene test results shall be maintained for 30 years.**
- **The Safety Coordinator shall maintain noise exposure records for 2 years.**
- **The Safety' Coordinator shall maintain safety committee minutes for 3 years.**
- **Management shall maintain records of tool box talks for 3 years.**
- **Management shall maintain copies of self-inspections for 3 years.**
- **The company shall maintain a record of all training classes. A copy of the training record for each individual employee shall be kept in their personnel file for the term of their employment.**
- **The company shall maintain a copy of all maintenance records for 3 years.**
- **The Safety Coordinator or Personnel Department shall maintain copies of the MIOSHA 300 or equivalent form for 5 years.**
- **The Safety Coordinator shall maintain an accident file which shall include copies of: Supervisor's accident investigation report.**
- **AH other claim supporting documentation including medical documentation**

MIOSHA INSPECTIONS

The following procedures should be followed in the event of a MIOSHA inspection:

- **Upon entering your facility and presenting credentials, the inspector will request an opening conference.**
- **Be courteous and respectful to the inspector.**
- **Be as direct as possible when answering the inspector's questions. DO NOT make false statements to the inspector.**
- **Avoid costly fines by being prepared. Making sure all training records, safety policies, and record keeping is updated and easily accessible.**
- **Do you know where your Hazard Communication Policy is? Lockout/Tagout Policy? OSHA 200 log/ Form 300 A?**

Hazard Communication Policy

- Training Checklist
- Steps to Continue
- Compliance Checklist
- Global Harmonizing System

HAZARD COMUNICATION POLICY

INTRODUCTION

It is the policy of Northwest Kent Mechanical, that the first consideration in the performance of work shall be the protection of the safety and health of all employees. The company has developed this Hazard Communication Program to ensure that all employees receive adequate information relevant to the possible hazards which may be involved with the various hazardous substances used in the Company's operations and processes.

SCOPE

This policy covers all potential workplace exposures involving hazardous substances as defined by Federal, State and local regulations.

HAZARD DETERMINATION

Northwest Kent Mechanical does not intend to evaluate any of the hazardous substances purchased from suppliers and/or manufacturers but have chosen to rely upon the evaluation performed by the suppliers or by the manufacturers of the substances to satisfy the requirements for hazard determination.

CONTAINER LABELING

- No container or hazardous substances will be released for use unless the container is correctly labeled and the label is legible.
- All chemicals in bags, drums, barrels, bottles, boxes, cans, cylinders, reaction vessels, storage tanks, or the like will be checked by the receiving department to ensure the manufacturer's label is intact, is legible, and has not been damaged in any manner during shipment. Any containers found to have damaged labels will be quarantined until a new label has been installed.

The label must contain:

- The chemical name of the contents
- The appropriate hazard warnings

- The name and address of the manufacturer, and any other information required
- All secondary containers shall be labeled. The information must include details of all chemicals which are in the referenced container.

SAFETY DATA SHEETS (SDS)

- Each location must maintain a master SDS file as well as a department specific file. These Material Safety Data Sheets are available to all employees, at all times, upon request.
- The Safety Designee will be responsible for reviewing all incoming SDS's for new and significant health/safety information (the company will ensure that any new information is passed on to the employees involved).
- The Safety Designee will review all incoming SDS's for completeness. If any SDS is missing or obviously incomplete, a new SDS will be requested from the manufacturer or distributor. MIOSHA is to be notified if the manufacturer or distributor will not supply the SDS or if it is not received after 30 days from request. Any new information will be passed on to employees involved.
- New materials will not be introduced into the work area until a SDS has been received.
- The purchasing department will make it an ongoing part of their function to obtain SDS's for all new materials when they are first ordered.
- The safety designee shall coordinate with appropriate departments to make sure all SDS's are obtained, distributed and communicated.

NON-ROUTINE TASKS

Infrequently, employees may be required to perform non-routine tasks which involve the use of hazardous substances. Prior to starting work on such projects, each involved employee will be given information by his/her supervisor about hazards to which they may be exposed during such an activity.

This information will include:

- **The specific hazards**
- **Protective/safety measures which must be utilized**
- **The measures the company has taken to lessen the hazards, including special ventilation, respirators, and the presence of another employee, air sample readings, and emergency procedures.**

INFORMING CONTRACTORS

To ensure that outside contractors work safely in our plant, and to ensure the safety of the contractor's employees, it will be the responsibility of management to provide contractors the following information:

- The hazardous substance to which they may be exposed while working in the plant.
- The precautions the contractor's employees must take to lessen the possibility of exposure by usage of the appropriate measures.
- Rules and regulations regarding the protection of employee safety relevant to fire and ignition sources around flammable materials will be followed. The rules regarding smoking, welding, grinding, will also be followed.

The Purchasing Agent via the safety coordinator will be responsible for obtaining from outside contractors the name of any hazardous substance the contractor's employees may be bringing into the facility for use in their work. The contractor should also supply a copy of the material safety data sheet relevant to these materials.

PLAN ADMINISTRATION

This Hazard Communication program will be monitored by the Safety Coordinator. Questions regarding this program should be directed to the Safety Coordinator.

SAFETY DATA SHEETS

The SDS is obtained from the hazardous substance manufacturer or supplier. You should become familiar with information on this sheet to avoid injury to yourself and fellow employees. Following is a description of the SDS's principle sections. Not all sections are relevant to your safety, but brief descriptions will be provided.

Section 1: Identification

This section identifies the chemical on the SDS as well as the recommended uses. It also provides the essential contact information of the supplier. The required information consists of:

- Product identifier used on the label and any other common names or synonyms by which the substance is known.
- Name, address, phone number of the manufacturer, importer, or other responsible party, and emergency phone number.

- Recommended use of the chemical (e.g., a brief description of what it actually does, such as flame retardant) and any restrictions on use (including recommendations given by the supplier).

Section 2: Hazard(s) Identification

This section identifies the hazards of the chemical presented on the SDS and the appropriate warning information associated with those hazards. The required information consists of:

- The hazard classification of the chemical (e.g., flammable liquid, category).
- Signal word.
- Hazard statement(s).
- Pictograms (the pictograms or hazard symbols may be presented as graphical reproductions of the symbols in black and white or be a description of the name of the symbol (e.g., skull and crossbones, flame).
- Precautionary statement(s).
- Description of any hazards not otherwise classified.
- For a mixture that contains an ingredient(s) with unknown toxicity, a statement describing how much (percentage) of the mixture consists of ingredient(s) with unknown acute toxicity. Please note that this is a total percentage of the mixture and not tied to the individual ingredient(s).

Section 3: Composition/Information on Ingredients

This section identifies the ingredient(s) contained in the product indicated on the SDS, including impurities and stabilizing additives. This section includes information on substances, mixtures, and all chemicals where a trade secret is claimed. The required information consists of:

Substances

- Chemical name.
- Common name and synonyms.
- Chemical Abstracts Service (CAS) number and other unique identifiers.
- Impurities and stabilizing additives, which are themselves classified and which contribute to the classification of the chemical.

Mixtures

- Same information required for substances.
- The chemical name and concentration (i.e., exact percentage) of all ingredients which are classified as health hazards and are:
- Present above their cut-off/concentration limits or
- Present a health risk below the cut-off/concentration limits.
- The concentration (exact percentages) of each ingredient must be specified except concentration ranges may be used in the following situations:
- A trade secret claim is made,

- There is batch-to-batch variation, or
- The SDS is used for a group of substantially similar mixtures.

Chemicals where a trade secret is claimed

- A statement that the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret is required.

Section 4: First-Aid Measures

This section describes the initial care that should be given by untrained responders to an individual who has been exposed to the chemical. The required information consists of:

- Necessary first-aid instructions by relevant routes of exposure (inhalation, skin and eye contact, and ingestion).
- Description of the most important symptoms or effects, and any symptoms that are acute or delayed.
- Recommendations for immediate medical care and special treatment needed, when necessary.

Section 5: Fire-Fighting Measures

This section provides recommendations for fighting a fire caused by the chemical. The required information consists of:

- Recommendations of suitable extinguishing equipment, and information about extinguishing equipment that is not appropriate for a particular situation.
- Advice on specific hazards that develop from the chemical during the fire, such as any hazardous combustion products created when the chemical burns.
- Recommendations on special protective equipment or precautions for firefighters

Section 6: Accidental Release Measures

This section provides recommendations on the appropriate response to spills, leaks, or releases, including containment and cleanup practices to prevent or minimize exposure to people, properties, or the environment. It may also include recommendations distinguishing between responses for large and small spills where the spill volume has a significant impact on the hazard. The required information may consist of recommendations for:

- Use of personal precautions (such as removal of ignition sources or providing sufficient ventilation) and protective equipment to prevent the contamination of skin, eyes, and clothing.

- Emergency procedures, including instructions for evacuations, consulting experts when needed, and appropriate protective clothing.
- Methods and materials used for containment (e.g., covering the drains and capping procedures).
- Cleanup procedures (e.g., appropriate techniques for neutralization, decontamination, cleaning or vacuuming; adsorbent materials; and/or equipment required for containment/clean up)

Section 7: Handling and Storage

This section provides guidance on the safe handling practices and conditions for safe storage of chemicals. The required information consists of:

- Precautions for safe handling, including recommendations for handling incompatible chemicals, minimizing the release of the chemical into the environment, and providing advice on general hygiene practices (e.g., eating, drinking, and smoking in work areas is prohibited).
- Recommendations on the conditions for safe storage, including any incompatibilities. Provide advice on specific storage requirements (e.g., ventilation requirements)

Section 8: Exposure Controls/Personal Protection

This section indicates the exposure limits, engineering controls, and personal protective measures that can be used to minimize worker exposure. The required information consists of:

- OSHA Permissible Exposure Limits (PELs), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available.
- Appropriate engineering controls (e.g., use local exhaust ventilation, or use only in an enclosed system).
- Recommendations for personal protective measures to prevent illness or injury from exposure to chemicals, such as personal protective equipment (PPE) (e.g., appropriate types of eye, face, skin or respiratory protection needed based on hazards and potential exposure).
- Any special requirements for PPE, protective clothing or respirators (e.g., type of glove material, such as PVC or nitrile rubber gloves; and breakthrough time of the glove material).

Section 9: Physical and Chemical Properties

This section identifies physical and chemical properties associated with the substance or mixture. The minimum required information consists of:

- Appearance (physical state, color, etc.);
- Upper/lower flammability or explosive limits;
- Odor;
- Vapor pressure;
- Odor threshold;
- Vapor density;
- pH;
- Relative density;
- Melting point/freezing point;
- Solubility(ies);
- Initial boiling point and boiling range;
- Flash point;
- Evaporation rate;
- Flammability (solid, gas);
- Partition coefficient: n-octanol/water;
- Auto-ignition temperature;
- Decomposition temperature; and
- Viscosity.

The SDS may not contain every item on the above list because information may not be relevant or is not available. When this occurs, a notation to that effect must be made for that chemical property. Manufacturers may also add other relevant properties, such as the dust deflagration index (Kst) for combustible dust, used to evaluate a dust's explosive potential.

Section 10: Stability and Reactivity

This section describes the reactivity hazards of the chemical and the chemical stability information. This section is broken into three parts: reactivity, chemical stability, and other. The required information consists of:

Reactivity

- Description of the specific test data for the chemical(s). This data can be for a class or family of the chemical if such data adequately represent the anticipated hazard of the chemical(s), where available.

Chemical stability

- Indication of whether the chemical is stable or unstable under normal ambient temperature and conditions while in storage and being handled.
- Description of any stabilizers that may be needed to maintain chemical stability.

- Indication of any safety issues that may arise should the product change in physical appearance.

Other

- Indication of the possibility of hazardous reactions, including a statement whether the chemical will react or polymerize, which could release excess pressure or heat, or create other hazardous conditions. Also, a description of the conditions under which hazardous reactions may occur.
- List of all conditions that should be avoided (e.g., static discharge, shock, vibrations, or environmental conditions that may lead to hazardous conditions).
- List of all classes of incompatible materials (e.g., classes of chemicals or specific substances) with which the chemical could react to produce a hazardous situation.
- List of any known or anticipated hazardous decomposition products that could be produced because of use, storage, or heating. (Hazardous combustion products should also be included in Section 5 (Fire-Fighting Measures) of the SDS.)

Section 11: Toxicological Information

This section identifies toxicological and health effects information or indicates that such data are not available. The required information consists of:

- Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact). The SDS should indicate if the information is unknown.
- Description of the delayed, immediate, or chronic effects from short- and long-term exposure.
- The numerical measures of toxicity (e.g., acute toxicity estimates such as the LD50 (median lethal dose)) - the estimated amount [of a substance] expected to kill 50% of test animals in a single dose.
- Description of the symptoms. This description includes the symptoms associated with exposure to the chemical including symptoms from the lowest to the most severe exposure.
- Indication of whether the chemical is listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest editions) or found to be a potential carcinogen by OSHA

Section 12: Ecological Information (non-mandatory)

This section provides information to evaluate the environmental impact of the chemical(s) if it were released to the environment. The information may include:

- Data from toxicity tests performed on aquatic and/or terrestrial organisms, where available (e.g., acute or chronic aquatic toxicity data for fish, algae, crustaceans, and other plants; toxicity data on birds, bees, plants).
- Whether there is a potential for the chemical to persist and degrade in the environment either through biodegradation or other processes, such as oxidation or hydrolysis.
- Results of tests of bioaccumulation potential, making reference to the octanol-water partition coefficient (Kow) and the bioconcentration factor (BCF), where available.
- The potential for a substance to move from the soil to the groundwater (indicate results from adsorption studies or leaching studies).
- Other adverse effects (e.g., environmental fate, ozone layer depletion potential, photochemical ozone creation potential, endocrine disrupting potential, and/or global warming potential).

Section 13: Disposal Considerations (non-mandatory)

This section provides guidance on proper disposal practices, recycling or reclamation of the chemical(s) or its container, and safe handling practices. To minimize exposure, this section should also refer the reader to Section 8 (Exposure Controls/Personal Protection) of the SDS. The information may include:

- Description of appropriate disposal containers to use.
- Recommendations of appropriate disposal methods to employ.
- Description of the physical and chemical properties that may affect disposal activities.
- Language discouraging sewage disposal.
- Any special precautions for landfills or incineration activities

Section 14: Transport Information (non-mandatory)

This section provides guidance on classification information for shipping and transporting of hazardous chemical(s) by road, air, rail, or sea. The information may include:

- UN number (i.e., four-figure identification number of the substance).
- UN proper shipping name.
- Transport hazard class(es).
- Packing group number, if applicable, based on the degree of hazard[2].
- Environmental hazards (e.g., identify if it is a marine pollutant according to the International Maritime Dangerous Goods Code (IMDG Code)).
- Guidance on transport in bulk (according to Annex II of MARPOL 73/78 and the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code (IBC Code)).
- Any special precautions which an employee should be aware of or needs to comply with, in connection with transport or conveyance either within or outside their premises (indicate when information is not available).

Section 15: Regulatory Information (non-mandatory)

This section identifies the safety, health, and environmental regulations specific for the product that is not indicated anywhere else on the SDS. The information may include:

- Any national and/or regional regulatory information of the chemical or mixtures (including any MIOSHA, Department of Transportation, Environmental Protection Agency, or Consumer Product Safety Commission regulations)

Section 16: Other Information

This section indicates when the SDS was prepared or when the last known revision was made. The SDS may also state where the changes have been made to the previous version. You may wish to contact the supplier for an explanation of the changes. Other useful information also may be included here.

Lockout Tagout Program

- Lockout/Tagout Policy
- Equipment Listing
- Program Inspection
- Specific Energy Control Procedures
- Energy Source Evaluation

HAZARDOUS ENERGY CONTROL PROGRAM

PURPOSE

- The purpose of this program is to protect employees from injuries while servicing and maintaining equipment.

SCOPE

- The program establishes requirements for hazardous energy control. It is to be used to ensure that machines and equipment are isolated from all potentially hazardous energy sources whenever servicing or maintenance activities are in progress.

EMPLOYER RESPONSIBILITY

- Provide Hazardous Energy Control training to employees and maintain current listing of employees who are authorized, affected, or aware of energy control practices and procedures.
- Evaluate all machinery (using the Energy Evaluation Form) and maintain a current listing of all equipment/machines that fall under the Hazardous Energy Control Program. Listing is to be updated each time a change in machinery occurs. See Equipment Listing Form.
- Implementation and enforcement of the Hazardous Energy Control Program.
- Maintain an adequate supply of padlocks and DANGER tags for use each time a lockout process is performed.
- Conduct a periodic inspection in conjunction with section IX of this policy.

BASIC LOCKOUT PRINCIPLES

- All equipment must be locked out to protect against accidental or inadvertent operation, when the operation could cause injury to personnel. Locks are to be applied and removed only by the authorized employee who is performing the servicing or maintenance activities.
- No one should attempt to operate locked out equipment except for testing purposes.

- Disciplinary action will be taken if any employee violates these procedures, regardless of whether or not physical harm or equipment damage results.
- Lockout devices (padlocks) with an appropriate DANGER warning tag shall be used only for energy control. Each padlock will be keyed and identified differently.

LOCKOUT APPLICATION

A. The following are specific procedures to be followed for lockout:

1. Notify the Program Coordinator (if major systems will be shut down).
2. Notify all affected employees that lockout is going to be utilized and the reason why.
3. If the machine/equipment is in operation, shut it down by the normal shutdown procedure.
4. Operate the appropriate isolating device (switch, valve, etc.,) so that the machine/equipment is isolated from the energy source.
5. Lock the energy isolating devices, using assigned locks and danger tags.
6. Release, restrain, or dissipate any stored energy.
7. Verify that energy isolation is complete by attempting to start the affected machinery or equipment in the normal manner.
8. After testing, return all operation controls to the "neutral" or "off' positions.

RELEASE FROM LOCKOUT

- Before lockout devices and/or tagout devices are removed and energy is restored to the machine or equipment, the following procedures shall be utilized:

1. After servicing or maintenance is complete, check the area to ensure that employees are safely positioned or removed from immediate area.
2. Remove all tools and nonessential equipment.
3. Ensure that all guards have been replaced and all safety interlocks reactivated.
4. Verify that the operating controls are in the "neutral" of "off' position.
5. Remove all lockout and tag devices and activate the energy isolation devices to restore energy.

PROGRAM INSPECTION AND REVIEW

- A periodic inspection of the energy control procedure shall be conducted at least annually to ensure that the energy control procedures are valid and up to date.

1. The periodic inspection shall be performed by an authorized employee other than the one(s) utilizing the energy control procedure being inspected.
2. The periodic inspection shall be conducted to correct any deviations or inadequacies identified.
3. The inspection must be certified and documented by the inspector using the Lockout Program Inspection Form.

OUTSIDE CONTRACTORS

- Outside personnel or contractors involved in lockout equipment or machinery must submit their energy control procedures, in writing, to the Program Coordinator. All affected employees must be trained in, and familiar with, the contractor's submitted procedure.
- The contractor's work area will be isolated, and access will be restricted. If this is impractical or cannot be accomplished, the Program Coordinator must assure the contractor's compliance with proper work procedures, energy isolation procedures, and contractor employee compliance.
- Contractors failing to adhere to the provisions of the MIOHSA Hazardous Energy Control standard will be asked to terminate their work until their program is brought into compliance.

HAZARDOUS ENERGY CONTROL
LOCKOUT EQUIPMENT LISITNG

The following machines and equipment fall under the MIOSHA requirements for the control of Hazardous Energy (Lockout/Tagout). For this reason, appropriate lockout procedures must be performed each time service or maintenance is performed.

EQUIPMENT/MACHINE	IDENTIFICATION	LOCATION	DATE

HAZARDOUS ENERGY CONTROL LOCKOUT PROGRAM INSPECTION

DATE: _____

EQUIPMENT IDENTIFICATION: _____

INSPECTED BY: _____

AUTHORIZED EMPLOYEES (JOB TITLES)

1. _____ 2. _____

3. _____ 4. _____

5. _____ 6. _____

PROCEDURES BEING FOLLOWED: Y _____ N _____

COMMMENTS/DEFICIENCIES

_____

_____

_____

DEFICIENCY FOLLOW-UP: DATE COMPLETED _____

COMMMENTS

_____

_____

_____

REVIEWED BY: _____ **DATE:** _____

SPECIFIC ENERGY CONTROL PROCEDURES

Machines/Equipment utilizing this procedure and manufacturer:

_____

Location/Department: _____

PROCEDURE FOR CONTROLLING HAZARDOUS ENERGY

1. **Be familiar with the sources of hazardous energy for the machine or equipment that will be serviced.**

EVALUATION OF HAZARDOUS ENERGY SOURCES

_____ ELECTRICAL _____ (120/240)	_____ ENGINE
_____ SPRING	_____ COUNTER WEIGHT
_____ FLYWHEEL	_____ HYDRAULIC
_____ PNEUMATIC	_____ CHEMICAL
_____ THERMAL	_____ OTHER _____

2. **Notify affected employees that the machine is about to be shut down and locked out.**
3. **Shut down the machine using normal stopping procedures.**
4. **Isolate all energy sources listed above.**
5. **Apply locks to all isolation devices operated in step four.**
6. **Block or dissipate all stored energy in rams, flywheels, springs, pneumatic or hydraulic systems, etc.**
7. **Verify that the machine is locked out by testing the machine operating controls. RETURN ALL CONTROLS TO THE "NEUTRAL" OR "OFF" POSITION AFTER TESTING.**

PROCEDURE FOR REMOVING LOCKS/TAGS

1. Check the machine to be sure it is operationally intact, tools have been removed, and guards have been replaced.
2. Check to be sure all employees are safely positioned.
3. Notify all affected employees that locks/tags are going to be removed and the machine is ready for operation.
4. Remove all locks, blocks, or other energy restraints.
5. Restore all energy to the machine.

ENERGY SOURCE EVALUATION

DATE: _____ CONDUCTED BY: _____

In order to determine all energy sources for each piece or type of machine/equipment, fill in the following table.

LOCATION/DEPARTMENT: _____

EQUIPMENT NAME: _____

MODEL/MANUFACTURER: _____

LOCKOUT PROCEDURE

ENERGY SOURCE OR MAGNITUDE	LOCATION OF ISOLATING DEVICE	MEANS OF ISOLATION
ELECTRICAL 120V OR 480V		
ENGINE		
SPRING		
COUNTER WEIGHT		
FLYWHEEL		
HYDRAULIC		
PNEUMATIC*		
CHEMICAL		
THERMAL		
OTHER:		
OTHER:		

* MAGNITUDE EXAMPLE: ELECTRICAL= 480v three phase, PNEUMATIC= 125 p.s.i.

Personal Protective Equipment

- Personal Protective Equipment Policy
- Hazard Assessment Form

Purpose

To establish minimum procedures for wearing, selection, and distribution of Personal Protective Equipment PPE to protect against identified hazards. The procedures outlined shall be used when engineering and administrative controls cannot adequately control the hazards present. Refer to employee handbook for other specific company requirements.

A. Employer Responsibility:

- To furnish PPE at no cost to the employee.
- Provide replacement equipment if necessary due to normal wear and tear.
- To enforce the wearing of PPE.
- Review the workplace on a regular basis to ensure an adequate level of PPE available to employees. See attachment.
- Provide training to employees.

B. Employee Responsibility:

- To wear, and properly maintain all required PPE.
- Shall not alter or damage company supplied PPE.
- Report any damaged or defective PPE to Management immediately.

C. Eye and Face Protection: Approved Safety Glasses shall be worn by personnel at all times when they are on site.

PPE shall be worn by all employees and visitors working in areas where the potential exists for flying particles, molten metal, chemicals, or when other potentially hazardous activities exist. Examples of situations when safety glasses/ face protection would be required include but are not limited to:

- Grinding with fixed or portable grinder.
- Working around batteries, refrigerants, acids, cleaning chemicals or other eye irritants.
- Using compressed air.
- Welding.
- When cutting with saw or torch.
- Proper safety glasses must be stamped with "ANSI Z. 87.1-2015" approval for industrial use.
- Face shields must also be worn in situations when safety glasses alone do not adequately control the hazard. Example: welding, grinding, etc.

D. Hand Protection

- Hand protection must be worn to prevent injuries due to:
- Chemical or thermal bums.
- Substances which are hazardous due to skin absorption.
- Severs cuts, lacerations, abrasions or punctures.
- Use caution wearing gloves while operating power tools and machinery as the glove material may become caught in moving parts.

E. Foot Protection

- Acceptable work shoes are those made of leather, provide full coverage of the foot, and have an adequate sole.
- Unacceptable footwear includes athletic or leisure footwear that does not meet the criteria listed above. Example: deck shoes, moccasins, shoes made of canvas, plastic, nylon, or woven materials. Shoes with high heels or open toes may not be worn in production areas.
- Steel toed boots, as referenced in ASTM F2413-17, are recommended for employees working in areas where the potential for falling objects may exist.

F. Hard Hats

- **Hard hats are required when working overhead, or when the potential of injury exists from falling objects.** Unless employees are performing "finish" work they shall were their hardhats at all times.
- Hard hats must comply with the ANSI/ISEA Z89-2009 standard.

G. Hearing Protection

- Hearing protection shall be worn in areas where excessive noise is present. NOTE: See Hearing Conservation Policy for further details.

H. Hair and Jewelry

- Unless you are required to wear a hat, cap, or hair net while on your job, always wear your hair in a fashion that will not interfere with your vision or pose risk of entanglement. Wear minimum jewelry on the job. Rings necklaces, chains, belts, key chains, and other accessory items may become caught while operating machinery, damaging the jewelry and possibly an injury.

I. Clothing

- Shirts. Work shirts should have a minimum T- Sleeve. Shirts or sweatshirts should be high visibility and easy to see. Nylon and polyester clothing should not be worn around flame or hot operations.

- **Pants. Unless authorized, pants should be full length, without cuffs, and not so long that you walk on them. Pants should be free of rips, holes, or accessories that may become caught in machinery.**

J. Visitors

- **All visitors including but not limited to, vendors, salespersons and sub-contractors shall wear personal protective equipment when in designated areas.**

Power Tools & Equipment

POWER TOOLS & EQUIPMENT

COMPANY EQUIPMENT

All company equipment will be handled with care at all times. Equipment is expensive and much of it requires proper training prior to using it. All damages, failures, problems, or loss of company equipment must be immediately reported to management. Use of company property and equipment during hours other than normal working hours or authorized overtime must be approved by appropriate company management. Deliberate destruction or stealing of company equipment is considered a serious offense.

MACHINERY OPERATION & REPAIR

All operations and repairs will be done by trained persons only. Never operate power tools, machinery, special equipment, or mechanical devices that you are unfamiliar with. Never try to repair broken machinery if you are not properly trained or certified to do so. Makeshift repairs can be costly, they invalidate product warranties, can further damage the equipment, and can cause serious injuries.

MACHINE GUARDS

All guards and shields will be kept in place while machinery is in operation. Tampering with machine guards or safety shields is prohibited, and any removal requires the prior approval of a responsible supervisor. All guards are to be replaced after any repair work that required their removal.

POWER TOOLS & EQUIPMENT

Treat all power tools with respect. Misusing, altering, or removing a guard or shield from a power tool, regardless of ownership, will result in disciplinary action (excluding maintenance operations).

- Check tools and cords for obvious damage. Do not use cords that have splices, exposed wires, or cracked or frayed ends. Report all damaged tools to your supervisor.
- Do not use the electric cord for hoisting or lowering a power tool.
- Do not carry plugged in equipment or tools with your finger on the switch. Always unplug power tools when not in use.
- Do not pull the cord to unplug a power tool. Pull the plug.

- Do not handle or operate power tools with wet hands or when standing in wet places.
- Keep power cords away from the path of drills, saws, and grinders.
- Check with your supervisor before using power tools in or around a flammable or explosive area.
- All hand held power tools must have momentary contact "on-off' controls." Lock- on" switches may be used if the tool can be turned off in a single motion.
- All electric power operated tools will be grounded, or will be of the double insulated type; when in doubt check with your supervisor.
- Do not use extension cords or other grounded three-pronged power cords that have the ground prong removed or broken.
- Consult the Lockout Tagout Policy for procedures on controlling hazardous energy during maintenance, service, or repair activities.

BATTERIES

- Do not lay tools or metal parts on top of a battery.
- Tum battery chargers off prior to connecting the cables to the battery posts.
- Do not smoke around battery charging areas.
- Make sure the fan motor is on before operating the battery charger.
- Do not use a screwdriver to test the charge of a battery.
  (Always wear eve protection when using any power tool or equipment.)

PORTABLE POWER EQUIPMENT

- Do not operate power equipment if labeled identification controls become unreadable.
- Do not operate powered equipment on which you have not been fully trained.
- Do not use tools with parts that are loose, worn, cracked, or otherwise visibly damaged.
- Read and follow the manufactures routine and preventative maintenance schedule.
- Tag damaged tools "Out of Service" to prevent accidental use.
- Never alter or by-pass any safety device provided by the equipment's manufacturer.
- Use grip locations specified by the manufacturer as handholds when operating power tools.
- Do not smoke while using, servicing, or refueling a gasoline powered tool.

Stop the engine and disconnect the spark plug wire before cleaning, adjusting, or repairing moving parts.

- Visually inspect the area where you will be using any portable power equipment. Watch for tree stumps, rocks, roots, sprinklers, branches, hoses, pipes, electrical cords and outlets, or other loose hazards.
- Always shut off the power or engine when making adjustments, fueling, or traveling with powered equipment.
- Never refuel portable power equipment with the engine running or while the engine is hot. Allow for adequate cool down time.
- All hand-held power equipment must be equipped with a constant pressure switch that will shut off the power when the pressure is released. Do not use portable power equipment with defective switches, or equipment that does not have one.

(Always wear eye protection when using any power tool or equipment.)

HAND TOOLS

- Never use damaged, incomplete or unserviceable tools (i.e. mushroomed chisel heads, splintered or cracked handles, sprung jaws on wrenches, chipped screwdrivers, and dull knives).
- Wooden handles of tools should not be used if the wood is splintered or cracked. All handles must be sealed tightly in the tool head.
- Keep the blade of all cutting tools sharp.
- Carry all sharp tools in a sheath or holster.
- Always clean and store tools properly.

FILES

- Do not use a file as a pry bar, hammer, screwdriver, or chisel.
- Clean the grooves of a file with a wire brush.
- Do not hammer on a file.

HAMMERS

- Do not use a hammer if your hands are oily, greasy, or wet.
- Do not strike a hardened steel surface, such as a cold chisel, with a claw hammer.
- Do not use a hammer as a wedge or a pry bar.
- Use only a sledge type hammer on a striking face wrench.

SAWS

- Do not use an adjustable blade saw, such as a hacksaw or coping saw, if the blade is not taut.
- Keep hands and fingers away from the saw blade while using the saw.
- Do not carry a saw by the blade.

SCREWDRIVERS

- Do not hold the work piece in your hand or against your body while using a screwdriver.
- Do not put your fingers near the blade of the screwdriver when tightening the screw.
- Do not force a screwdriver by using a hammer or pliers on it.
- Do not use a screwdriver as a punch, chisel, pry bar, or nail puller.
- Use screwdrivers that have the appropriate insulation ratings for electrical work.

WRENCHES

- Do not use wrenches that are bent, cracked, badly chipped, or that have loose or broken handles.
- Do not slip a pipe over a single head wrench for increased leverage.
- Do not use a shim to make a wrench fit.
- Size the adjustable wrench to fit the nut before turning.
- The movable jaw should always be turned to the direction of travel.
- Majority of the load should always be placed on the non-movable jaw.
- Use a spit box wrench on flare nuts.
- Do not use a wrench with broken or battered points.

PLIERS

- Do not use pliers as a wrench or hammer.
- Do not attempt to force pliers by using a hammer on them.
- Use pliers with an insulated handle for electrical work.
- Do not use pliers that are cracked, broken, or sprung.
- When using diagonal cutting pliers; shield the loose pieces of cut material from flying into the air by using a cloth or your gloved hand.

VISE

- When clamping a long work piece in a vise, support the far end of the work piece by using an adjustable pipe stand or saw horse.
- Position the work piece in the vise so that the entire face of the jaw supports the workpiece.
- Do not use a vise that has worn or broken jaw inserts, or has cracked or fractures in the body of the vise.

GRINDERS

- Wear safety glasses, goggles, or face shields when operating a grinder.
- Do not continue to work if your safety glasses become fogged. Stop work and clean them.
- Do not use grinding wheels that have chips, cracks, or grooves.
- Adjust the tongue guard so that it is no more than 1/4 inch from the grinding wheel.
- Do not try to stop the wheel with your hand, even if you are wearing gloves.
- The tool rest gap shall be no greater than 1/4”
- If the grinder has provisions for a clear shield above the tongue guard, than a severable one shall be put in place.
- Before installation, a “Ring Test” shall be done on all new and used abrasive wheels.
- It is good practice to have a wheel dresser available nearby while operating. Attaching the wheel dresser to a chain will ensure there is one available.

(Always use the right tool for the job.)
(Never use a hand tool for any purpose other than what was intended.)

DRILL PRESS

- Small pieces of metal when being drilled on a power machine must not be held in the operator's hands.
- Pieces of metal being drilled must be held tightly in a vise or clamp.
- Before drilling, the employee must check the spindle speed and the set up. When in doubt, ask your supervisor.
- Spring loaded chuck keys are ONLY to be used. MIOSHA has abolished the use of non-spring loaded chuck keys.
- Do not wear gloves of loose clothing while operating equipment with rotating parts.

OXYACETELENE WELDING

- Do not use oxygen cylinders in areas where oils or any combustible liquids, such as diesel fuel or motor fuel, are present.
- Tum the valve on the torch clockwise to tum off the gas before putting down the welding or cutting torch.
- To ensure gas leakage does not occur, inspect O-Rings for damage and replace if necessary before every use.
- When inserting a tip into the hose, exert very light pressure in the welding tip with a twisting motion until fully seated.
- Position the tip and hand tighten (DO NOT USE A WRENCH) the tip but into the torch handle. Failure to do so will cause dangerous gas leaks).
- Never allow pressure to remain in the hoses overnight.
- Tum the valve knobs, located at the base of the torch handle, clockwise to close the valves.
- Tum the valve knobs on the oxygen and acetylene cylinders to close the valves on these cylinders.
- Reduce the pressure on the regular diaphragms by pulling back on the T-handles, out from the regulator, until the T-handle turns easily; do not completely back the T- handles out from the regulator.
- Turn the valve knobs at the base of the torch counter-clockwise to open the valves; leave the valves open for only two seconds, then turn the valve knobs clockwise to close the valves again. If you do not observe a drop in pressure on the regulator gages, repeat steps.
- Do not transport cylinders in a horizontal position.
- Use the red hose for gas fuel and the green hose for oxygen.
- Do not use worn or cracked hoses.
- Do not use oil, grease, or other lubricants on the regulator.
- "Blow Out" hoses before attaching the torch.
- "Blow Out" the cylinder valve before attaching or reattaching a hose to the cylinder.
- Do not use a cigarette lighter to ignite torches; use friction lighters only.
- Do not change electrodes using your bare hands; use the dry, rubber gloves.
- "Bleed" oxygen and fuel lines at the end of the work shift.
- Use the welding cart that has a safety chain or cable when transpo1iing cylinders used for welding.

ELECTRIC ARC WELDING

- Use the welding screen to shield other employees from flying slag and intense light.
- Wear a welding helmet with filter plates and lenses, welding gloves, a long sleeve shirt, and long pants.
- Do not perform welding tasks wearing wet gloves.
- Do not change electrodes with bare hands; use dry welder's gloves.
- Do not use the welding apparatus if the power cord is cut, frayed, split, or otherwise visibly damaged or modified.

COMPRESSED GASES

Compressed gas cylinders are under extreme pressure. Treat with **caution:**

- Do not permit cylinders to be dropped or strike each other.
- Never use cylinders, whether full or empty, as rollers or supports.
- Never use oil or grease on a regulator, valve, or cylinder fitting.
- Do not handle oxygen cylinders if your hands or gloves are greasy or oily.
- Never use a damaged, dented, or defective cylinder. Tag it as unserviceable.
- Never place a cylinder close to an electrical power source where it could come in contact and arc.

(Never use compressed air to blow off clothing or parts of the body.)

USING COMPRESSED GAS

- Treat and handle all cylinders as if they were full.
- Inspect cylinders, valves, and regulators for defects or damages before each use.
- Purge oxygen valves, regulators, and lines before use.
- Use a suitable cylinder truck, chain, or other steadying device.
- Use only an open-end adjustable wrench when connecting or disconnecting regulators and fittings.
- Do not remove the valve wrench while a compressed gas cylinder is in use.
- Open compressed gas cylinders slowly.
- When in use, open valves fully to eliminate possible leakage around the cylinder valve stem.
- When compressed air is used to blow off material, do not exceed greater than 30 psi.
- If a cylinder is leaking around a valve or a fuse plug, move it to a safe outside area away from workers.
- Bleed all lines before disconnecting.

STORING COMPRESSED GAS

- Gas cylinders must have valve protection caps on when not in use.
- When stored, oxygen and acetylene cylinders shall be separated by at least 20 feet, or separated by a cinder block wall (CMU) of at least 5' high with a 1/2" hour fire rating.
- Do not store compressed gas cylinders in areas where they can come *in* contact with corrosives.
- Acetylene, oxygen, or other gases cylinders are to be stored in upright positions, secured by tying or blocking into position.
- Do not store compressed gasses or other flammable materials near fire exits or route of egress.

TRASNPORTING CYLINDERS

- Always close the valves on cylinders before moving them.
- Never transport a cylinder with a regulator connected. Cylinders must be capped when transported.
- Never use a valve protection cap to hoist or lift a cylinder.
- When transporting cylinders in powered vehicles; always secure them in a standing position.
- When hoisting cylinders; always secure them to a cradle, sling board, or pallet.
- Never hoist or transport cylinders by means of a magnet or choker sling.

LADDER SAFETY

Ladders, scaffolding, and elevated work platforms will be erected in accordance with MIOSHA General Industry Safety Standard Part 2 & 3 and MIOSHA Construction Safety Standard Part 11. Refer to these guidelines, or your supervisor, for specific details on use and construction. When used improperly, ladders can be very dangerous.

- Ladders should have an MIOSHA duty rating of a 1 (250 LB) or a IA (300 lb.).
- Make certain ladders are in a serviceable condition before they are used for any reason.
- Use only manufactured, portable, metal, or wood ladders equipped with non-slip bases, securely bolted or riveted to the side rails.
- Metal ladders around electrical work are prohibited.
- Portable ladder feet shall be placed on a substantial, sturdy, and level base, and the areas around the top and the bottom shall be kept clear.
- After raising the extension section of a ladder to the desired height, always check to see that safety dogs or latches are engaged and secure. Secure the extension rope to a rung at the base of the ladder.
- Ladders that are damaged or broken must be tagged and repaired or destroyed.
- Never use a ladder in a horizontal position as a platform or walk board.
- Always choose the proper ladder to fit the job.
- Never use a step ladder as a straight ladder.
- Do not stand on top of a step ladder or at the DO NOT STEP step clearly labeled on the ladder.
- A properly placed extension ladder should extend 3 feet past the walking surface.
- Straight extension ladders should be tied off at the top and maintain a 4:1 ratio. (For every 4 feet in length, the ladder must be 1’ away from the structure.

- Never temporarily repair or rig a ladder for use.
- Always use both hands when going up or down a ladder.
- Never improvise a ladder or place your ladder on an unleveled surface.
- Do not climb a ladder with tools and/or materials in your hands; use a rope or lift.

LADDER SAFETY CONTINUED…

- Always store ladders properly when not in use by adding a security chain (The chain eliminates the falling object hazard).
- Do not use ladders that have loose rungs, cracked or split side rails, missing rubber foot pads, or are otherwise visibly damaged.
- Keep ladder rungs clean and free of dirt, grease, and oils.
- Do not place a ladder in a passageway or doorway without posting warning signs or cones that detour pedestrian traffic away from the ladder.
- Allow only one person on the ladder at a time.
- Face the ladder when going up or down.
- Maintain a three-point contact by keeping both hands and one foot, or both feet and one hand on the ladder at all times when climbing.
- When performing work from a ladder, face the ladder and do not lean backwards or sideways from the ladder.
- Do not stand on the top two rungs of any ladder.
- Do not stand on a ladder that wobbles, or that leans to the right or left.
- Secure the ladder in place by having another employee hold it.
- Do not try to "walk" a ladder by rocking it. Climb down the ladder, and move it.
- Never move a rolling ladder while someone is on it.

STEP STOOLS

- Allow only one person on a step at a time.
- Face the step when climbing up or down.
- When performing work from a stool, face the stool and do not lean backwards or sideways from the step stool.
- Do not place a step stool on boxes, books, or other unstable bases.
- Do not stand on the top of the step stool.

ELECTRICAL HAZARDS

Most accidents involving electrical power occur due to improper use of power tools, appliances, and machinery. This includes improper grounding, damaged power cords and plugs, using the wrong tool for the job, and unsafe operations around power sources. Proper maintenance of tools and appliances and knowledge of electric hazards can reduce the chances of you having a shocking experience!

HOW ELECTROCUTION

Electrocution occurs when the human body encounters a power current that exceeds 70 milliamperes. This level of energy will cause your heart to beat in an erratic pattern. When this happens, your heart will not be able to adequately supply your body and brain with sufficient blood and oxygen to sustain life. At this point, you die! Be careful with electrical things.

ELECTRICAL SAFETY TIPS

- Electricity always seeks the least path of resistance to the ground, and that could be you.
- Electricity is an active hazard. It can kill immediately.
- Never use a power tool that has a damaged or "homemade" plug.
- Do not remove the grounding pin from a three-way plug.
- Never use power tools in explosive or flammable atmospheres.
- Check with the local power utility before working around power lines.
- Avoid downed or damaged power lines.
- Use only approved insulated power tools and appliances.
- Never work on a power tool or machinery while it is plugged in.
- Make sure all power tools are grounded.
- Remember, electricity is much faster than you are.

Any employee making unauthorized, unsafe alterations to an electrical device or power tool, or operating either in an unsafe manner, will be subject to disciplinary action as a safety violation.

Powered Industrial Truck Program

- Policy
- Inspection Checklist
- Operators Handbook
- Written Test

OBJECTIVES

To establish guidelines to reduce the potential for employee injury and to comply with all applicable standards and regulations

SCOPE

All operators of powered industrial trucks and their supervisors; program components will include:

- Training
- Inspection
- Safety Rules

REFERENCES

Federal, State and Local Ordinances, e.g., MIOSHA, Michigan Department of Labor and Economic Opportunity (LEO), and Manufacturer's specifications.

TRAINING

Prior to permitting an employee to operate a powered industrial truck (except for training purposes) each operator must successfully complete the powered industrial truck training program. The powered industrial truck training program consists of a combination of an I instruction (lecture, discussion, interactive computer based learning, video tape, or written materials, and a written test), practical training and demonstration, and performance evaluation.

FORMAL INSTRUCTION

This includes a review of the Operators Handbook, and completion of the written test. Five wrong answers will require follow up training to ensure the driver understands the safe operating procedures.

PRACTICAL TRAINING & DISCUSSION

This includes a hands on review of the powered industrial truck operating controls and review of all special powered industrial truck attachments and unique facility conditions.

All new operators should be given the opportunity to drive the powered industrial truck under the direct supervision of persons who have the knowledge, training, and experience to safely operate a powered industrial truck. A new operator is given a 30 day permit, once the 30 days is expired, the supervision of an individual with experience in operating a powered industrial truck is no longer valid.

PERFORMANCE EVALUATION

The Performance Evaluation should be conducted when an operator has successfully completed the formal instruction and practical training/discussion. To complete the Performance Evaluation use Form B on the Powered industrial truck Training Test Packet.

TRAINING PROGRAM CONTENT

Operators shall receive initial training in the following topics:

- Differences between a powered industrial truck and an automobile.
- Truck operating controls, safety devices, and attachments
- Engine or motor operation
- Pedestrian traffic
- Load handling and stacking
- Traveling, surface conditions, inclines and declines
- Vehicle stability, load capacity, and steering
- Loading and unloading trucks
- Parking the powered industrial truck
- Refueling and/or recharging
- Restricted uses of trucks and hazardous areas
- Maintenance, repair, and inspections

INSPECTION

All powered industrial truck operators must inspect the powered industrial truck they are operating at the start of the shift. If the vehicle is found to be unsafe, it must be reported to Management immediately. No powered industrial truck will be operated in an unsafe condition.

The powered industrial truck operator must utilize the "Powered industrial truck Inspection Report" form. These reports shall be turned into the supervisor.

CERTIFICATION

Employees successfully completing all portions of the Powered industrial truck Training Program will be issued an Operator's Permit. The Operator's Permit must be carried by the operator at all times. This Permit will be valid for three years and must contain the following:

- Name of operator
- Date of training
- Date of evaluation
- Name of trainer

It is worth noting, prior or current permits are NOT transferrable.

POWERED INDUSTRIAL TRUCK SAFETY RULES

- Only drivers authorized by the company and trained in the safe operation of powered industrial truck trucks or powered industrial trucks shall be permitted to operate such vehicles. Drivers shall not operate trucks other than those for which they are authorized. Trainees may be authorized to operate trucks provided they are under direct supervision.
- Drivers shall check the vehicle at least once per day and if it is found to be unsafe, the matter shall be reported immediately to a manager or mechanic, and the vehicle shall not be put into service until it has been made safe. Attention shall be given to the proper functioning of tires, horns, lights, battery, accelerator, brakes, steering mechanism, and the lift system of fork lifts (fork chains, cable, and limit switches).
- The powered industrial truck shall not exceed the authorized or safe speed, always maintaining a safe distance from other vehicles, and all established traffic regulations shall be observed. For trucks traveling in the same direction, a safe distance may be considered to be approximately 3 truck lengths or preferably a time lapse of 3 seconds before passing the same point. Exercise extreme care when cornering.
- Sound horn at blind corners.
- No riders shall be permitted on powered industrial trucks.
- Stunt driving and horseplay is prohibited.
- Loaded powered industrial trucks shall not be moved until the load is safe and secure.
- When leaving a powered industrial truck unattended, the power shall be shut off, brakes set, the mast brought to the vertical position, and the forks left in the down position. When left on an incline, the wheels shall be locked.

NOTE: A powered industrial truck is unattended when the operator is 25 ft. or more away from the vehicle or whenever the operator leaves the vehicle and it is not in his or her view.

- When the operator is dismounted and within 25 feet, of the truck still in his or her view, the load engaging means shall be fully lowered, control neutralized, and the brakes set to prevent movement.
- Trucks shall not be driven up to anyone standing in front of a bench or other fixed object of such size that the person could be caught between the truck and the object.
- Operators shall look in the direction of travel and shall not move a powered industrial truck until certain that all persons are in the clear.
- Powered industrial trucks shall not be operated on floors, sidewalk doors, or platforms that will not safely support the powered industrial truck, empty or loaded. Any damage to the powered industrial truck and/or structures shall be reported immediately to the manager. Additionally, doors adjacent to the path of travel should be marked and secured where possible.
- Employees shall not ride on the forks of the powered industrial truck
- The forks shall always be carried as low as possible, consistent with safe operation. Two to four inches above the ground is recommended.
- Extreme care shall be used when lifting loads.
- Powered industrial trucks shall not be driven in and out of highway trucks and trailers at unloading docks until the wheels are securely blocked and brakes set.
- Employees shall not place any part of their body outside the running lines of the powered industrial truck or between mast uprights or other parts of the truck where shear or crushing hazards exits.
- Employees shall not be allowed to stand, pass, or walk under the elevated portion of any powered industrial truck loaded or empty, unless it is effectively blocked to prevent it from falling.
- The width of one tire on the powered industrial truck shall be the minimum distance maintained by the truck from the edge while it is on any elevated dock, platform or freight car.
- Trucks shall not be loaded in excess of their rated capacity.
- No truck shall operate with a leak in the fuel or hydraulic system.

- Extreme care should be taken when tilting loads. Elevated loads shall not be tilted forward except for when the load is being deposited onto a storage rack or equivalent. When stacking, the backward tilt of the load shall be limited to that necessary to stabilize the load.
- The load engaging device shall be placed in such a manner that the load will be securely held or supported.
- Special precautions shall be taken in the securing and handling of loads by powered industrial trucks equipped with attachments, and during the operation of these trucks after the loads have been removed.
- **NO SMOKING WHILE OPERATING OR REFUELING POWERED INDUSTRIAL TRUCKS.**
- Trucks and trailers must have two rear wheels blocked or restrained by other mechanical means such as the tractor (power unit) with brake set or an electromechanical system such as a Dok-Lok system when being boarded by a powered industrial truck.

Fire Prevention Plan

- Fire Protection Checklist
- Inspection Logs & Fire Incident Reports
- Fire Hazard Identification
- Fire Equipment Training Record
- Fire Extinguisher Location & Evacuation Route
- Emergency & Disaster Plan

FIRE PREVENTION POLICY

- It is Northwest Kent Mechanical's policy to provide its employees with a safe workplace free from areas where potential fire hazards exist. The primary goal of this fire prevention program is to reduce or eliminate fire in the workplace by heightening the fire safety awareness of all employees. Another goal of this plan is to provide all employees with the information necessary to recognize hazardous conditions and take appropriate action before such conditions result in a fire emergency.
- This fire prevention plan complies with the MIOSHA general Industry Safety Standard Part 8 PPE, Part 18 Flammable Liquids and Construction Safety Standard Part 18.
- This plan details the basic steps necessary to minimize the potential for fire occurring in the workplace. Prevention of fires in the workplace is the responsibility of everyone employed by the company, but must be monitored by each supervisor overseeing any work activity that involves a_ major fire hazard. Every effort will be made by the company to identify those hazards that might cause fires and establish a means for controlling them.
- The fire prevention plan will be administered by the project foreman who will compile a list of all major workplace fire hazards, the names or job titles of personnel responsible for fire control equipment maintenance, the names or job titles of personnel responsible for control of fuel source hazards, and also, the locations of all fire extinguishers in the workplace. The plan administrator, or safety officer, must also be familiar with the behavior of employees that may create fire hazards, as well as periods of the day, month, and year in which the workplace could be more vulnerable to fire.
- This fire prevention plan should be reviewed at least annually and updated appropriately both to maintain compliance with changing regulations and to keep up with the state of the art and consensus industry standards. Inspection logs and fire incident reports should be maintained in Appendix B, and it should be used to provide corrections and improvements for this fire prevention plan.
- This plan will be kept in the workplace and made accessible for employee review.

CLASSIFICATION OF FIRES

- Fire is a chemical reaction involving rapid oxidation or burning of a fuel. The first component of the tetrahedron (a four sided object) is fuel. Fuel can be any combustible material: solid (i.e. wood, paper, or cloth), liquid (i.e. gasoline), or gas (i.e. acetylene or propane). Solids and liquids generally convert to gases or vapors before they will bum.
- Another component of the tetrahedron is oxygen. Fire only needs an atmosphere with at least 16 percent oxygen.
- Heat is also a component of the tetrahedron. Heat is the energy necessary to increase the temperature of the fuel source to a point in which sufficient vapors are emitted for ignition to occur.
- The final side of the tetrahedron represents a chemical chain reaction. When these components are brought together in the proper conditions and preparations, fire will develop. Take away any one of these elements, and the fire cannot exist or will be extinguished if it was already burning.
- Fires are classified into four groups according to sources of fuel: Class A, B, C or D. Table 1 describes the classifications of fire which can be used in making a hazard assessment.

Table 1: Classification of Fire

Class A: Ordinary combustible materials such as paper, wood, cloth, and some rubber and plastic materials.

Class B: Flammable or combustible liquids, flammable gases, greases and similar materials, and some rubber and plastic materials.

Class C: Energized electrical equipment, power supply circuits, and related materials.

Class D: Combustible metals, such as magnesium, titanium, zirconium, sodium, lithium, and potassium.

DETERMINING FIRE HAZARDS

This section consists of two steps: first, identifying the existing fire hazards in the workplace, and second, taking action to resolve them. The inspection checklist in Appendix A provides a guide for precise fire-safe practices that must be followed. The location of these major fire hazards are denoted in Appendix C. Also included in Appendix C is a listing of the personnel responsible for the maintenance of the equipment and systems installed to prevent or control fires.

Material hazards shall be identified, as evident on the specific material safety data sheets, and labeled on containers as soon as they arrive in the workplace. The identification system shall also include incorporation into the company's hazard communication program.

INDUSTRIAL TRUCKS

The type of industrial truck being used shall be approved for use within any building storing hazardous materials. All refueling operations shall be conducted outside and away from storage of flammable materials. Areas that are used for maintenance and battery charging of electrical trucks should be separated from storage areas.

ORDINARY COMBUSTIBLES

- Wooden pallets will not be stacked over 6 feet tall. If feasible, extra pallets will be stored outside or in separate buildings to reduce the risk of fire hazards.
- Piles of combustible materials shall be stored away from buildings and located apart from each other sufficiently to allow firefighting efforts to control an existing fire.

STORAGE AND HANDLING PROCEDURES

- The storage of material shall be arranged such that adequate clearance is maintained away from heating surfaces, air ducts, heaters, flue pipes, and lighting fixtures. All storage containers or areas shall prominently display signs to identify the material stored within. Storage of chemicals shall be separated from other materials in storage, from handling operations, and from incompatible materials. All individual containers shall be identified as to their contents.
- Only containers designed, constructed, and tested in accordance with the U.S. Department of Transportation specifications and regulations are used for storage of compressed or liquefied gases. Compressed gas storage rooms will be areas reserved exclusively for that purpose, with good ventilation and at least a 1 hour fire resistance rating. The gas cylinders shall be secured in place and stored away from any heat or ignition source. Pressurized gas cylinders shall never be used without pressure regulators.

FLAMMABLE MATERIALS

- Bulk quantities of flammable liquids shall be stored outdoors and away from buildings. Smaller quantities are subsequently brought into a mixing room where they are prepared for use. The mixing room shall be located next to an outside wall equipped with explosion relief vents. The room shall also have sufficient mechanical ventilation to prevent the accumulation of flammable vapor concentrations in the explosive range.
- Small quantities (limited to amount necessary to perform an operation for one working shift) of flammable liquids shall be stored in, and also dispensed from, approved safety containers equipped with vapor-tight, self-closing caps, screens, or covers.
- Flammable liquids shall be stored away from sources that can produce sparks.
- Flammable liquids shall only be used in areas having adequate and, if feasible, positive ventilation. If the liquid is highly hazardous, the liquid shall only be used in areas with a local exhaust ventilation.

- Flammable liquids shall never be transferred from one container to another by applying air pressure to the original container. Pressurizing such containers may cause them to rupture, creating a serious flammable liquid spill.
- When dangerous liquids are being handled, a warning sign will be posted near the operation, notifying other employees and giving warning that open flames are hazardous and are to be kept away.
- The storage and usage areas will include fire-resistive separations, automatic sprinklers, special ventilation, explosion-relief valves, separation of incompatible materials, and the separation of flammable materials from other materials.

POTENTIAL IGNITION SOURCES

- Ensure that utility lights always have some type of wire guard over them.
- Don't misuse fuses. Never install a fuse rated higher than specified for the circuit.
- Investigate any appliance or equipment that smells strange. Space heaters, microwave ovens, hot plates, coffee makers, and other small appliances shall be rigidly regulated and closely monitored.
- The use of extension cords to connect heating devices to electric outlets shall be prohibited.
- If a hot or under-inflated tire is discovered, it should be moved well away from the vehicle. As an alternative, the driver should remain with the vehicle until the tire is cool to the touch, then make repairs. If a vehicle is left with a hot tire, the tire might burst into flames and destroy the vehicle and load.

COMMON SOURCES OF IGNICTION IN THE WORKPLACE

Electrical equipment: Electrical defects, generally due to poor maintenance, mostly in wiring, motors switches, lamps, and hot elements. Use only approved equipment. Follow the National Electrical Code. Establish regular maintenance.

Friction: Hot bearings, misaligned or broken machine parts, poor adjustment. Follow a regular schedule of inspection, maintenance, and lubrication.

Open flames: Cutting and welding torches, gas and oil burners, misuse of gasoline torches. Follow established welding precautions. Keep burners clean and properly adjusted. Do not use open flames near combustibles.

Smoking and matches: Dangerous near flammable liquids and in areas where combustibles are stored or used. Smoke only in permitted areas. Make sure matches are out. Use appropriate receptacles.

Static electricity: Occurs where liquid flows from pipes. Ground equipment. Use static eliminators. Humidify the atmosphere.

Hot surfaces: Exposure of combustibles to furnaces, electric lamps, or heaters. Provide ample clearances, insulation, and air circulation. Check heating apparatus prior to leaving it unattended.

WELDING AND CUTTING

- Welding and cutting will not be permitted in areas not authorized by management.

- If practical, welding and cutting operations shall be conducted in well-ventilated rooms with a fire-resistant floor. If this practice is not feasible, Management shall ensure that the work areas have been surveyed for fire hazards, the necessary precautions have been taken to prevent fires, and then issue a work permit. This work permit shall only encompass the area, item, and time which is specified on it.

- If welding is to be performed over wooden or other combustible type floors, the floors will be swept clean, wetted down, and covered with either fire-retardant blankets, metal, or other noncombustible coverings.

- **Welding will not be permitted in or near areas containing flammable or combustible materials (liquids, vapors, or dusts). Welding will not be permitted in or near closed tanks that contain or have contained flammable liquids, unless they have been thoroughly drained, purged, and tested free from flammable gases or vapors. Welding shall not begin until all combustible materials have been removed at least 35 feet from the affected areas, or, if unable to relocate, covered with a fire retardant covering. This also applies to walls, partitions, ceilings, or roofs of combustible materials. Openings in walls, floors, or ducts .shall be covered if located within 35 feet of the intended work area. Welding will not be permitted on any closed containers.**

- **Fire extinguishers will be provided at each welding or cutting operation. A trained watcher will be stationed, at all times, during the operation and for at least 30 minutes following the completion of the operation. This person will assure that no stray sparks cause a fire and will immediately extinguish fires that do start.**

STATIC ELECTRICITY

- **The company recognizes that it is impossible to prevent the generation of static electricity in every situation, but the company realizes that the hazard of static sparks can be avoided by preventing the buildup of static charges. One or more of the following preventive methods will be used: grounding, bonding, maintaining a specific humidity level (usually 60 -70 percent), and ionizing the atmosphere.**

- **Where a static accumulating piece of equipment is unnecessarily located in a hazardous area, the equipment will be relocated to a safe location, rather than attempt to prevent static accumulation.**

HOUSEKEEPING PREVENTIVE TECHNIQUES

The following are housekeeping techniques and procedures to prevent the occurrences of fire:

- Keep storage and working areas free of trash.
- Place oily rags in covered containers and dispose of daily.
- Do not use gasoline or other flammable solvent or finish to clean floors.
- Use noncombustible oil-absorptive materials for sweeping floors consisting of sawdust or some other combustible material treated with oil.
- Don't refuel gasoline-powered equipment in a confined space, especially in the presence of equipment such as furnaces or water heaters.
- Don't refuel gasoline-powered equipment while it is hot.
- Follow proper storage and handling procedures for all chemicals and flammable materials.
- Ensure combustible materials are present only in areas and quantities required for the work operation.
- Clean up any spill of flammable liquids immediately.
- Ensure that if a worker's clothing becomes contaminated with flammable liquids, these individuals change their clothing before continuing to work.
- Post "No Smoking" caution signs near flammable storage areas.
- Report any hazardous condition, such as old wiring, worn insulation, and broken electrical equipment, to the supervisor.
- Keep motors clean and in good working order.
- Don't overload electrical outlets.
- Ensure all equipment is turned off at the end of the work day.
- Maintain the right class type of fire extinguisher available for use.
- Ensure that all passageways and fire doors are unobstructed. Stairwell doors shall never be propped open, and materials shall not be stored in stairwells.
- Don't allow materials to block automatic sprinkler systems or to be piled around fire extinguisher locations. To obtain the proper distribution of water, a minimum of 18 inches of clear space must be maintained below sprinkler deflectors. If there are no sprinklers, a 3 foot clearance between piled material and the ceiling must be maintained to permit use of hose streams. These distances must be doubled when stock is piled higher than 15 feet.
- Check daily for any discarded lumber, broken pallets, or pieces of material stored on site and remove properly.

- Re-pile immediately any pile of material which falls into an aisle or clear space.
- Use weed killers that are nontoxic and do not pose a fire hazard.

FIRE PROTECTION EQUIPMENT

- Portable fire extinguishers are placed in all buildings. Fire extinguishers must be kept fully charged and in their designated places. The extinguishers will not be obstructed or obscured from view. A map indicating the locations of all fire extinguishers for this company is located in Appendix E. The fire extinguishers will also be inspected by Management, at least every month, per NFPA 10, to make sure that they are in their designated places, have not been tampered with or actuated, and are not corroded or otherwise impaired.
- The location of all hydrants, hose houses, portable fire extinguishers, or other fire protective equipment shall be properly marked with arrows and signs painted on the pavement.

TRAINING

All employees shall be instructed on the locations and proper use of fire extinguishers in their work areas. Employees shall also be instructed as to how to operate the building's fire alarm system, and be familiar with evacuation routes. The training of all employees shall include the locations and types of materials and/or processes which pose potential fire hazards. The training program shall also emphasize the following:

1) Use and disposal of smoking materials.
2) The importance of electrical safety.
3) Proper use of electrical appliances and equipment.
4) Unplugging heat-producing equipment and appliances at the end of each work day.
5) Correct storage of combustible and flammable materials.
6) Safe handling of compressed gases and flammable liquids (where appropriate).

Ongoing training shall include regularly scheduled fire drills. Training documentation shall be placed in Appendix D.

APPENDIX A
FIRE PREVENTION CHECKLIST
ELECTRICAL EQUIPMENT

- No makeshift wiring. Extension cords serviceable.
- Motors and tools free of dirt and grease.
- Lights clear of combustible materials.
- Safest cleaning solvents used.
- Fuse and control boxes clean and closed.
- Circuits properly fused or otherwise protected.
- Equipment approved for use in hazardous areas (if required).
- Ground connections clean and tight and have electrical continuity.

FRICTION:

- Machinery properly lubricated.
- Machinery properly adjusted and/or aligned.

SPECIAL FIRE HAZARD MATERIALS:

- Storage of special flammables isolated.

WELDING AND TORCH CUTTING:

- Area surveyed for fire safety.
- Combustibles removed or covered.
- Supervisor has authorized practice.

OPEN FLAMES:

- Kept away from spray rooms and booths.
- Portable torches clear of flammable surface.
- No gas leaks.

PORTABLE HEATERS:

- Set up with ample horizontal and overhead clearance.
- Safely mounted on non-combustible surface.
- Secured against tipping or upsetting.
- Use of steel drums is prohibited.
- Combustibles removed or covered.
- Not used as rubbish burners.

SMOKING AND MATCHES:

- "No smoking" and "smoking" areas clearly marked.
- No discarded smoking materials in prohibited areas.
- Butt containers available and serviceable.

SPONTANEOUS IGNITION:

- Flammable waste material in closed, metal containers well ventilated.
- Piled material, cool, dry, and well ventilated.
- Flammable waste material containers emptied frequently.
- Trash receptacles emptied daily.

STATIC ELECTRICITY:

- Flammable liquid dispensing vessels grounded and bonded. Moving machinery grounded.

HOUSEKEEPING:

- No accumulations of rubbish.
- Premises free of unnecessary combustible materials.
- Safe storage of flammables.
- No leaks or dripping of flammables, and floor free of spills.
- Passageways clear of obstacles.
- Fire doors unblocked and operating freely with fusible links intact.
- Automatic sprinklers unobstructed.

FIRE PROTECTION:

- Proper type of fire extinguisher.
- Extinguishing system in working order.
- Fire extinguisher in proper location.
- Service date current.
- Access to fire extinguishers unobstructed.
- Personnel trained in use of equipment.
- Access to fire extinguishers clearly marked.
- Personnel exits unobstructed and maintained.
- Fire protection equipment turned on.

APPENDIX B
INSPECTION LOGS AND FIRE INCIDENT REPORTS

(Insert any fire incident reports and inspection records in the documentation book.)

APPENDIX C
HAZARD IDENTIFICATION

TYPE	LOCATION	CONTROL PROCEDURES	EXTINGUISHER LOCATION	RESPONSIBLE PERSONNEL

APPENDIX D
FIRE EQUIPMENT
TRAINING RECORD

NAME	DEPARTMENT	DATE

APPENDIX E
FIRE EXTINGUISHER LOCATION & EVACUATION ROUTE

(It is recommended the foreman of the project is to insert a map designating fire extinguisher locations here on this page or on a copy of the plan drawings.)

EMERGENCY & DISASTER PLANS

The Safety Coordinator should develop operational emergency and contingency plans. These plans should define operations the company will take if forced to cope with natural disasters, i.e. severe weather (where tornadoes and/or hurricane conditions are possible), gas leaks, fires, bomb threats, hazardous chemical spills, public disturbances, and other emergency situations. In these conditions, the protection of employees and guests is essential. Good preparation and training can be valuable in averting panic and will help ensure rapid and safe evacuation.

Emergency plans should be written. This information should be a required part of the employee safety orientation and training. The written plan should delegate specific responsibilities so all employees know exactly what is expected of them. The written plan is also a permanent record for periodic reference. Clear, thorough planning and integrated activities are essential to emergency planning. Above all, you should test the plan before it is needed. It is too late when disaster strikes! The plan should include the following:

These Emergency & Disaster plans should be developed at the beginning of every job site by the job site foreman. A copy of the written plan shall be placed inside the job site trailer, the tool boxes inside the building, and the foreman should submit one to the NWK office to keep for records.

- **A written policy statement.**
- **Types of disasters expected.**
- **The building(s) layout with exit routes and location of emergency equipment (First Aid, Fire Extinguishers, route of egress with directional arrows.**
- **Contingencies with local disaster and relief agencies.**
- **An emergency organization chart.**
- **A description of the employee warning system.**
- **Emergency shutdown procedures.**
- **Emergency shelters and provisions.**
- **Alternate company headquarters.**
- **Utilities repair.**

Blood Borne Pathogens

BLOOD BORNE INFECTIOUS DISEASE EXPOSURE CONTROL POLICY
SATEMENT OF PURPOSE

The Blood borne Infectious Disease Plan is established with the express purpose and intent of providing Northwest Kent employees with suitable and necessary protection from occupational exposure to blood borne diseases and to ensure their safety, health, and wellbeing in the performance of their jobs, as well as, complying with state and federal occupational safety and health laws.
These diseases include, but are not limited to, immunodeficiency virus (HIV) which causes AIDS and the Hepatitis B Virus (HBV).

SCOPE

"Occupational Exposure" is any reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or any other potentially infectious materials that may result from the performance of an employee's duties.
"Exposure Incident" means a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other infectious materials that result from the performance of any employee's duties.

PLAN RESPONSIBILITY

The responsibility for the administration of this plan is assigned to the Human Resources Department. Enforcement of this plan will be the responsibility of the Director of Human Resources. The Human Resources Department is responsible for the following aspects of the plan:

1. **Eliminate and/or minimize occupational exposure to HBV, HIV, other blood borne diseases, and other "potentially infectious" materials.**
2. **Instruction and training of employees in use and limitations of personal protective equipment.**
3. **Educate, instruct and train in the concept of "Universal Precautions" and "Work Practice Controls".**
4. **Coordinate HBV vaccinations and maintain appropriate records.**

5. Coordinate appropriate medical care with medical consultant regarding prophylactic treatment and maintain appropriate records.
6. Maintain confidentiality provisions concerning employee exposure records as deemed within state and federal statutes.
7. Educate employees on the epidemiology of blood infectious diseases, modes of transmission and prevention of HIV, HBV and other blood borne diseases.

EMPLOYEE RESPONSIBILITES

It is the employee's responsibility to:

1. Wear and use the provided personal protective equipment as directed and trained, including properly inspecting personal protective equipment and reporting any malfunctions.
2. Follow the set outline Blood borne Infectious Diseases Plan and Policies as directed and trained.

DESIGNATION OF JOBS REQUIRING PROTECTION FROM BLOOD BORNE INFECTIOUS DISEASES AND OTHER POTENTIALLY INFECTIOUS MATERIALS

The following jobs in our operation are designated as requiring protection against blood borne infectious diseases and other potentially infectious materials.

- Category A - "Anticipated Exposure"
  - Foreman/ Supervisors with first aid training
- Category B - "Some Exposure"
  - Employees (office or jobsite) not trained in first aid procedures

It shall be the responsibility of the Human Resources Department to conduct continual monitoring and evaluation of the "anticipated exposure" and "some exposure" tasks of Northwest Kent employees and contracted personnel, and to identify the continuing need for the Blood borne Infectious Diseases Plan and Policies, as well as, designating any new or additional jobs for which protection should be required.

METHODS OF COMPLIANCE UNIVERSAL PRECAUTIONS

- The term "Universal Precautions" implies consistent infectious disease control which assumes that every direct contact with blood or body fluids is infectious. It requires that every employee who may inadvertently be contaminated by such fluids be protected as though such fluids are infected with HBV, HIV, or other infectious agents. Universa1 precautions are intended to protect health-care providers and Good Samaritan first aid caregivers from parenteral mucous membrane and skin exposure to blood borne pathogens.
- Universal precautions include the use of personal protective equipment.
- Employees, who would be called upon to respond to an emergency situation and may be exposed to blood or body fluids, may be aware of the location and instructed in the use of the personal protective equipment.

IDENTIFYING REQUIRED PERSONAL PROTECTIVE EQUIPMENT

- Where there is occupational exposure Northwest Kent Mechanical will provide the appropriate personal protective equipment such as, but not limited to gloves, gowns, face masks or eye protection, resuscitation bags, pocket masks, or other ventilation devices.
- Personal protective equipment will be considered "appropriate" only if it does not permit blood or other potentially infectious materials from reaching the employees' work clothing, street clothing, undergarments, skin, eyes, mouth or other mucous membranes. Appropriate personal protective equipment (PPE) will be provided, cleaned and replaced by Northwest Kent Mechanical at no cost to the employee.

GLOVES

- Disposable single use gloves such as latex examination gloves shall be worn when it can be reasonably anticipated that the employee may have hand contact with blood, body fluids or other potentially infectious materials, mucous membranes and non-intact skin, or potentially infectious surfaces.

- Gloves shall be replaced as soon as practical when contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised.
- No gloves should be used if there is evidence of deterioration.

MASKS, EYE PROTECTION, GOWNS, AND OTHER PROTECTIVE BODY CLOTHING

- Masks in combination with eye protection devices such as goggles or glasses with side- shields shall be worn during procedures that are likely to generate droplets of blood or other potentially infectious materials and reasonable contamination of the eyes, nose or mouth can be anticipated.

RESUSCITATION EQUIPMENT

- Resuscitation equipment shall be designed to prevent direct contact of one individual to another and available for use by emergency care providers. CPR mouthpieces are to be used whenever CPR is rendered.

HOUSEKEEPING

- Jobsite foremen shall ensure that the worksite is maintained in a clean and sanitary condition.
- All equipment, environmental surfaces and working surfaces shall be cleaned and decontaminated as soon as possible with an appropriate disinfectant after contact with blood or any potentially infectious materials.
- The cleaning agent must be hospital grade virucide or 1: 10 bleach to water solution.
- All trash bins and similar receptacles intended for reuse which have a likelihood for becoming contaminated with potentially infectious materials shall be inspected and decontaminated on a routine basis or cleaned as soon as visibly soiled.

- Broken glass which may be contaminated shall be picked up with mechanical means, i.e. broom, brush.
- Any bags containing contaminated or potentially contaminated infectious material must be tagged or otherwise identified as BioHazWaste bags. If leakage or contamination of the first bag is possible a second bag is to be used.
- Objects contaminated with the potentially infectious materials shall be places in a BioHazWaste bag.

HBV PRECAUTIONS

- HBV Vaccinations shall be made available to all employees who have potential occupational exposure/occupational exposure after they have received training.
- If the employee initially declines, and eventually wants the HBV Vaccination, Northwest Kent Mechanical shall provide the vaccination to the employee at such time.
- The vaccinations are available at no cost to the employee.
- An employee who declines to accept the Hepatitis B Vaccination shall sign the "Hepatitis B Vaccination Declination Form".

PROTOCOLS POST EXPOSURE-EVALUATION AND FOLLOW-UP

Should an employee incur an "Exposure Incident", Northwest Kent Mechanical will make available immediately confidential medical evaluation and follow-up which will include:

1. Serological testing of blood as soon as possible
2. Post-exposure vaccine if indicated
3. Medical evaluation of reported illnesses
4. Counseling

- The treating physician will be provided with a copy of the Blood borne Infectious Diseases and a description of the employees' duties and occupational exposure.

- If identification of the source individual is possible, serological testing of the blood will be obtained after consent for testing has been submitted.
- If consent is not obtained Northwest Kent shall establish that legally required consent was not obtained.
- Both the exposed individual and the source should be retested for HIV at six weeks, three months, six months, and twelve months if HIV testing remains negative.

PHYSICIAN'S WRITTEN OPINION

Northwest Kent Mechanical shall obtain and provide the exposed employee with a copy of the physician's written opinion within 15 working days of the completion of the evaluation.

Physician's written opinion for post-exposure evaluation and follow-up shall be limited to the following information:

- That the employee has been informed of the results of the evaluation
- 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 and treatment
- All findings and diagnosis are to remain strictly confidential

RECORDKEEPING MEDICAL RECORDS

Northwest Kent shall establish and maintain an accurate record for each employee with an occupation exposure incident in accordance with R325.7000.

This record shall include:

1. Name and social security number of the employee
2. Copy of the employee's HBV vaccination records
3. Copy of all medical testing and findings
4. Copy of Physician's Written Opinion

The employer shall maintain these records for the duration of employment plus 30 years. Northwest Kent Mechanical shall maintain these records confidentiality filed of his/her legal rights of testing refusal.

TRAINING RECORDS

Training records shall include:

1. **The dates of the training session**
2. **The contents or summary of training session**
3. **The names and qualifications of persons conducting the training session**
4. **Name and job title of all persons attending the training sessions**

Confined Space Safety

CONFINED SPACE SAFETY PROCEDURE

1. Before work begins on the job, each employer must ensure that a competent person identifies all confined spaces in which one or more of the employees it directs may work, and identifies each space that is a permit space, through consideration and evaluation of the elements of that space, including testing as necessary.
2. Inform all employees by posting danger signs or by any other equally effective means (confined space sign) of the existence and location of the given confined space.
3. <u>Steps to take if a hazard is found in a confined elevator space during entry:</u>

- Each employee must leave the space immediately.
- The space must be evaluated to determine how the hazard developed and how it must be taken care of.
- The employer must ensure a safe method of entering the space to protect other employees from the hazard before any additional entrance takes place.

4. Anytime working near or in a confined space, the employer is responsible for ensuring that is a safe method of entering and/or exiting the space. If any hoisting system is needed to be used, it must be designed and manufactured for personal hoisting or approved by a registered professional engineer.

Refer to MIOSHA General Industry Part 90 and MIOSHA Construction Part 35.

Scaffolding Safety

General

- To select and direct employees who erect, dismantle, move, or alter scaffolds.
- To determine if it is safe for employees to work on or from a scaffold during the working day and to apply proper personal fall arrest if it is applicable.
- Inspect scaffolds and scaffold components for visible defects before each work shift and after any occurrence that could affect the structural integrity and to authorize prompt corrective actions if applicable.

Inspecting Scaffolding

- Do not used scaffolding equipment or accessories that are obviously damaged.
- Do not use rusty or corroded scaffolding equipment. If the equipment shows any type of rust or corrosion, discard the equipment as it may not be supportive enough for the given load.
- Check for bent, kinked, flattened, or crushed components of the scaffolding.
- Check for cracks around welds, joints, and around the circumference.
- Look inside tubes for signs of rust or corrosion.
- Check moving parts and gravity locks.
- Check for brackets with deformed attachment hooks.
- Check holes in the cross braces for splitting out.
- Check the planking for missing hooks, locks, rivets, bent side rails, and damaged walking surfaces.
- Check castors for damaged brakes, axles, or stems.
- Look for any painted areas that may be blistered, cracked, or crazed which may indicate previous damage.
- When there is any doubt regarding the safety of the scaffolding, either discard the component or consult a scaffolding supplier. Do not take chances with defective equipment.

Refer to MIOSHA Construction Part 12.

Setting Up & Using Scaffolding

Consider the following when properly setting up scaffolding:

- Proximity of electrical lines, process piping, or any other overhead obstructions
- Adequate access to the job site
- Weather conditions and/or weather protection
- Openings, pits, and ground conditions
- Adequate foundations of sufficient strength to support scaffolds from a sound, stable surface that assures support of the intended loads
- Interference with other jobs and/or workers
- Environmental hazards
- Proper bracing that is rigid in all directions
- Safe and easy means of access and egress to the platform
- Fall protection used for the workers
- Adequate decking materials and overhead protection where required
- Falling object protection of people passing, working near or underneath the scaffolding
- Planning for the load and the weight of the scaffolding

Fall Protection

- For most supporting scaffolds, the guardrails are the fall protection for the user of the scaffolding. If the guardrails are installed, personal fall protection is not needed for the workers. If the guardrails are not in place, then a personal fall protection must be used.

Respirable Crystalline Silica Program

PURPOSE

This Respirable Crystalline Silica Program was developed to prevent employee exposure to hazardous levels of Respirable Crystalline Silica that could result through construction activities or nearby construction activities occurring on worksites. Respirable Crystalline Silica exposure at hazardous levels can lead to lung cancer, silicosis, chronic obstructive pulmonary disease, and kidney disease. It is intended to meet the requirements of the Respirable Crystalline Silica Construction Standard (29 CFR 1926.1153) established by the Occupational Safety and Health Administration (OSHA).

All work involving chipping, cutting, drilling, grinding, or similar activities on materials containing Crystalline Silica can lead to the release of respirable-sized particles of Crystalline Silica (i.e. Respirable Crystalline Silica). Crystalline Silica is a basic component of soil, sand, granite and many other minerals. Quartz is the most common form of Crystalline Silica. Many materials found on constructions sites include Crystalline Silica; including but not limited to – cement, concrete, asphalt, pre-formed structures (inlets, pipe, etc.) and others. Consequently, this program has been developed to address and control these potential exposures to prevent our employees from experiencing the effects of occupational illnesses related to Respirable Crystalline Silica exposure.

SCOPE

This Respirable Crystalline Silica Program applies to all employees who have the potential to be exposed to Respirable Crystalline Silica when covered by the OSHA Standard. The OSHA Respirable Crystalline Silica Construction Standard applies to all occupational exposures to Respirable Crystalline Silica in construction work, except where employee exposure will remain below 25 micrograms of Respirable Crystalline Silica per cubic meter of air (25 $\mu g/m^3$) as an 8-hour time-weighted average (TWA) under any foreseeable conditions.

RESPONSIBILITIES

Northwest Kent Mechanical firmly believes protecting the health and safety of our employees is everyone's responsibility. This responsibility begins with upper management providing the necessary support to properly implement this program. However, all levels of the organization assume some level of responsibility for this program including the following positions.

- **Conduct job site assessments for Silica containing materials and perform employee Respirable Crystalline Silica hazard assessments in order to determine if an employee's exposure will be above 25 $\mu g/m^3$ as an 8-hour TWA under any foreseeable conditions**

- **Select and implement into the project's ECP the appropriate control measures in accordance with the Construction Tasks identified in OSHA's Construction Standard Table 1; and potentially including (but not limited to) - a written Exposure Control Plan (ECP), exposure monitoring, Hazard Communication training, medical surveillance, housekeeping and others.**

  NOTE: OSHA's Construction Standard Table 1 is a list of 18 common construction tasks along with acceptable exposure control methods and work practices that limit exposure for those tasks.

- **Ensure that the materials, tools, equipment, personal protective equipment (PPE), and other resources (such as worker training) required to fully implement and maintain this Respirable Crystalline Silica Program are in place and readily available if needed.**

- **Ensure that Project Managers & Foreman's, Site Managers, Competent Persons, and employees are educated in the hazards of Silica exposure and trained to work safely with Silica in accordance with OSHA's Respirable Crystalline Silica Construction Standard and OSHA's Hazard Communication Standard. Managers and Competent Persons may receive more advanced training than other employees.**

- **Maintain written records of training (for example, proper use of respirators), ECPs, inspections (for equipment, PPE, and work methods/practices), medical surveillance (under lock and key), respirator medical clearances (under lock and key) and fit-test results.**

- **Conduct an annual review (or more often if conditions change) of the effectiveness of this program and any active project ECP's that extend beyond a year. This includes a review of available dust control technologies to ensure these are selected and used when practical.**

- **Coordinate work with other employers and contractors to ensure a safe work environment relative to Silica exposure.**

- **Ensure all applicable elements of this Respirable Crystalline Silica Program are implemented on the project including the selection of a Competent Person.**

- **Assist in job site assessments for Silica containing materials and perform employee Respirable Crystalline Silica hazard assessments in order to determine if an ECP, exposure monitoring, and medical surveillance is necessary.**

- **Assist in the selection and implementation of the appropriate control measures in accordance with the Construction Tasks identified in OSHA's Construction Standard Table 1; and potentially including (but not limited to) - a written Exposure Control Plan (ECP), exposure monitoring, Hazard Communication training, medical surveillance, housekeeping and others.**

- **Ensure that employees using respirators have been properly trained, medically cleared, and fit-tested in accordance with the company's Respiratory Protection Program. This process will be documented.**

- **Ensure that work is conducted in a manner that minimizes and adequately controls the risk to workers and others. This includes ensuring that workers use appropriate engineering controls, work practices, and wear the necessary PPE.**

- **Where there is risk of exposure to Silica dust, verify employees are properly trained on the applicable contents of this program, the project-specific ECP, and the applicable OSHA Standards (such as Hazard Communication). Ensure employees are provided appropriate PPE when conducting such work.**

COMPETENT PERSON AND/OR SITE MANAGER (SUPERINTENDENT, FOREMAN, ETC.)

- Make frequent and regular inspections of job sites, materials, and equipment to implement the written ECP.
- Identify existing and foreseeable Respirable Crystalline Silica hazards in the workplace and take prompt corrective measures to eliminate or minimize them.
- Notify the jobsite project manager and the project foreman of any deficiencies identified during inspections in order to coordinate and facilitate prompt corrective action.
- Assist the jobsite project manager and the project foreman in conducting job site assessments for Silica containing materials and perform employee Respirable Crystalline Silica hazard assessments in order to determine if an ECP, exposure monitoring, and medical surveillance is necessary.

EMPLOYEES

- Follow recognized work procedures (such as the Construction Tasks identified in OSHA's Construction Standard Table 1) as established in the project's ECP and this program.
- Use the assigned PPE in an effective and safe manner.
- Participate in Respirable Crystalline Silica exposure monitoring and the medical surveillance program.
- Report any unsafe conditions or acts to the Site Manager and/or Competent Person.
- Report any exposure incidents or any signs or symptoms of Silica illness.

DEFINITIONS

If a definition is not listed in this section, please contact your supervisor. If your supervisor is unaware of what the term means, please contact the Competent Person or your Safety Department.

- **Action Level means a concentration of airborne Respirable Crystalline Silica of 25 μg/m^3, calculated as an 8-hour TWA.**

- **Competent Person means an individual who is capable of identifying existing and foreseeable Respirable Crystalline Silica hazards in the workplace and who has authorization to take prompt corrective measures to eliminate or minimize them.**

- **Employee Exposure means the exposure to airborne Respirable Crystalline Silica that would occur if the employee were not using a respirator.**

- **High-Efficiency Particulate Air (HEPA) Filter means a filter that is at least 99.97 percent efficient in removing monodispersed particles of 0.3 micrometers in diameter.**

- **Objective Data means information, such as air monitoring data from industry-wide surveys or calculations based on the composition of a substance, demonstrating employee exposure to Respirable Crystalline Silica associated with a particular product or material or a specific process, task, or activity. The data must reflect workplace conditions closely resembling or with a higher exposure potential than the processes, types of material, control methods, work practices, and environmental conditions in the employer's current operations.**

- **Permissible Exposure Limit (PEL) means the employer shall ensure that no employee is exposed to an airborne concentration of Respirable Crystalline Silica in excess of 50 μg/m^3, calculated as an 8-hour TWA.**

- **Physician or Other Licensed Health Care Professional (PLHCP) means an individual whose legally permitted scope of practice (i.e., license, registration, or certification) allows him or her to independently provide or be delegated the responsibility to provide some or all of the particular health care services required by the**

Medical Surveillance Section of the OSHA Respirable Crystalline Silica Standard.

- Respirable Crystalline Silica means Quartz, Cristobalite, and/or Tridymite contained in airborne particles that are determined to be respirable by a sampling device designed to meet the characteristics for respirable-particle size- selective samplers specified in the International Organization for Standardization (ISO) 7708:1995: Air Quality-Particle Size Fraction Definitions for Health-Related Sampling.

- Specialist means an American Board Certified Specialist in Pulmonary Disease or an American Board Certified Specialist in Occupational Medicine.

REQUIREMENTS

SPECIFIED EXPOSURE CONTROL METHODS

When possible and applicable, Northwest Kent Mechanical will conduct activities with potential Silica exposure to be consistent with OSHA's Construction Standard Table 1. Supervisors will ensure each employee under their supervision and engaged in a task identified on OSHA's Construction Standard Table 1 have fully and properly implemented the engineering controls, work practices, and respiratory protection specified for the task on Table 1 (unless Northwest Kent Mechanical has assessed and limited the exposure of the employee to Respirable Crystalline Silica in accordance with the Alternative Exposure Control Methods Section of this program).

The task(s) being performed by Northwest Kent Mechanical identified on OSHA's Construction Standard Table 1 is/are: Select any/all of the following that apply:

Table 1: Specified Exposure Control Methods When Working With Materials Containing Crystalline Silica

Construction Task or Equipment Operation		Engineering and Work Practice Control Methods	Required Respiratory Protection	
			≤ 4 hours/ shift	>4 hours/ shift
2a	Handheld power saws (any blade diameter) when used outdoors	• Use saw equipped with integrated water delivery system that continuously feeds water to the blade. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	N95 (or Greater Efficiency) Filtering Facepiece or Half Mask
6	Rig-mounted core saws or drills	• Use tool equipped with integrated water delivery system that supplies water to cutting surface. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None
7	Handheld and stand-mounted drills (including impact and rotary hammer drills)	• Use drill equipped with commercially available shroud or cowling with dust collection system. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. • Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99%	None	None

Construction Task or Equipment Operation		Engineering and Work Practice Control Methods	Required Respiratory Protection	
			≤ 4 hours/ shift	>4 hours/ shift
		or greater efficiency and a filter-cleaning mechanism. • Use a HEPA-filtered vacuum when cleaning holes.		
11	Handheld grinders for mortar removal (i.e., tuckpointing)	• Use grinder equipped with commercially available shroud and dust collection system. • Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. • Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism.	N95 (or Greater Efficiency) Filtering Facepiece or Half Mask	Powered Air-Purifying Respirator (PAPR) with P100 Filters
18a	Heavy equipment and utility vehicles for tasks such as grading and excavating but not including demolishing, abrading, or fracturing silica-containing	• Apply water and/or dust suppressants as necessary to minimize dust emissions.	None	None

Construction Task or Equipment Operation		Engineering and Work Practice Control Methods	Required Respiratory Protection	
			≤ 4 hours/ shift	>4 hours/ shift
	materials			
18b	Heavy equipment and utility vehicles for tasks such as grading and excavating but not including demolishing, abrading, or fracturing silica-containing materials	• When the equipment operator is the only employee engaged in the task, operate equipment from within an enclosed cab.	None	None

When implementing the control measures specified in Table 1, Northwest Kent Mechanical shall:

- For tasks performed indoors or in enclosed areas, provide a means of exhaust as needed to minimize the accumulation of visible airborne dust;
- For tasks performed using wet methods, apply water at flow rates sufficient to minimize release of visible dust;
- For measures implemented that include an enclosed cab or booth, ensure that the enclosed cab or booth:
    - Is maintained as free as practicable from settled dust;
    - Has door seals and closing mechanisms that work properly;
    - Has gaskets and seals that are in good condition and working properly;

- Is under positive pressure maintained through continuous delivery of fresh air;
- Has intake air that is filtered through a filter that is 95% efficient in the 0.3-10.0 μm range (e.g., MERV-16 or better); and
- Has heating and cooling capabilities.

- Where an employee performs more than one task included on OSHA's Construction Standard Table 1 during the course of a shift, and the total duration of all tasks combined is more than four hours, the required respiratory protection for each task is the respiratory protection specified for more than four hours per shift. If the total duration of all tasks on Table 1 combined is less than four hours, the required respiratory protection for each task is the respiratory protection specified for less than four hours per shift.

ALTERNATIVE CONTROL METHODS

Alternative Exposure Control Methods apply for tasks not listed in OSHA's Construction Standard Table 1, or where Northwest Kent Mechanical cannot not fully and properly implement the engineering controls, work practices, and respiratory protection described in Table 1.

First, Northwest Kent Mechanical will assess the exposure of each employee who is or may reasonably be expected to be exposed to Respirable Crystalline Silica at or above the Action Level in accordance with either the Performance Option or the Scheduled Monitoring Option.

- **Performance Option**
  - Northwest Kent Mechanical will assess the 8-hour TWA exposure for each employee on the basis of any combination of air monitoring data or objective data sufficient to accurately characterize employee exposures to Respirable Crystalline Silica.

- **Scheduled Monitoring Option:**
    - Northwest Kent Mechanical will perform initial monitoring to assess the 8-hour TWA exposure for each employee on the basis of one or more personal breathing zone air samples that reflect the exposures of employees on each shift, for each job classification, and in each work area. Where several employees perform the same tasks on the same shift and in the same work area, Northwest Kent Mechanical will plan to monitor a representative fraction of these employees. When using representative monitoring, Northwest Kent Mechanical will sample the employee(s) who are expected to have the highest exposure to Respirable Crystalline Silica.
    - If initial monitoring indicates that employee exposures are below the Action Level, Northwest Kent Mechanical will probably discontinue monitoring for those employees whose exposures are represented by such monitoring.
    - Where the most recent exposure monitoring indicates that employee exposures are at or above the Action Level but at or below the PEL, Northwest Kent Mechanical will repeat such monitoring within six months of the most recent monitoring.
    - Where the most recent exposure monitoring indicates that employee exposures are above the PEL, Northwest Kent Mechanical will repeat such monitoring within three months of the most recent monitoring.
    - Where the most recent (non-initial) exposure monitoring indicates that employee exposures are below the Action Level, Northwest Kent Mechanical will repeat such monitoring within six months of the most recent monitoring until two consecutive measurements, taken seven or more days apart, are below the Action Level, at which time Northwest Kent Mechanical will probably discontinue monitoring for those employees whose exposures are represented by such monitoring, except when a reassessment is required. Northwest Kent Mechanical will reassess exposures whenever a change in the production, process, control equipment, personnel, or work practices may reasonably be expected to result in new or additional exposures at or above the Action Level, or when Northwest Kent Mechanical has any reason to believe that new or additional exposures at or above the Action Level have occurred.

Northwest Kent Mechanical will ensure that all Respirable Crystalline Silica samples taken to satisfy the monitoring requirements of this program and OSHA are collected by a qualified individual (i.e. a Certified Industrial Hygienist) and the samples are evaluated by a qualified laboratory (i.e. accredited to ANS/ISO/IEC Standard 17025:2005 with respect to Crystalline Silica analyses by a body that is compliant with ISO/IEC Standard 17011:2004 for implementation of quality assessment programs).

Within five working days after completing an exposure assessment, Northwest Kent Mechanical will individually notify each affected employee in writing of the results of that assessment or post the results in an appropriate location accessible to all affected employees.

Whenever an exposure assessment indicates that employee exposure is above the PEL, Northwest Kent Mechanical will describe in the written notification the corrective action being taken to reduce employee exposure to or below the PEL.

Where air monitoring is performed, Northwest Kent Mechanical will provide affected employees or their designated representatives an opportunity to observe any monitoring of employee exposure to Respirable Crystalline Silica. When observation of monitoring requires entry into an area where the use of protective clothing or equipment is required for any workplace hazard, Northwest Kent Mechanical will provide the observer with protective clothing and equipment at no cost and shall ensure that the observer uses such clothing and equipment.

Once air monitoring has been performed, Northwest Kent Mechanical will determine its method of compliance based on the monitoring data and the hierarchy of controls. Northwest Kent Mechanical will use engineering and work practice controls to reduce and maintain employee exposure to Respirable Crystalline Silica to or below the PEL, unless Northwest Kent Mechanical can demonstrate that such controls are not feasible. Wherever such feasible engineering and work practice controls are not sufficient to reduce employee exposure to or below the PEL, Northwest Kent Mechanical will nonetheless use them to reduce employee exposure to the lowest feasible level and shall supplement them with the use of respiratory protection.

In addition to the requirements of this program, Northwest Kent Mechanical will comply with other programs and OSHA standards (such as 29 CFR 1926.57 [Ventilation]), when applicable where abrasive blasting is conducted using Crystalline Silica-containing blasting agents, or where abrasive blasting is conducted on substrates that contain Crystalline Silica.

CONTROL METHODS

Northwest Kent Mechanical will provide control methods that are either consistent with Table 1 or otherwise minimize worker exposures to Silica. These exposure control methods can include engineering controls, work practices, and respiratory protection. Listed below are control methods to be used when Table 1 is not followed:

RESPIRATORY PROTECTION

Where respiratory protection is required by this program, Northwest Kent Mechanical will provide each employee an appropriate respirator that complies with the requirements of the company's Respiratory Protection Program and the OSHA Respiratory Protection Standard (29 CFR 1910.134).

Respiratory protection is required where specified by the OSHA Construction Standard Table 1, for tasks not listed in Table 1, or where the company has not fully and properly implemented the engineering controls, work practices, and respiratory protection described in Table 1. Situations requiring respiratory protection include:

- Where exposures exceed the PEL during periods necessary to install or implement feasible engineering and work practice controls;

- Where exposures exceed the PEL during tasks, such as certain maintenance and repair tasks, for which engineering and work practice controls are not feasible; and

- During tasks for which an employer has implemented all feasible engineering and work practice controls and such controls are not sufficient to reduce exposures to or below the PEL.

HOUSEKEEPING

Northwest Kent Mechanical does not allow dry sweeping or dry brushing where such activity could contribute to employee exposure to Respirable Crystalline Silica unless wet sweeping, HEPA-filtered vacuuming, or other methods that minimize the likelihood of exposure are not feasible.

Northwest Kent Mechanical does not allow compressed air to be used to clean clothing or surfaces where such activity could contribute to employee exposure to Respirable Crystalline Silica unless:

- The compressed air is used in conjunction with a ventilation system that effectively captures the dust cloud created by the compressed air.
- No alternative method is feasible.

WRITTEN EXPOSURE CONTROL PLAN

When employee exposure on a construction project is expected to be at or above the Action Level, a Written Exposure Control Plan (ECP) will be established and implemented. This ECP will contain at least the following elements:

- A description of the tasks in the workplace that involve exposure to Respirable Crystalline Silica;
- A description of the engineering controls, work practices, and respiratory protection used to limit employee exposure to Respirable Crystalline Silica for each task;
- A description of the housekeeping measures used to limit employee exposure to Respirable Crystalline Silica; and
- A description of the procedures used to restrict access to work areas, when necessary, to minimize the number of employees exposed to Respirable Crystalline Silica and their level of exposure, including exposures generated by other employers or sole proprietors.

The written ECP will designate a Competent Person to make frequent and regular inspections of job sites, materials, and equipment to ensure the ECP is implemented.

The written ECP will be reviewed at least annually to evaluate the effectiveness of it and update it as necessary. Having said this, ECP's are project specific and most project durations do not exceed a year. The written ECP will be readily available for examination and copying, upon request, to each employee covered by this program and/or ECP, their designated representatives, and OSHA.

MEDICAL SURVEILLANCE

Medical surveillance will be made available for each employee who will be required to use a respirator for 30 or more days per year due to their Respirable Crystalline Silica exposure. Medical surveillance (i.e. medical examinations and procedures) will be performed by a PLHCP and provided at no cost to the employee at a reasonable time and place.

Northwest Kent Mechanical will make available an initial (baseline) medical examination within 30 days after initial assignment, unless the employee has received a medical examination that meets the requirements of the OSHA Respirable Crystalline Silica Construction Standard within the last three years. The examination shall consist of:

- A medical and work history, with emphasis on past, present, and anticipated exposure to Respirable Crystalline Silica, dust, and other agents affecting the respiratory system in addition to any history of respiratory system dysfunction, including signs and symptoms of respiratory disease (e.g., shortness of breath, cough, wheezing), history of tuberculosis, and smoking status and history;

- A physical examination with special emphasis on the respiratory system;

- A chest X-ray (a single postero-anterior radiographic projection or radiograph of the chest at full inspiration recorded on either film [no less than 14 x 17 inches and no more than 16 x 17 inches] or digital radiography systems) interpreted and classified according to the International Labour Office (ILO) International Classification of Radiographs of Pneumoconiosis by a NIOSH-certified B Reader;

- A pulmonary function test to include forced vital capacity (FVC) and forced expiratory volume in one second (FEV1) and FEV1/FVC ratio, administered by a spirometry technician with a current certificate from a NIOSH-approved spirometry course;

- Testing for latent tuberculosis infection; and

- Any other tests deemed appropriate by the PLHCP.

Northwest Kent Mechanical will make available medical examinations that include the aforementioned procedures (except testing for latent tuberculosis infection) at least every three years. If recommended by the PLHCP, periodic examinations can be more frequently than every three years.

Northwest Kent Mechanical will ensure that the examining PLHCP has a copy of the OSHA Respirable Crystalline Silica Construction Standard, this program, and the following information:

- A description of the employee's former, current, and anticipated duties as they relate to the employee's occupational exposure to Respirable Crystalline Silica;

- The employee's former, current, and anticipated levels of occupational exposure to Respirable Crystalline Silica;

- A description of any personal protective equipment (PPE) used or to be used by the employee, including when and for how long the employee has used or will use that equipment; and

- Information from records of employment-related medical examinations previously provided to the employee and currently within the control of Northwest Kent Mechanical.

Northwest Kent Mechanical will ensure that the PLHCP explains to the employee the results of the medical examination and provides each employee with a written medical report within 30 days of each medical examination performed. The written report shall contain:

- A statement indicating the results of the medical examination, including any medical condition(s) that would place the employee at increased risk of material impairment to health from exposure to Respirable Crystalline Silica and any medical conditions that require further evaluation or treatment;

- Any recommended limitations on the employee's use of respirators;

- Any recommended limitations on the employee's exposure to Respirable Crystalline Silica; and;

- A statement that the employee should be examined by a Specialist if the chest X-ray is classified as 1/0 or higher by the B Reader, or if referral to a Specialist is otherwise deemed appropriate by the PLHCP.

Northwest Kent Mechanical will also obtain a written medical opinion from the PLHCP within 30 days of the medical examination. The written opinion shall contain only the following in order to protect the employee's privacy:

- The date of the examination;

- A statement that the examination has met the requirements of the OSHA Respirable Crystalline Silica Construction Standard; and

- Any recommended limitations on the employee's use of respirators.

If the employee provides written authorization, the written opinion shall also contain either or both of the following:

- Any recommended limitations on the employee's exposure to Respirable Crystalline Silica; and/or

- A statement that the employee should be examined by a Specialist if the chest X-ray is classified as 1/0 or higher by the B Reader, or if referral to a Specialist is otherwise deemed appropriate by the PLHCP.

If the PLHCP's written medical opinion indicates that an employee should be examined by a Specialist, Northwest Kent Mechanical will make available a medical examination by a Specialist within 30 days after receiving the PLHCP's written opinion. Northwest Kent Mechanical will ensure that the examining Specialist is provided with all of the information that the employer is obligated to provide to the PLHCP.

Northwest Kent Mechanical will ensure that the Specialist explains to the employee the results of the medical examination and provides each employee with a written medical report within 30 days of the examination. The written report will contain:

- A statement indicating the results of the medical examination, including any medical condition(s) that would place the employee at increased risk of material impairment to health from exposure to Respirable Crystalline Silica and any medical conditions that require further evaluation or treatment;

- Any recommended limitations on the employee's use of respirators; and

- Any recommended limitations on the employee's exposure to respirable crystalline Silica.

In addition, Northwest Kent Mechanical will obtain a written opinion from the Specialist within 30 days of the medical examination. The written opinion shall contain the following:

- The date of the examination;

- Any recommended limitations on the employee's use of respirators; and

- If the employee provides written authorization, the written opinion shall also contain any recommended limitations on the employee's exposure to Respirable Crystalline Silica.

HAZARD COMMUNICATION

Northwest Kent Mechanical will include Respirable Crystalline Silica in the company's Hazard Communication Program established to comply with the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Northwest Kent Mechanical will ensure that each employee has access to labels on containers of Crystalline Silica and those containers respective Safety Data Sheets (SDS's).

All employees will be trained in accordance with the provisions of the OSHA Hazard Communication Standard and the Training Section of this program. This training will cover concerns relating to cancer, lung effects, immune system effects, and kidney effects.

Northwest Kent Mechanical will ensure that each employee with the potential to be exposed at or above the Action Level for Respirable Crystalline Silica can demonstrate knowledge and understanding of at least the following:

- **The health hazards associated with exposure to Respirable Crystalline Silica;**
- **Specific tasks in the workplace that could result in exposure to Respirable Crystalline Silica;**
- **Specific measures Northwest Kent Mechanical has implemented to protect employees from exposure to Respirable Crystalline Silica, including engineering controls, work practices, and respirators to be used;**
- **The contents of the OSHA Respirable Crystalline Silica Construction Standard;**
- **The identity of the Competent Person designated by Northwest Kent Mechanical; and**
- **The purpose and a description of the company's Medical Surveillance Program.**

Northwest Kent Mechanical will make a copy of the OSHA Respirable Crystalline Silica Construction Standard readily available without cost to any employee who requests it.

RECORDKEEPING

Northwest Kent Mechanical will make and maintain an accurate record of all exposure measurements taken to assess employee exposure to Respirable Crystalline Silica. This record will include at least the following information:

- The date of measurement for each sample taken;
- The task monitored;
- Sampling and analytical methods used;
- Number, duration, and results of samples taken;
- Identity of the laboratory that performed the analysis;
- Type of personal protective equipment (PPE), such as respirators, worn by the employees monitored; and
- Name, social security number, and job classification of all employees represented by the monitoring, indicating which employees were actually monitored.

Northwest Kent Mechanical will ensure that exposure records are maintained and made available in accordance with 29 CFR 1910.1020. Exposure records will be kept for at least 30 years.

The employer shall make and maintain an accurate record of all objective data relied upon to comply with the requirements of the OSHA Respirable Crystalline Silica Construction Standard. This record shall include at least the following information:

- The Crystalline Silica-containing material in question;
- The source of the objective data;
- The testing protocol and results of testing;
- A description of the process, task, or activity on which the objective data were based; and
- Other data relevant to the process, task, activity, material, or exposures on which the objective data were based.

Northwest Kent Mechanical will ensure that objective data are maintained and made available in accordance with 29 CFR 1910.1020. Objective data records will be kept for at least 30 years.

Northwest Kent Mechanical will make and maintain an accurate record for each employee enrolled in the Medical Surveillance portion of this program. The record shall include the following information about the employee:

- Name and social security number;
- A copy of the PLHCPs' and/or Specialists' written medical opinions; and
- A copy of the information provided to the PLHCPs and Specialists.

Northwest Kent Mechanical will ensure that medical records are maintained and made available in accordance with 29 CFR 1910.1020. Medical records will be kept under lock and key for at least the duration of employment plus 30 years. It is necessary to keep these records for extended periods because Silica-related diseases such as cancer often cannot be detected until several decades after exposure. However, if an employee works for an employer for less than one year, the employer does not have to keep the medical records after employment ends, as long as the employer gives those records to the employee.

PROGRAM EVALUATION

This program will be reviewed and evaluated on an annual basis by Northwest Kent Mechanical unless changes to operations, the OSHA Respirable Crystalline Silica Construction Standard (29 CFR 1926.1153), or another applicable OSHA Standard require an immediate re-validation of this program.

APPLICABLE FORMS

The following lists applicable forms relating to this program.

APPENDICES

APPENDIX A - Written Exposure Control Plan (ECP) template

Northwest Kent Mechanical Employee Disciplinary Policy

DISCIPLINARY ACTION POLICY

Violation of any policies and procedures of this handbook may result in disciplinary action. When performance problems occur, the usual steps of disciplinary action undertaken by the Company may be a verbal warning, written warning, and ultimately, termination of employment. Employees may also receive a suspension, in appropriate circumstances, as a final disciplinary action prior to termination. Furthermore, if you engage in misconduct deemed to be serious enough by the Company it may, in its sole discretion, subject you to immediate suspension and/or termination without the administration of other, less severe discipline. The Company also reserves the right to discipline any offense not specifically enumerated in these rules in a manner commensurate with the seriousness of the offense.

Employees who violate any of these rules or any aspect of the safety and health policies presented in this document may be disciplined, up to and including discharge, under the Company's general discipline policy directly above.

Note: Hazardous materials will be properly labeled, and employees will be trained with respect to the safe utilization of those materials. The Company also maintains "Safety Data Sheets" (SDS) with respect to those materials used/stored on site, and employees may review those SDS at any time. If you have any questions about the Company's hazardous materials policy, please contact your supervisor.

IF THERE ARE ANY QUESTIONS OR CONCERNS ABOUT WHAT TYPES OF ACTIONS MAY RESULT IN DISCIPLINARY ACTIONS TAKEN BY NORTHWEST KENT MECHANICAL PLEASE REFERENCE THE COMPANY EMPLOYEE HANDBOOK YOU RECEIVED OR ASK TO SEE A COPY OF THE EMPLOYEE HANDBOOK IN THE OFFICE

RESPIRABLE CRYSTALLINE SILICA

MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
WEAR RESPIRATORY PROTECTION IN THIS AREA

AUTHORIZED PERSONNEL ONLY

CONFINED SPACE
AUTHORIZED PERSONNEL ONLY