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SAFETY POLICY & PROCEDURE

Safety Manual

100-SM-001
Revision 2

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Issue Authorization

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Caring Connects

At **MISTRAS**, we're a team **connected by a common thread of caring** – about one another, our customers, the environment, and the work we do.

We see it as our responsibility to look out for one another, by **fostering a culture of togetherness, safety, respect, and contribution** which enables each individual member to feel that they're a part of something bigger.

Safety and health are an integral part of all our activities. We believe that all safety incidents are preventable if the proper care measures are taken.

MISTRAS Expectations:

- Role model and teach all MISTRAS safety processes / approaches
- Intervene if you see any unsafe action or situation
- Look out for your coworker's safety, and care enough to say something if you can see a better way
- Remember Caring is making sure everyone goes home in the same condition as they arrived

1.0 General Policy Statement

It is the policy of MISTRAS Group, Inc., and this Injury and Illness Prevention Program (IIPP) to provide a safe and healthful place of employment for all employees. It is the purpose of this policy to:

- 1.1 Abide by all Federal, State, and Local regulations as they pertain to the general industry and construction standards 29 CFR 1910 and 1926.
- 1.2 Apply good sense and safe practices as dictated by locations, conditions, and circumstances to all jobs.
- 1.3 Exercise good judgment in the application of this policy

2.0 Responsibilities

2.1 MISTRAS Management shall:

- 2.1.1 Establish rules and programs designed to promote safety.
- 2.1.2 Make known to all employees the rules established.
- 2.1.3 Require all contractors and subcontractors, as a matter of contract, to follow safety rules.
- 2.1.4 Encourage all prime contractors and subcontractors to work safely.
- 2.1.5 Record all instances of violations and investigate all accidents.
- 2.1.6 Discipline any employee willfully disregarding this policy.
- 2.1.7 Provide protective equipment for employees, where required.
- 2.1.8 Inform employees of changes in safety rules.
- 2.1.9 Appoint a safety officer with full enforcement authority over safety matters.
- 2.1.10 Conduct safety inspections of all jobsites and maintain records.
- 2.1.11 Provide all supervisors with copies of appropriate rules and regulations.
- 2.1.12 In order to monitor the compliance and effectiveness of this manual, make revisions as necessary of this manual and follow up on any reports concerning health, safety, and accident prevention.
- 2.1.13 The Corporate Safety Director and Human Resources will be responsible for enforcement of disciplinary actions.

- 2.2 MISTRAS General and Operational Managers shall:
 - 2.2.1 Be completely responsible for on-the-job safety health.
 - 2.2.2 Ensure proper safety materials and protective devices are available.
 - 2.2.3 Review all incidents, oversee correction of all unsafe practices, and file incident reports.
 - 2.2.4 Require conformance to safety standards from all subcontractors.
- 2.3 MISTRAS Lab Supervisors/Managers shall:
 - 2.3.1 Ensure safety materials and devices are in safe working order and used.
 - 2.3.2 Notify office of ALL safety violations.
 - 2.3.3 Provide all employees under their direction proper instructions of safety requirements.
 - 2.3.4 Keep records of weekly Toolbox Talks.
- 2.4 MISTRAS Services Job Safety Coordinator shall:
 - 2.4.1 Work with the Lab Supervisor in correcting jobsite hazards.
 - 2.4.2 Make periodic safety inspections (see Attachment 1) and correct or initiate corrective procedures for problems discovered.
 - 2.4.3 Follow all other safety requirements in the performance of other assigned duties.
 - 2.4.4 Take advantage of offered safety training and be aware of all safety rules.
 - 2.4.5 Instruct Lab Supervisors in safety requirements and ensure they pass on their instruction to their crews.
- 2.5 MISTRAS Services Project Supervisors and Lead Technicians shall:
 - 2.5.1 Carry out safety program at work level.
 - 2.5.2 Be aware of all safety requirements and safe working practices.
 - 2.5.3 Report all injuries and safety violations to Lab Supervisor.
 - 2.5.4 Instruct new employees and existing employees performing new tasks in safe working practices.
 - 2.5.5 Ensure protective equipment is available and used.
 - 2.5.6 Secure prompt medical attention for any injured employee.
 - 2.5.7 Ensure all work is performed in a safe manner and no unsafe conditions or equipment are present.
 - 2.5.8 Provide crew with proper instruction on safety requirements.
 - 2.5.9 Conduct weekly Toolbox Talks.
- 2.6 MISTRAS Technicians shall:
 - 2.6.1 Work safely.
 - 2.6.2 Request help when unsure how to perform any task safely.
 - 2.6.3 Report all unsafe acts to supervision.
 - 2.6.4 Work in such a manner as to ensure their safety as well as that of their coworkers.
 - 2.6.5 Avail themselves of company and industry sponsored safety programs.
 - 2.6.6 Use and maintain all safety devices provided to them.
 - 2.6.7 Maintain and properly use all tools under their control.

- 2.6.8 Follow all safety rules.
 - 2.6.9 Provide fellow employees help with safety requirements.
 - 2.6.10 Report for work in clothing suitable for work and in such a manner that clothes and jewelry worn will not constitute a safety hazard.
 - 2.6.11 Perform their work in a safe and alert manner and be aware of the possibility of unseen danger or situations. Employees are not expected to sacrifice their own or others' safety to perform their duties.
- 2.7 New Hires of MISTRAS shall:
- All new employees will be instructed about MISTRAS safety policies and will be given a copy of our Injury and Illness Prevention Program (IIPP). Each employee will receive training on the use and content of the IIPP. An acknowledgement of receiving the IIPP will be signed by each employee and retained on file.
- 2.8 Subcontractors and Suppliers of MISTRAS shall:
- 2.8.1 Abide by all safety rules of MISTRAS, the owner, and other contractors.
 - 2.8.2 Notify all other contractors when actions or activities undertaken by them could affect health or safety of employees of other companies.
 - 2.8.3 Check in with jobsite supervision before entering jobsite.
 - 2.8.4 Inform MISTRAS of all injuries to workers.
 - 2.8.5 Report to MISTRAS any unsafe condition that comes to their attention.
 - 2.8.6 Make available to MISTRAS a copy of their own IIPP manual for verification of compliance prior to commencing any work for MISTRAS.
- 2.9 Visitors on MISTRAS premises shall:
- 2.9.1 Abide by all safety rules.
 - 2.9.2 Check in with Lab Supervisors so protective equipment may be provided such as hardhats and/or eye and respirator protection.
 - 2.9.3 Refrain from entering construction areas without first contacting the Lab Supervisor.
- 2.10 All Personnel shall:
- 2.10.1 Strive to make all operations safe.
 - 2.10.2 Maintain mental and physical health conducive to working safely.
 - 2.10.3 Keep all work areas clean and free of debris.
 - 2.10.4 Assess result of their actions on the entire workplace.
 - 2.10.5 Replace or repair safety precautions removed or altered before leaving work area. Unsafe conditions will not be left to imperil others.
 - 2.10.6 Abide by the safety rules and regulations of owners on their sites.
 - 2.10.7 Work in strict conformance with OSHA and/or state regulations.
 - 2.10.8 Report promptly to supervision all incidents and injuries observed whether involving MISTRAS personnel or others.

3.0 Problem Solving Procedure

3.1 To have an effective safety program, we will communicate both up and down corporate structure. When a safety problem arises, everyone, even the least senior and experienced employee, has a responsibility to coworkers and the company to report or correct any hazardous conditions found. Every employee's concerns will be heard and each situation will be corrected or a valid explanation tendered.

3.2 Safety Problem Solving

It is the attempt of MISTRAS to provide a safe workplace for all employees. Supervisory personnel have been instructed to watch for and correct all unsafe conditions immediately. Facility work areas and construction sites are complex and items are easily overlooked. It is important that all employees be on the lookout for unsafe conditions. If you observe a condition that is unsafe, the following actions are to be taken:

- 3.2.1 If possible, correct the condition immediately. Many safety hazards (like a piece of missing guardrail) are easy to correct.
- 3.2.2 If you are not able to take corrective action, report the condition to your immediate supervisor for correction.
- 3.2.3 Should you wish to remain anonymous throughout this reporting process, the form contained in Attachment 4 does not require any personal information.
- 3.2.4 All MISTRAS employees with any supervisory responsibility have been instructed to take corrective action or contact someone who can when a safety concern is raised. In the event corrective action is not begun in a reasonable length of time, the employee is requested to contact the Corporate Safety Director.

4.0 Disciplinary Procedures

Disciplinary actions will be taken in accordance with MISTRAS' Disciplinary Program. The following is an example of the progression that may take place in the event action is necessary.

- 4.1 Nothing in this policy prevents the immediate dismissal or removal from the jobsite of any employee or subcontractor whose conduct is a serious violation of the safety requirements and constitutes a grave danger to themselves, coworkers, property, equipment, or the employees of others.
- 4.2 For minor first instance violations:
 - 4.2.1 Immediate correction, if applicable.
 - 4.2.2 Verbal warning, documented in the supervisor's log.
- 4.3 For minor second instance violations of the same safety requirement:
 - 4.3.1 Immediate correction, if applicable.
 - 4.3.2 Written warning with a copy to the Corporate Safety Director and Lab Supervisor/Manager.
 - 4.3.3 Copy to the employee's file.
- 4.4 For third minor violation of the same safety requirement:
Immediate dismissal.
- 4.5 For more than three (3) verbal warnings for minor violations of different safety requirements:
 - 4.5.1 Immediate correction.
 - 4.5.2 Written warning with a copy to the Corporate Safety Director and Lab Supervisor/Manager.
 - 4.5.3 Copy to the employee's file.

- 4.6 For more than two (2) written warnings for minor violations of different safety requirements:
Immediate dismissal.

5.0 General Work Rules

This is not a complete list of all applicable safety rules. It is intended to provide general guidance and to be used where more specific work practice guides have not been issued.

5.1 Abrasive Grinding

Abrasive wheel bench or stand grinders must have safety guards strong enough to withstand bursting wheels. Adjust work rests on grinders to a clearance not to exceed 1/8-inch in between rest and wheel surface. Adjust tongue guard to a clearance not to exceed ¼-inch between tongue guard and wheel surface. Inspect and ring test abrasive wheels before mounting. Always leave wheel in working condition for next user. Properly dress wheel before using and/or when finished.

5.2 Alcohol and Controlled Substance Abuse

- 5.2.1 The use of alcohol and/or drugs can lead to impairment of judgment and skills and result in a serious injury or accident. One (1) of the purposes of the Fitness for Duty Alcohol & Drug Abuse Program is to prevent any accident from occurring due to the use of alcohol and/or drugs.
- 5.2.2 The use of alcohol or controlled substances during working hours on any MISTRAS project or at any MISTRAS facility shall be cause for immediate dismissal. Any individual who reports for work under the influence of alcohol or other controlled substance shall not be allowed to work.

See MISTRAS' Fitness for Duty and Anti-Drug and Alcohol-Misuse Prevention Plan for specific details.

5.3 Air Tools

Secure pneumatic tools to hose in a positive manner to prevent accidental disconnection. Install and maintain safety clips or retainers on pneumatic impact tools to prevent attachments from being accidentally expelled. All hoses exceeding ½-inch inside diameter require safety devices at source of supply to reduce pressure in case of hose failure.

5.4 Asbestos

- 5.4.1 No work involving contact with asbestos-containing material (ACM) will be performed without first contacting the General Manager for clearance to perform the work.
- 5.4.2 All work will be performed in accordance with applicable OSHA, EPA, and local regulations.
- 5.4.3 Workers suspecting that the operations of other contractors are releasing asbestos fibers into the work environment are requested to notify supervisory personnel of their suspicions immediately.
- 5.4.4 MISTRAS employees who may come in contact with ACM or presumed asbestos-containing material (PACM) are to receive asbestos awareness training.

5.5 Bloodborne Pathogens

- 5.5.1 The Bloodborne Pathogen Standard falls outside the scope of services provided by MISTRAS.
- 5.5.2 No employees are tasked with the responsibility of providing emergency or routine medical care, nor are employees tasked with responsibilities that may cause exposure during the performance of an employee's duties. Any action taken on the part of an employee to provide medical assistance will be considered as part of the "Good Samaritan Act". Therefore, in an effort to provide a safe workplace for its employees, MISTRAS will adopt a "General Awareness" as part of policy to ensure protection of employees from possible hazards associated with bloodborne pathogens.

5.6 Breathing Air Policy

- 5.6.1 This policy applies to self-contained and airline breathing equipment.
- 5.6.2 Candidates for work involving the wearing of a respirator must successfully complete a medical screening at a company designated facility. This screening will be focused on the candidates' ability to support respiratory equipment. A written report from the medical facility will be filed at MISTRAS.
- 5.6.3 Upon medical certification, candidates will receive training on the use, operation, and care of the selected respiratory equipment by qualified sources. After completion of this training to the supervisor's satisfaction, the candidate will be considered qualified in the use of the selected equipment. Proper selection of respiratory equipment is the responsibility of the MISTRAS supervisor. The supervisor shall ensure that the selected respirator is appropriate for the task and shall seek additional assistance when necessary.
- 5.6.4 The supply air shall be from bottled source or a common manifold. The quality of the air, proper selection, operation, and maintenance of the supply air system to the point of MISTRAS' connection, rests with the supplier.
- 5.6.5 New and/or retraining will be provided on an annual basis.
- 5.6.6 Medical recertification will be required on an annual basis.
- 5.6.7 A standby unit and qualified person will be stationed outside the hazardous work area and will be in communication with the workers in the hazardous area. Appropriate rescue equipment will be at the site and ready for use should the need arise.

5.7 Chains and Slings

Chains and slings shall not be mended. If it is damaged beyond the allowable working condition, dispose of it properly to make sure someone else doesn't use it in its damaged condition. All chains are to be tagged as to its rated load capacity. All chains and slings shall be routinely inspected before each use and on a monthly basis and recorded in a logbook for documentation.

5.8 Confined Spaces

- 5.8.1 Work shall not be performed in confined spaces unless the atmosphere has been properly tested and adequate ventilation is available.
- 5.8.2 No tank, underground sewer, or other confined enclosure shall be entered until MISTRAS has approved and posted an ENTRY PERMIT for the enclosure or has performed a hazard assessment of the customer's entry permit and program. MISTRAS management personnel in charge of the area shall be notified before entry and upon leaving the enclosure.
- 5.8.3 No ENTRY PERMIT will be issued until the confined space has been tested for flammable mixtures, toxicity limits, etc., and found to be safe for work with appropriate protective equipment according to MISTRAS' Confined Space Program.
- 5.8.4 ENTRY PERMITS will not be issued until all working tools, protective clothing, and equipment have been inspected and certified to be safe for work to be performed.

Refer to MISTRAS' Confined Space Procedure (100-SP-008) for specific details.

5.9 Compressed Air, Use of

- 5.9.1 Compressed air used for cleaning purposes may not exceed 30 psi and then only in conjunction with effective chip guarding and personal protective equipment (PPE). Exceptions to 30 psi are allowed only for concrete form, mill scale, and similar cleaning operations. The use of compressed air to clean off yourself or other workers is not allowed for any reason.

5.9.2 Goggles must be worn at all times when blowing with compressed air.

5.10 Compressed Gas Cylinders

5.10.1 Put valve protection caps in place before compressed gas cylinders are transported, moved, or stored. Cylinder valves will be closed when work is finished and when cylinders are empty or being moved.

5.10.2 Compressed gas cylinders will be secured in an upright position at all times. Keep cylinders a safe distance or shield from welding or cutting operations and place where they cannot become part of an electrical circuit. Oxygen and acetylene must not be stored together, empty or full.

5.10.3 Oxygen and fuel gas regulators must be in proper working order while in use.

5.11 Concrete, Concrete Forms, and Shoring

5.11.1 Do not work above vertically protruding reinforcing steel unless it has been protected to eliminate the hazard of impalement.

5.11.2 Formwork and shoring will be designed and constructed to safely support all loads imposed during concrete placement. Drawings or plans of jack layout, formwork, shoring, working decks, and scaffolding systems will be available at the jobsite.

5.12 Cranes or Derricks

5.12.1 Rated-load capacities, recommended operating speeds, and special hazard warnings or instructions must be visible from the operator's station.

5.12.2 Cranes will be inspected before each use by the operator. Any defects must be corrected before use. Logs of crane inspections must be kept with the crane.

5.12.3 Overhead cranes and jibs must be operated by trained personnel only. Lifting gear must be used properly to avoid damage to product, property, or personnel.

5.13 Crane Suspended Work Platforms

Work platforms suspended from cranes will be used only with the permission of the Lab Supervisor or Corporate Safety Director and then only in accordance with the current OSHA regulations regarding their use.

5.14 Disposal Chutes

5.14.1 Use an enclosed chute whenever materials are dropped more than 20 feet to any exterior point of a building.

5.14.2 When debris is dropped through floor holes without a chute, the area where the material is dropped must be enclosed with barricades at least 42 inches high and not less than 6 feet back from projected edges of opening above. Post warning signs at each level.

5.15 Electrical (General)

5.15.1 All extension cords must be 3-wire type, protected from damage, and should not be fastened with staples, hung from nails, or suspended from wires. No cord or tool with a damaged ground plug may be used. Worn or frayed cables may not be used. Electrical cords should be inspected periodically and kept in good condition.

5.15.2 Except where bulbs are deeply recessed in reflectors, bulbs on temporary lights will be equipped with guards. Temporary lights may not be suspended by their electrical cords unless so designed.

5.15.3 Receptacles for attachment plugs will be of approved, concealed contact type. Where different voltages, frequencies, or types of current are applied, receptacles must be located and arranged so purpose is evident.

- 5.15.4 Cable passing through work areas will be covered or elevated to protect from damage. Boxes with covers for disconnecting means must be securely and rigidly fastened to mounting surface.
- 5.15.5 No employee may work in proximity to any electric power circuit that may be contacted during course of work unless protected against electrical shock by de-energizing circuit and grounding it or by guarding with effective insulation. In work areas where exact location of underground electric power lines is unknown, workmen using jackhammers, bars, or other hand tools that may contact lines, must wear insulated protective gloves.
- 5.15.6 Do not store material or objects in front of control panel or switch boards.
- 5.15.7 Keep doors of all lighting panels, disconnect, and breaker boxes closed.
- 5.16 Electrical (Grounding)
 - 5.16.1 An equipment ground must be connected up prior to, and during, all electrical equipment testing.
 - 5.16.2 15- and 20-ampere receptacle outlets on single-phase, 120-volt circuits for construction sites that are not part of permanent wiring of the building or structure must be protected by either ground fault circuit interrupters or an assured equipment grounding conductor program.
 - 5.16.3 An assured equipment grounding conductor program covers all cord sets, receptacles that are not a part of the permanent wiring of the building or structure, and equipment connected by cord and plug.
 - 5.16.4 Inspect each cord set, attachment cap, plug, and receptacle of cord sets, and any equipment connected by cord and plug, except cord sets and receptacles that are fixed and not exposed to damage, before each day's use, for external defects and possible internal damage. Remove from service or repair immediately any defective items.
 - 5.16.5 Tests will be performed on all cord sets, receptacles that are not part of the permanent wiring of the building or structure, and cord and plug connected equipment required to be grounded.
 - 5.16.6 Grounding conductors will be tested for continuity. Each receptacle and attachment cap or plug will be tested for correct attachment of the equipment grounding conductor.
 - 5.16.7 Tests will be recorded. This test record must identify each receptacle, cord set, and cord and plug connected equipment that passed the test and will indicate the last date it was tested or the interval for which it was tested. No electrical tool or cord may be used unless it has been tested according to the company's assured grounding program. The concurrent-carrying metal parts of fixed portable and plug-connected equipment must be grounded except those protected by an approved system of double insulation. The path from circuits, equipment, structures, and conduit or enclosures to ground must be permanent and continuous and have ample current carrying capacity.
- 5.17 Employee Facilities
 - 5.17.1 Lockers

Personal belongings belong in lockers, not in work areas. Lockers should be cleaned out and inspected once a week by each employee to prevent unhealthy or unsanitary accumulations.
 - 5.17.2 Lunchroom Facility

Eating space, with adequate bottle and trash receptacles, shall be provided. Floors will be kept clean and free from litter. Smoking will be prohibited when it is a fire hazard, and "NO SMOKING" signs will be posted. Both eating and smoking will be prohibited in areas containing toxic materials.
 - 5.17.3 Toilet Facilities

Toilet facilities shall be well ventilated and well lit. There shall be adequate receptacles for disposal of towels. Floors, toilets, and lavatories shall be cleaned weekly and more often if necessary.

5.17.4 Aisles

Aisles shall be kept clear at all times and will not be used as storage spaces. Pedestrian traffic shall use the designated areas.

5.18 Equipment Lifting and Moving

5.18.1 Only equipment that can be lifted with the powered industrial forklift can be bolted to skids.

5.18.2 Band saw, stichers, and tapers are to be safety chained while moving.

5.18.3 All machines are to be skidded before moving. Machines 6 feet and taller must be safety chained while moving occurs.

5.18.4 Machines are not to be lifted off the floor higher than 24 inches.

5.18.5 During machine assembly, all parts power lifted more than 24 inches off the floor must be secured with safety chains. This is to include the man carrier.

5.18.6 All equipment must be picked up or put on rollers, not sliding on the floor.

5.18.7 A safety chain must be used when side loading a truck.

5.18.8 Employees with less than 4 months' experience cannot move or help move machines.

5.19 Equipment Operation

No employee will operate electric, gas, or hand-powered tools or equipment unless familiar with use of the item. Safety precautions are required. Supervision will provide necessary safety information for all tasks and equipment.

5.20 Evacuation Plan

5.20.1 It shall be the responsibility of the available management/supervision to direct evacuation of the building and verify all areas are free of employees in the event of a fire.

5.20.2 Employees shall exit through the nearest available safe and unencumbered exit and shall congregate in the employees' parking lot for accountability.

5.20.3 Management/supervision with employee assistance may attempt to extinguish the fire. Management/supervision shall notify the local fire department.

Refer to MISTRAS' Emergency Action and Fire Plan Procedure (100-SP-002).

5.21 Eye and Face Protection

5.21.1 Safety glasses shall be worn in compliance with the requirements of each specific job function. Jobs requiring grinding, chipping, sanding, or similar work functions or the handling of hazardous materials shall always require the use of face shields along with safety glasses. Safety glasses with side shields will be provide and must be worn, when applicable.

5.21.2 Face protection will be provided and must be worn on all construction sites and in the shop, when applicable.

5.21.3 Employees involved in welding operations must wear filter lenses or plates of the proper shade number.

5.21.4 Employees engaged in electric arc welding shall be required to use shields or helmets equipped with suitable filter lenses.

5.21.5 Employees engaged in oxyacetylene welding or cutting shall be required to wear goggles equipped with suitable filter lenses.

5.21.6 Where it is practicable, all welding, cutting, and/or grinding operations will be enclosed.

- 5.21.7 Employees exposed to laser beams must use suitable laser safety goggles that will protect for the specific wavelength of the laser and be optical density (O.D.) adequate for the energy involved.
 - 5.21.8 Goggles will be worn over any employee-owned prescription glasses that do not meet industrial safety standards.
- 5.22 Fire Protection
- 5.22.1 Firefighting equipment must be conspicuously located and readily accessible at all times and periodically inspected and maintained in operating condition. Report any inoperative or missing equipment to supervision.
 - 5.22.2 Fire extinguishers, rated not less than 2A, will be provided for each 3,000 square feet of building area (or major fraction). Travel distance from any point to the nearest fire extinguisher may not exceed 100 feet with at least one (1) extinguisher per floor. Know where the closest extinguisher is located to your work area.
 - 5.22.3 In multi-story buildings, at least one (1) fire extinguisher must be located adjacent to the stairway. Refer to MISTRAS' Emergency Action and Fire Plan Procedure (100-SP-002).
- 5.23 Flammable and Combustible Liquids
- 5.23.1 Only approved containers and portable tanks will be used for storage and handling of flammable and combustible liquids.
 - 5.23.2 No more than 60 gallons of flammable or 120 gallons of combustible liquids may be stored in any one (1) storage cabinet.
 - 5.23.3 No more than three (3) storage cabinets may be located in a single storage area. Inside storage rooms for flammable and combustible liquids must be of fire-resistive construction, with self-closing fire doors, 4-inch sills or depressed floors, a ventilation system of at least six (6) air changes per hour, and electrical wiring and equipment approved for Class I, Division I locations.
 - 5.23.4 Storage in containers outside buildings may not exceed 1,000 gallons in any one (1) pile or area. Grade storage areas to divert possible spills away from buildings or other exposures or surround with curb or dike. Locate storage areas at least 20 feet from any building and keep free from weeds, debris, and other combustible materials.
 - 5.23.5 Keep flammable liquids in closed containers when not in use.
 - 5.23.6 Post conspicuous and legible signs prohibiting smoking in service and refueling areas.
- 5.24 Floor Openings, Open Sides, Hatchways, etc.
- 5.24.1 Guard openings with standard guardrails and toe boards or cover. Provide railing on all exposed sides, except at entrances to stairways.
 - 5.24.2 Every open-sided floor or platform 6 feet or more above adjacent floor or ground level must be guarded by a standard railing, or equivalent, on all open sides except where there is entrance to a ramp, stairway, or fixed ladder.
 - 5.24.3 Runways 4 feet or more high need standard railings on all open sides.
 - 5.24.4 Guard ladderway floor openings or platforms with standard guardrails and standard toe boards on all exposed sides, except at the entrance to the opening, with passage through the railing provided by a swinging gate or offset so a person cannot walk directly onto the opening.
 - 5.24.5 Temporary floor openings will have standard railings or effective covers.

- 5.24.6 Floor holes into which persons can accidentally walk will be guarded by either a standard railing with standard toe boards on all exposed sides, or a standard floor hole cover.
- 5.24.7 While the cover is not in place, a standard railing will protect the floor hole.
- 5.25 Forklift Operation
- Only authorized personnel are allowed to operate powered industrial trucks (forklifts).
Refer to MISTRAS' Powered Industrial Truck Safety Procedure (100-SP-010).
- 5.26 Gases, Vapors, Fumes, Dusts, and Mists
- 5.26.1 Exposure to toxic gases, vapors, fumes, dusts, and mists at a concentration above those specified in the "Threshold Limit Values of Airborne Contaminants" of the ACGIH should be avoided.
- 5.26.2 When engineering and administrative controls are not feasible to achieve full compliance, protective equipment or other protective measures will be used to keep the exposure of employees to air contaminants within the limits prescribed. Any equipment and technical measures used for this purpose must be reviewed for each particular use by a technically qualified person. Employees will wear all furnished equipment at all times.
- 5.27 Grinding
- A face shield will be used over the safety glasses when grinding. A filter mask is required at all times when grinding.
- 5.28 Hand Tools
- 5.28.1 Employees will not use unsafe hand tools
- 5.28.2 Wrenches may not be used when jaws are sprung to the point slippage occurs. Keep impact tools free of mushroomed heads. Keep wooden tool handles free of splinters or cracks and tight in the tool.
- 5.28.3 Electric power operated tools will either be approved double insulated, be properly grounded, or used with ground fault circuit interrupters.
- 5.29 Hard Hats
- 5.29.1 Safety hats shall meet the requirements set forth by American National Standard Z89.1, Safety Requirements for Industrial Head Protection. No attempt should be made to repair the shell of a hat once it has been punctured or broken. Do not modify the hat in any way for this will destroy the ability of the hat to protect the wearer.
- 5.29.2 Hard hats will be worn at all times on construction sites.
- 5.29.3 Employees working in areas where there is a possible danger of head injury from impact or from falling or flying objects shall be protected by hardhats.
- 5.29.4 All overhead crane work will require the use of hardhats.
Refer to MISTRAS' PPE and Hazard Assessment Procedure (100-SP-006).
- 5.30 Hazard Communications
- 5.30.1 In accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200), MISTRAS is required to inform its employees and subcontractors of the hazardous chemicals they may be exposed to while performing their work and suggest appropriate protective measures.
- 5.30.2 All chemical containers brought onto the premises shall be labeled in accordance with OSHA requirements with:
- 1) Identity of chemical product

2) Appropriate hazard warning

5.30.3 Everyone must familiarize themselves with cleaning chemicals, their uses, disposal, and first aid.

Refer to MISTRAS’ Hazard Communication Program (100-HCP-001) that is provided for viewing of each employee for further details and training requirements.

5.31 Hearing Protection

5.31.1 Excessive noise shall be reduced whenever possible. Ear protection will be used only as the last resort. Hearing protection will be worn in areas where sound levels may exceed 85 decibels.

5.31.2 MISTRAS recommends hearing protection whenever exposed to loud noises for long periods of time.

Refer to MISTRAS’ Hearing Protection – Noise Awareness Procedure (100-SP-004).

5.32 Heat Stress Management

Refer to MISTRAS’ Heat Stress Management Procedure (100-SP-015).

5.33 Heating Devices (Temporary)

Fresh air must be present in sufficient quantities to maintain safety of workers. Solid fuel salamanders are prohibited in buildings and on scaffolds.

5.34 Hoists

5.34.1 A tag line or guide rope shall be used on all loads that swing freely and an experienced person shall control every guide rope.

5.34.2 Loads shall not be lifted or swung over the heads of persons and no one shall be permitted to walk under a load.

5.35 Hoists, Material, and Personnel

Rated load capacities, recommended operating speeds, and special hazard warnings or instructions posted on cards and platforms may not be exceeded. Substantial full width gates or bars will protect material hoistway entrances. Hoistway doors or gates or personnel hoists will not be less than 6 feet 6 inches high and be protected with mechanical locks that cannot be operated from the landing side and are accessible only to persons on the car. Overhead protective covering on the top of the hoist cage shall be provided.

5.36 Horseplay

Horseplay and practical jokes are not allowed and can result in immediate disciplinary action.

5.37 Housekeeping

5.37.1 Form and scrap lumber with protruding nails and all other debris will be kept clear from work areas. Remove combustible scrap and debris at regular intervals. Containers will be provided for collection and separation of all refuse. Covers are required on containers used for flammable or harmful substances.

5.37.2 At the end of each portion of work, return all tools and excess material to proper storage. Clean up all debris before moving on to the next phase.

5.38 Illumination

Construction areas should be lighted to not less than minimum illumination intensities listed while work is in progress.

Foot-Candles	Area of Operation
5	General construction area lighting. General construction areas, concrete placement, active storage areas, loading platforms, refueling, and field maintenance areas and stairways.
5	Indoor: warehouses, corridors, hallways, and exits.

Foot-Candles	Area of Operation
10	General construction plant and shops (e.g., batch plants, screening plants, mechanical and electrical equipment rooms, carpenter shops, rigging lofts, and active storerooms, mess halls, indoor toilets, and workrooms.

5.39 Ladders

- 5.39.1 The use of ladders with broken or missing rungs or steps, broken or split side rails, or with other faulty or defective construction is prohibited. When ladders with such defects are discovered, withdraw them from service immediately. Place portable ladders on a substantial base at a 4-1 pitch, have clear access at top and bottom, extend a minimum of 36 inches above landing, or where not practical, provide grab rails. Secure against movement while in use.
- 5.39.2 Portable metal ladders may not be used for electrical work or where they may contact electrical conductors.
- 5.39.3 Job-made ladders will be constructed for their intended use. Cleats will be inset into side rails ½-inch, or filler blocks used. Cleats will be uniformly spaced, 12 inches, top-to-top.
- 5.39.4 Never try to carry tools or equipment while ascending or descending a ladder. Both hands should be available for climbing. If tools or equipment are needed at different elevations, use a bucket or toolbox, and hoist them with a rope using caution not to overexert yourself to back strain.

5.40 Lasers

- 5.40.1 Only trained employees will be allowed to operate lasers. Employees will wear proper eye protection where there is a potential exposure to laser light greater than 0.005 watts (5 milliwatts).
- 5.40.2 Beam shutters or caps will be utilized, or laser turned off, when laser transmission is not actually required. When lasers are left unattended for a substantial period of time, turn them off.

5.41 Lifting and Carrying

- 5.41.1 When lifting bulky objects, use the following methods:
 - 1) To place an object on a bench or table: First set the object on edge and push it far enough onto the support to be sure it will not fall. Release it gradually as you set it down. Move it in place by pushing with the hands and body from in front of the object. This method prevents fingers from getting pinched.
 - 2) To raise an object above shoulder height: Lift the object first to waist height. Rest the edge of the object on a ledge, stand, or hip. Shift hand position so object can be boosted after knees are bent. Straighten out knees as object is lifted or shifted to the shoulders.
 - 3) To change direction: Lift the object to carry position and turn the entire body, including the feet. Do not twist your body. In repetitive work, the person and material should both be positioned so that person will not have to twist their body when moving the material.
 - 4) If the object is too heavy to be handled by one (1) person: Get help. When two (2) or more persons are handling the same object, one (1) person should “call the signals”. All the persons on the lift should know who this person is and should warn them if any member of the crew is about to relax their grip.
- 5.41.2 Six (6) Steps to Safe Lifting
 - 1) Keep feet parted, one (1) alongside and one (1) behind the object.
 - 2) Keep back straight, nearly vertical.

- 3) Tuck your chin in.
- 4) Grip the object with the whole hand.
- 5) Tuck elbows and arms in.
- 6) Keep body weight directly over feet.

5.42 Liquefied Petroleum Gas

- 5.42.1 Each system will have containers, valves, connectors, manifold valve assemblies, and regulators of an approved type.
- 5.42.2 Every container and vaporizer must be provided with one (1) or more approved safety relief valves or devices. Containers will be placed upright on firm foundations or otherwise firmly secured.
- 5.42.3 Portable heaters must be equipped with an approved automatic device to shut off the flow of gas in the event of flame failure. Storage of LPG within buildings is prohibited. Storage locations must have at least one (1) approved portable fire extinguisher, rated not less than 20-B.C.

5.43 Lock Out and Tagging Procedure

- 5.43.1 This procedure establishes minimum requirements for lockout and tag out of energy isolating devices where unexpected energization, start-up, or release of stored energy could cause injury. It shall be used to ensure the equipment or piping systems are isolated from potentially hazardous energy and locked and tagged out before individuals perform maintenance or servicing equipment.
- 5.43.2 All energy sources will be isolated, locked out prior to the start of maintenance or servicing of equipment. Equipment shall also tagged when more than one (1) person is working on the equipment or if the lock is to be left on for any appreciable length of time.
- 5.43.3 Equipment or circuits that are de-energized shall be rendered inoperative and shall have tags attached at all points where such equipment or circuits can be energized.
- 5.43.4 The reason for the tagout must be clearly stated on the tag.
- 5.43.5 All equipment locked out will be "tried out" before servicing and/or maintenance can begin.
- 5.43.6 The device to which the lock (and tag) has been applied must not be used or operated until all tags have been removed.
- 5.43.7 Locks and tags must be removed by the individual who placed them.
- 5.43.8 Locks and tags will not be removed by anyone other than the person who installed them unless all possible means of having that person remove them have been taken.

Refer to MISTRAS' Energy Control (LOTO) Procedure (100-SP-009).

5.44 Material Storage

Storage of materials shall be done with extreme safety. Incoming and outgoing materials shall be piled and stowed safely, orderly, and neatly. Flammable materials shall be stowed in a separate area as prescribed by fire regulations.

5.45 Medical Services and First Aid

- 5.45.1 When a medical facility is not reasonably accessible, a person trained to render first aid will be available at the worksite or local fire department ambulance must be called (911).
- 5.45.2 First aid supplies must be readily available.
- 5.45.3 The telephone numbers of physicians, hospitals, or ambulances must be conspicuously posted.

5.46 Motor Vehicles and Mechanized Equipment

- 5.46.1 Check all vehicles in use at beginning of each shift to assure that all parts, equipment, and accessories affecting safe operation are in proper operating condition and free from defects. All defects shall be corrected before placing vehicle in service.
- 5.46.2 No employee shall use any motor vehicle, earthmoving, or compacting equipment having an obstructed view to the rear unless the vehicle has a reverse signal alarm distinguishable from surrounding noise level or is backed up only when an observer signals it is safe to do so.
- 5.46.3 Heavy machinery, equipment, or parts thereof, that are suspended or held aloft, will be substantially blocked to prevent falling or shifting work under or between them.
- 5.46.4 No person shall operate a motor vehicle on a public highway without a valid driver's license.
- 5.46.5 Forklifts are not to be driven over electric cords or air hoses.
- 5.46.6 Forklifts are to be driven by certified personnel only, unless given permission to do so by the plant manager.
- 5.46.7 Under no circumstances should anyone drive under the influence of intoxicating beverages or drugs.

5.47 Nuclear Power Plants

- 5.47.1 Protective and monitoring equipment shall be utilized by all employees while working in a radioactive power plant.
- 5.47.2 Body count, badge processing, and total individual records shall be maintained by management, as required.
- 5.47.3 Total exposure for any quarter will be indicated in writing.

5.48 Painting

Fresh air masks are available and are to be worn when painting is being done.

5.49 Personal Protective Equipment

- 5.49.1 The employee is responsible for wearing appropriate personal protective equipment (PPE) in operations where there is exposure to hazardous conditions or where need is indicated to reduce hazards.
- 5.49.2 Lifelines, safety belts, and lanyards will be used only for employee safeguarding. Employees working over or near water, where danger of drowning exists, will wear U.S. Coast Guard approved life jackets or buoyant work vests.

Refer to MISTRAS' PPE and Hazard Assessment Procedure (100-SP-006).

5.50 Powder-Actuated Tools

Only trained employees will be allowed to operate powder-actuated tools. All powder-actuated tools will be tested daily before use and all defects discovered before or during use will be corrected. Tools will not be loaded until immediately before use. Loaded tools will not be left unattended.

5.51 Powered Hand Trucks

- 5.51.1 All operators will be trained and will not use powered hand trucks unless authorized.
- 5.51.2 When operating a powered hand truck, the following procedure will be followed:
 - 1) Do not operate the truck with wet or greasy hands.
 - 2) Lead the truck from right or left of the handle. Face direction of travel. Keep one (1) hand on the handle.

- 3) Operate the truck in reverse whenever it must be run close to a wall or other obstruction.
- 4) Always give pedestrians the right of way.
- 5) Stop at blind corners, doorways, and aisle intersections to prevent collisions.
- 6) Never operate the truck faster than normal walking pace.
- 7) Only handle flammable or corrosive liquids when they are in approved containers.
- 8) Never ride the truck unless it is specifically designed for the driver to ride.
- 9) Never permit others to ride on the truck.
- 10) Do not indulge in horseplay.

5.52 Power Transmission (Mechanical)

Belts, gears, shafts, pulleys, sprockets, spindles, drums, flywheels, chains, or other reciprocating, rotating, or moving parts of equipment must be guarded if such parts are exposed to contact by employees or otherwise constitute a hazard. No equipment may be used without guards in place.

5.53 Railings

- 5.53.1 A standard railing will consist of top rail, intermediate rail, toe board, posts, and have a vertical height of approximately 42 inches from upper surface of top rail to floor, platform, etc. The top rail of a railing will be smooth surfaced, with strength to withstand at least 200 pounds. The intermediate rail will be approximately halfway between top rail and floor.
- 5.53.2 A stair railing will be of construction similar to a standard railing, but the vertical height will be not more than 34 inches nor less than 30 inches from the upper surface of top rail to surface of tread in line with face of riser at forward edge of tread.

5.54 Refueling

All internal combustion engines must be turned off before refueling. Refueling should be in the open or in specifically designated areas, where ventilation is adequate to carry away fuel vapors. Liquid fuels, such as gasoline and diesel fuel, must be handled and stored in accordance with the National Fire Prevention Association Flammable and Combustible Liquids Code, No. 30 1969 (now OSHA Regulation 1910.106); liquefied petroleum gas fuel (or LP gas), in accordance with the National Fire Prevention Association's Handling of Liquefied Petroleum Gases, No. 58 1969 (now OSHA Regulation 1910.110).

5.55 Respiratory Protection

- 5.55.1 In emergencies, or when feasible engineering or administrative controls are not effective in controlling toxic substances, approved respiratory protective equipment will be provided and used. Respiratory protective devices will be approved for the hazardous material involved and extent and nature of work requirements and conditions.
- 5.55.2 Employees required to use respiratory protective devices will be thoroughly trained in their use. Respiratory protective equipment will be inspected regularly and maintained in good condition.
- 5.55.3 The following is a basic guide in the use of respirators for painting:
 - 1) A NIOSH/MSHA TC-23C or equivalent particulate respirator should be used when using the following products:
 - a) Lucite acrylic lacquers
 - b) Lacquer thinners and cleaning solvents
 - c) Acrylic lacquer primers and sealers

- d) Enamel primers, chromate primers, variprime
 - e) Metal treatments, lacquer removers, paint removers
 - f) Products with additives:
 - Centari basemakers
 - Enamel reducers
 - Isocyanate activators, hardeners, and additives
- 2) A NIOSH/MSHA TC-19C or equivalent particulate respirator should be used when using the following products:
- a) Centari acrylic enamel
 - b) Dulax alkyd enamel
 - c) Impron polyurethane enamel
 - d) Clear enamel topcoats
 - e) Vinyl enamels
 - f) Tractor and implement enamels
 - g) Aluminum paints and spatter finishes
 - h) Additives for topcoats

5.55.4 When paints don't fall into one (1) of these categories, refer to the safety data sheet (SDS) for proper protective equipment.

Refer to MISTRAS' Respiratory Protection Program Procedure (100-SP-007).

5.56 Safety Belts and Harnesses

Safety belts and harnesses shall be worn when the job is such that it is required. Inspection and care of equipment shall be the responsibility of each employee. All defects shall be reported to the crew leader or management.

Refer to MISTRAS' Fall Protection Procedure (100-SP-003).

5.57 Safety Nets

Safety nets are required when workplaces are more than 25 feet above the surface and the use of ladders, scaffolds, catch platforms, temporary floors, safety lines, or safety belts is impractical.

5.58 Safety Programs

MISTRAS makes available, free of charge, safety training programs covering all types of hazards. All employees are requested to actively participate in these programs.

5.59 Safety Shoes

Proper protection of feet and legs shall be required at all times. Safety shoes meeting the ANSI standard shall be worn. No tennis shoes or workout shoes shall be allowed at MISTRAS or onsite at any remote job location, regardless of the actual site requirements.

Refer to MISTRAS' PPE and Hazard Assessment Procedure (100-SP-006).

5.60 Saws

5.60.1 All portions of band saw blades will be enclosed or guarded except for working portions of blades between bottom of guide rolls and table.

- 5.60.2 Portable, power-driven circular saws will be equipped with guards above and below the base plate or shoe.
 - 5.60.3 The lower guard will cover the saw to depth of teeth, except for minimum arc required to allow proper retraction and contact with the work and will automatically return to covering position when blade is removed from the work.
 - 5.60.4 Radial saws will have an upper guard that completely encloses the upper half of the saw blade. The sides of lower exposed portion of blade will be guarded by a device that will automatically adjust to the thickness of and remain in contact with material being cut. Radial saws used for ripping must have non-kickback fingers or dogs. Radial saws will be installed so the cutting head will return to starting position when released by the operator.
 - 5.60.5 All swing or sliding cutoff saws will be provided with a hood that will completely enclose the upper half of the saw. Limit stops will be provided to prevent swing or sliding-type cutoff saws from extending beyond the front or back edges of the table. Each swing or sliding cutoff saw will be provided with an effective device to return saw automatically to the back of table when released at any point of its travel.
 - 5.60.6 Inverted sliding cutoff saws will be provided with a hood that will cover the part of the saw that protrudes above the top of the table of material being cut.
 - 5.60.7 Circular table saws will have a hood over the portion of the saw above the table, so mounted that the hood will automatically adjust itself to the thickness of and remain in contact with the material being cut. Circular table saws will have a spreader aligned with the blade, spaced no more than ½-inch behind the largest blade mounted in saw. Circular table saws used for ripping will have non-kickback fingers or dogs. Feed rolls and blades of self-feed circular saws will be protected by a hood or guard to prevent hands of operators from coming in contact with running rolls at any time.
- 5.61 Scaffolds (General)
- 5.61.1 Scaffolds will be capable of supporting four (4) times the maximum intended load and erected on sound, rigid footing, capable of carrying the maximum intended load without settling or displacement.
 - 5.61.2 Guardrails and toe boards will be installed on all open sides and ends of platforms more than 10 feet above ground or floor, except needle beam scaffolds and floats that require the use of safety belts. Scaffolds 4-to-10 feet in height and have a minimum dimension in either direction of less than 45 inches will have standard guardrails installed on all open sides and ends.
 - 5.61.3 There will be a screen with maximum ½-inch openings between toe board and guardrail, where persons are required to work or pass under scaffolds. Planking will be scaffold grade or equivalent as recognized by approved grading rules for species of wood used. Overlap scaffold planking will be a minimum of 12 inches or secure from movement.
 - 5.61.4 Scaffold planks will extend over end supports not less than 6 inches no more than 12 inches. Scaffolding and accessories with defective parts will be immediately replaced or repaired. Where possible, scaffold planks will be created.
- 5.62 Scaffolds (Mobile)
- 5.62.1 Platforms will be tightly planked for full width of scaffold except for necessary entrance opening. Platforms will be secured in place.
 - 5.62.2 Guardrails made of lumber, not less than 2 X 4 inches (or equivalent), approximately 42 inches high, with a midrail of 1 X 6 inch lumber (or equivalent), and toe boards, will be installed at all open sides and ends on scaffolds more than 10 feet above the ground or floor. Toe boards will be minimum 4 inches in height. Where persons are required to work or pass under scaffolds, install wire mesh between toe board and guardrail.

5.63 Scaffolds (Swinging)

On suspension scaffolds designed for a working load of 500 pounds, no more than two (2) workers will be permitted to work at a time. On suspension scaffolds with a working load of 750 pounds, no more than three (3) workers may work at a time. Each employee will wear an approved safety life belt attached to a lifeline. The lifeline will be securely attached to substantial members of the structure (not scaffold), or to securely rigged lines, which will safely suspend an employee in case of a fall.

5.64 Scaffolds (Tubular Welded Frame)

Scaffolds will be properly braced by cross-bracing or diagonal braces, or both, for securing vertical members together laterally. Cross braces will be of such length as will automatically square and align vertical members so erected scaffold is plumb, square, and rigid. All brace connections will be made secure.

5.65 Slings

5.65.1 Hoisting equipment, including slings and other lifting devices, shall be kept in good condition.

5.65.2 Wire rope slings shall be frequently inspected, tested, and lubricated.

5.65.3 Wooden blocks or heavy padding should be used at corners of the load to protect the sling from sharp bending.

5.65.4 All wire ropes shall be inspected before being used and any rope showing excessive rust or breakage of 10% or more of any single strand shall not be used.

5.65.5 A safety chain must always be used when lifting equipment with a strap.

5.66 Smoking Policy

Smoke only in designated areas. When working in offsite locations, be sure you know where those designated areas are located. Many refineries do not allow smoking anywhere on their premises.

5.67 Stairs

5.67.1 Flights of stairs having four (4) or more risers will be equipped with standard stair railings or handrails as specified below:

- 1) On stairways less than 44 inches wide have one (1) side open, at least one (1) stair railing on the open side.
- 2) On stairways less than 44 inches wide having both sides open, one (1) stair railing on each side.
- 3) On stairways more than 44 inches wide, but less than 88 inches wide, one (1) handrail on each enclosed side and one (1) stair railing on each open side.

5.67.2 On all structures 20 feet or over in height, stairways, ladders, or ramps will be provided.

5.67.3 Riser height and tread width will be uniform throughout any flight of stairs.

5.68 Steam Cleaning

Facemasks and gloves are to be worn when steam cleaning and chemical spraying.

5.69 Storage

5.69.1 All materials stored in tiers will be secured to prevent sliding, falling, or collapse.

5.69.2 Aisles and passageways will be kept clear and in good repair.

5.69.3 Stored materials will not obstruct exits. Materials will be sorted with due regard to fire characteristics.

5.70 Theft

Theft of any company-owned equipment or materials, or the unauthorized removal of equipment or materials from a jobsite, shall be cause for immediate dismissal.

5.71 Toilet Facilities

- 5.71.1 Toilet facilities shall be well ventilated and well lit. There shall be adequate receptacles for disposal of towels. Floors, toilets, and lavatories shall be cleaned weekly and more often if necessary.
- 5.71.2 Toilets will be provided according to the following:
 - 1) Twenty (20) or fewer persons – one (1) facility
 - 2) Twenty (20) or more persons – one (1) toilet seat and one (1) urinal per forty (40) persons
 - 3) Two hundred (200) or more persons – one (1) toilet set and one (1) urinal per fifty (50) persons

5.72 Wall Openings

- 5.72.1 Wall openings from which there is a drop of more than 4 feet and the bottom of the opening is less than 3 feet above the working surface will be guarded.
- 5.72.2 When the height and placement of the opening in relation to the working surface is such that a standard rail or intermediate rail will effectively reduce the danger of falling, one (1) or both will be provided. The bottom of a wall opening that is less than 4 inches above the working surface will be protected by a standard toe board or an enclosing screen.

5.73 Welding, Cutting, and Heating

- 5.73.1 Proper precautions (insulating welding and cutting, removing fire hazards from the vicinity, providing a fire watch, etc.) for fire prevention will be taken in areas where welding or other hot work is being done.
- 5.73.2 No welding, cutting, or heating will be done where the application of flammable paints or the presence of other flammable compounds, or heavy dust concentrations, creates a fire hazard. Equip torches with anti-flashback devices.
- 5.73.3 Arc welding and cutting operations will be shielded by non-combustible or flameproof shields to protect employees from direct arc rays.
- 5.73.4 When electrode holders are left unattended, electrodes will be removed and holders will be placed or protected so they cannot make electrical contact. All arc welding and cutting cables will be completely insulated. There will be no repairs or splices within 10 feet of electrode holders, except where splices are insulated equal to the insulated of the cable. Defective cable will be repaired or replaced.
- 5.73.5 Fuel gas and oxygen hose must be easily distinguishable and not interchangeable. Inspect hoses at the beginning of each shift and repair or replace if defective.
- 5.73.6 Hose couplings shall be of the type that cannot be unlocked or disconnected by means of a straight pull without rotary motion.
- 5.73.7 General mechanical or local exhaust ventilation or air-line respirators will be provided, as required, when welding, cutting, or heating hazardous materials or in confined spaces.
- 5.73.8 Always wear approved tinted eye protection when welding or in areas where welding is being done. Refer to MISTRAS' Welding Safety Procedure (100-SP-059).

5.74 Wire Ropes, Chains, Ropes, etc.

- 5.74.1 Wire ropes, chains, ropes, and other rigging equipment will be inspected prior to use and as necessary during use to assure their safety. Remove defective rigging equipment from service immediately.

5.74.2 Job or shop hooks and links, or makeshift fasteners, formed from bolts, rods, etc., or other such attachments, will not be used.

5.74.3 When U-bolts are used for eye splices, the U-bolt will be applied so the “U” section is in contact with dead end of rope.

5.75 Woodworking Machinery

All fixed power-driven woodworking tools will be provided with a disconnect switch that can be either locked or tagged in an off position.

6.0 Jobsite Requirements

The following provides direction and information to be considered for jobsites or temporary facilities located at client sites or startup locations.

6.1 Temporary Facilities

- 1) GFCIs or assured grounding program
- 2) Site/storage layout for placement of materials, shanties, equipment, etc.
- 3) Communication system
- 4) Water (drinking water) and sanitary facilities
- 5) Jobsite security equipment (fencing, lights, etc.)
- 6) Temporary access and parking facilities

6.2 Paperwork Requirements

- 1) Copy of OSHA standards and poster
- 2) Posting area for employee notices
- 3) Emergency phone numbers (100-SP-002, Attachment 1)
- 4) Occupation Health and Medical Clinic Information (100-SM-003, Attachment 1)
- 5) Copy of assured grounding program, if in use
- 6) Incident Reporting Flowchart (100-SM-002, Attachment 1)
- 7) Contractors’ safety program and rules
- 8) Proof of training and safety instructions (lasers, powder-actuated tools, first aid)
- 9) Written respiratory protection program if respirators are in use
- 10) Required special permits (burning, welding, traffic, etc.)
- 11) Required signs (Hardhats, No Trespassing, Danger, Caution, etc.)
- 12) Worker’s Comp notice, EEO, minimum water, U/E posters

6.3 Emergency Needs

- 1) First aid trained personnel
- 2) First aid kit
- 3) Fire extinguishers (or water equivalent)
- 4) Emergency evacuation plans

6.4 Protective Equipment

- 1) Hardhats
- 2) Safety glasses
- 3) Respirators

- 4) Ear plugs
- 5) Guarding material for perimeter scaffolds and floor holes
- 6) Safety cans for flammable liquids
- 7) Tagged alloy steel chains when used for rigging
- 8) Safety belts, lifelines, and lanyards or nets where fall hazards exist
- 9) Trench and excavation shoring materials when necessary
- 10) Personal protective equipment for visitors

7.0 Recordkeeping

- 7.1 MISTRAS will maintain records required to document the effective implementation of this Injury and Illness Prevention Program.
- 7.2 Records shall include the following:
 - 1) Records of scheduled and periodic inspections to identify unsafe conditions and work practices, including person(s) conducting the inspection, the unsafe condition and work practices that have been identified, and action taken to correct the identified unsafe conditions and work practices. These records shall be maintained for 1 year, or as required by local jurisdictional regulations.
 - 2) Documentation of safety and health training for each employee. This documentation shall be maintained for 1 year, or as required by local jurisdictional regulations. *Exception:* Training records of employees who have worked less than 1 year for the employer need not be retrained beyond the term of employment if they are provided to the employee upon termination of employment.
 - 3) Written documentation of the identity of the person or persons with authority and responsibility for implementing the program.

8.0 Implementation

To fully implement the Injury and Illness Prevention Program, MISTRAS will:

- 8.1 Hold a supervisory meeting for all of its supervisors at least monthly (see Attachment 3).
- 8.2 Prepare, at least annually, a detailed description of all accidents including their causes and measures taken to prevent recurrence for distribution to all supervisory personnel.
- 8.3 Require weekly Toolbox Talk training sessions and document the topics and attendance. All employees are to attend at least one (1) meeting per month (see Attachment 3).
- 8.4 Institute an anonymous reporting system such that employees can report unsafe or hazardous working conditions without the fear of reprisal (see Attachment 4).
- 8.5 Use the resources of its equipment and material suppliers to train its employees in the safe use of their equipment and materials.
- 8.6 Subscribe to safety periodical to ensure up-to-date, state of the art information on safety. This information shall be shared with employees at weekly Toolbox Talk sessions.
- 8.7 Collect, where required, Safety Data Sheets on materials in use by the company.
- 8.8 Distribute copies of pertinent OSHA regulations and other standards to supervisory personnel.
- 8.9 Redefine and/or clarify the role of safety to place emphasis on training at all levels.
- 8.10 Commit resources for safety training for existing groups and new employees.
- 8.11 Establish companywide safety training for managers, supervisory personnel, and hourly personnel.

- 8.12 Institute a system of continual re-education and retraining in the IIPP. Training will be conducted on at least a three (3) year basis, with refresher training in selected topics on a more frequent basis.

9.0 Hazard Analysis and Correction

- 9.1 Periodic inspections and procedures for correction and control provide a method of identifying existing or potential hazards in the workplace and eliminating or controlling them. Hazard control is the heart of an effective Injury and Illness Prevention Program.
- 9.2 If hazards occur or recur, this reflects a breakdown in the hazard control system. The hazard control system is also the basis for developing safe work procedures and injury/illness prevention training.
- 9.3 A qualified person will perform a hazard assessment survey of each establishment. This survey will provide the basis and guidelines for establishing the hazard assessment and control system. The survey produces knowledge of hazards that exist in the workplace as well as conditions, equipment, and procedures that could be potentially hazardous.
- 9.4 MISTRAS will perform scheduled and documented self-inspections. Scheduled inspections are in addition to the everyday safety and health checks that are part of the routine duties of managers and supervisors. See Attachment 1 of this document for a sample audit checklist and refer to the MISTRAS PPE and Hazard Assessment Procedure (100-SP-006) for additional information.
- 9.5 The frequency of these inspections depends on the operations involved, the magnitude of the hazards, the proficiency of employees, changes in equipment or work processes, and the history of workplace injuries and illnesses.
- 9.6 Personnel who, through experience or training, are able to identify actual and potential hazards and understand safe work practices will conduct inspections.
- 9.7 Management and/or the safety committee must review written inspection reports. The review should assist in prioritizing actions and verify completion of previous corrective actions. Overall inspection program results should be reviewed for trends.
- 9.8 Hazards should be corrected as soon as they are identified. For any that cannot be immediately corrected, set a target date for correction based on such considerations as the probability and severity of an injury or illness resulting from the hazard; the availability of needed equipment, materials, and/or personnel; time for delivery, installation, modification, or construction; and training periods. The Hazardous Condition Report Form (Attachment 4) can be used by all employees to report unsafe or hazardous conditions.

10.0 Incident Investigation

- 10.1 Common sense alone can prevent many incidents. Repeated violation of safety rules, such as failing to wear adequate safety equipment or chance-taking and horseplay, eventually lead to incidents. Incidents involve both unsafe conditions and unsafe acts. It should be the effort of every employee to minimize the chances of an incident occurring.
- 10.2 “Those who do not learn from the past are condemned to repeat it.” Each and every incident must be investigated. An incident is any unplanned occurrence that could have caused injury or damage, not just the occurrences that did. If a sling breaks and drops a load, it is an incident whether anyone was hurt or not.
- 10.3 Incidents should be investigated by immediate supervision. Results should be reported completely on a company form (Attachment 2, or equivalent). Completely is the key. In today’s world of litigation an incomplete form is of no use 3 years down the road when the case comes to court.
- 10.4 The Director of Regulatory Affairs should review the immediate supervisor’s report. Appropriate steps to prevent recurrence should be taken.

- 10.5 Incident reports highlight problem areas. Patterns can be detected and resources directed toward preventing a recurrence. Incident reports make excellent training tools. The causes and effects of incidents can be reviewed at safety meetings.
- 10.6 Incidents should be investigated as described in the MISTRAS Incident Reporting and Investigation Procedure (100-SM-002).

11.0 Incidents and Injuries Recorded

- 11.1 All incidents and injuries are to be reported immediately to your supervisor and the Incident Reporting Flowchart (100-SM-002, Attachment 1) should be followed.
- 11.2 Incidents may be recorded on Form OSHA 300 or similar. MISTRAS is classified as a partially exempt industry and therefore, is not required to record injuries and illnesses.

Attachment 1: Site Safety Audit Form

Location:	Auditor:	Date:		
PROTECTIVE EQUIPMENT – Is protective equipment being used?		YES	NO	N/A
Hardhat				
Safety Glasses				
Goggles				
Face Shield				
Gloves				
Safety Belt/Full Body Harness				
Lanyard(s)				
Comments/Corrective Action Taken				
PROPER ATTIRE – Are employees appropriately dressed?		YES	NO	N/A
Clothing				
Footwear				
Flame-Resistant Clothing				
Facial Hair				
Comments/Corrective Action Taken				
WORKING CONDITIONS – Are working areas properly maintained?		YES	NO	N/A
Housekeeping Adequate				
Lighting Adequate				
Extension Cords Secured				
Signs Posted				
Permits Posted				
Ladders Secure				
Scaffold Secure				
Scaffold Guardrails in Place				
Scaffold Toe Boards in Place				
Comments/Corrective Action Taken				
WORKING PROCEDURES– Are safe work procedures being followed?		YES	NO	N/A
Using Proper Tool/Equipment for Job				
Tools/Equipment in Good Condition				
Climbing Ladders/Scaffold Safety				
Knowledge of Proper Evacuation Procedure				
Traffic Safety Rules Observed				
Comments/Corrective Action Taken				

Attachment 2: Incident Investigation Form

The following form includes details that may be required when investigating an incident. This form is not all inclusive and is provided as an example.

BASIC INFORMATION					
Preparer Information					
Name:		ID:		Title:	
Involved Employee Information					
Name:		ID:		Title:	
Date of Hire:	Region:	Lab:	Group:	Evergreen:	Services:
Worker Type: <input type="checkbox"/> Full-time <input type="checkbox"/> Part-time <input type="checkbox"/> Callout <input type="checkbox"/> Contract					
Supervisor's Information					
Name:		ID:		Title:	
Initial Incident Information					
Date of Incident:	Time of Incident:	Time Began Work:	Was this incident work-related? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Severity: <input type="checkbox"/> Catastrophic <input type="checkbox"/> Critical <input type="checkbox"/> Marginal <input type="checkbox"/> Negligible			Probability: <input type="checkbox"/> Frequent <input type="checkbox"/> Improbable <input type="checkbox"/> Occasional <input type="checkbox"/> Probable <input type="checkbox"/> Remote		
Incident Type:					
<input type="checkbox"/> Barricade Breach		<input type="checkbox"/> Employee Injury (Recordable)		<input type="checkbox"/> Environmental	
<input type="checkbox"/> First Aid Only		<input type="checkbox"/> High Potential Incident		<input type="checkbox"/> Non-Occupational Injury	
<input type="checkbox"/> Non-Employee Incident		<input type="checkbox"/> Property Damage		<input type="checkbox"/> Vehicle	
<input type="checkbox"/> Other: _____					
Incident Cause:					
<input type="checkbox"/> Ergonomics		<input type="checkbox"/> Failure to perform 360 walkaround		<input type="checkbox"/> Falling object(s)	
<input type="checkbox"/> Housekeeping		<input type="checkbox"/> Improper PPE		<input type="checkbox"/> Improper tool selection	
<input type="checkbox"/> Improper/inadequate training		<input type="checkbox"/> Inadequate design		<input type="checkbox"/> Lack of spotter use	
<input type="checkbox"/> Lack of training		<input type="checkbox"/> Line of fire		<input type="checkbox"/> Missing/poorly established barricade	
<input type="checkbox"/> Pinch points		<input type="checkbox"/> Poor lighting		<input type="checkbox"/> Unsafe action	
<input type="checkbox"/> Slip/trip/fall		<input type="checkbox"/> Slippery walking surface		<input type="checkbox"/> Work station design	
<input type="checkbox"/> Poor rigging practice(s)/lack of adequately securing equipment <input type="checkbox"/> Other: _____					
Was personal protective equipment required?		<input type="checkbox"/> Yes <input type="checkbox"/> No	Was a vehicle involved?		<input type="checkbox"/> Yes <input type="checkbox"/> No
Was personal protective equipment used?		<input type="checkbox"/> Yes <input type="checkbox"/> No	Was a non-employee injured?		<input type="checkbox"/> Yes <input type="checkbox"/> No
Was a drug and alcohol test performed?		<input type="checkbox"/> Yes <input type="checkbox"/> No	Was property damage involved?		<input type="checkbox"/> Yes <input type="checkbox"/> No
Was Stop Work Authority used?		<input type="checkbox"/> Yes <input type="checkbox"/> No	Was an employee or directly supervised contractor injured?		<input type="checkbox"/> Yes <input type="checkbox"/> No
Inviabile Rule Violation?		<input type="checkbox"/> Yes <input type="checkbox"/> No			
Initial Incident Description					

INCIDENT DETAILS							
Reported To:							
Name:		ID:		Title:			
Group:	Region:	Lab:	Client:	Evergreen:	Services:		
Can time be determined? <input type="checkbox"/> Yes <input type="checkbox"/> No		Shift:		Description of Location:			
<u>Description of Incident</u>							
Weather:		Lighting:		Description of Environmental Conditions:			
EMPLOYEE INJURY							
Date of injury or onset of illness:		Did injury occur on premises? <input type="checkbox"/> Yes <input type="checkbox"/> No		Was medical treatment received? <input type="checkbox"/> Yes <input type="checkbox"/> No			
<u>Initial Treatment:</u> <input type="checkbox"/> Emergency Care <input type="checkbox"/> Future Major Medical <input type="checkbox"/> Hospitalized >24 hours <input type="checkbox"/> Lost Time Anticipated <input type="checkbox"/> Minor by Clinic/Hospital <input type="checkbox"/> Minor by Employee <input type="checkbox"/> No Medical Treatment		<u>Classification of Injury/Illness:</u> <input type="checkbox"/> Injury <input type="checkbox"/> Skin Disorders <input type="checkbox"/> Respiratory Condition <input type="checkbox"/> Poisoning <input type="checkbox"/> Hearing Loss Cases <input type="checkbox"/> All Other Illnesses <input type="checkbox"/> N/A		<u>Area of Body Affected:</u> <input type="checkbox"/> Head <input type="checkbox"/> Lower Extremities <input type="checkbox"/> Multiple Body Parts-Other <input type="checkbox"/> Neck <input type="checkbox"/> Trunk <input type="checkbox"/> Upper Extremities <u>Body Part Affected:</u>		<u>Side of Body Affected:</u> <input type="checkbox"/> Anterior <input type="checkbox"/> Both <input type="checkbox"/> Left <input type="checkbox"/> N/A <input type="checkbox"/> Neither <input type="checkbox"/> Posterior <input type="checkbox"/> Right	
<u>Nature of Injury:</u> <input type="checkbox"/> AIDS <input type="checkbox"/> Amputation <input type="checkbox"/> Asbestosis <input type="checkbox"/> Asphyxiation <input type="checkbox"/> Avulsion <input type="checkbox"/> Black Lung <input type="checkbox"/> Burn <input type="checkbox"/> Byssinosis <input type="checkbox"/> Cancer <input type="checkbox"/> Carpal Tunnel Syndrome <input type="checkbox"/> Chest Pain (Angina Pectoria) <input type="checkbox"/> Concussion <input type="checkbox"/> Contagious Disease <input type="checkbox"/> Contusion/Bruise <input type="checkbox"/> Crushing <input type="checkbox"/> Dermatitis		<input type="checkbox"/> Dislocation <input type="checkbox"/> Dust Disease-not otherwise classified <input type="checkbox"/> Electric Shock <input type="checkbox"/> Eucleation-Removal of Organ or Tumor <input type="checkbox"/> Foreign Body <input type="checkbox"/> Fracture <input type="checkbox"/> Freezing <input type="checkbox"/> Hearing Loss or Impairment <input type="checkbox"/> Heat Prostration <input type="checkbox"/> Hepatitis C <input type="checkbox"/> Hernia <input type="checkbox"/> Infection <input type="checkbox"/> Inflammation <input type="checkbox"/> Laceration <input type="checkbox"/> Loss of Hearing		<input type="checkbox"/> Loss of an Eye <input type="checkbox"/> Mental Disorder <input type="checkbox"/> Mental Stress <input type="checkbox"/> Multiple Injuries including both Physical or Psychological <input type="checkbox"/> Multiple Physical Injuries Only <input type="checkbox"/> Myocardial Infarction (Heart Attack) <input type="checkbox"/> No Physical Injury <input type="checkbox"/> Other Cumulative Injuries-not otherwise classified <input type="checkbox"/> Other Occupational Disease Injury-not otherwise classified <input type="checkbox"/> Other Specific Injuries-not otherwise classified <input type="checkbox"/> Poisoning-Chemical (other than metals)		<input type="checkbox"/> Poisoning-General (no OD or cumulative injury) <input type="checkbox"/> Poisoning-Metal <input type="checkbox"/> Puncture <input type="checkbox"/> Radiation <input type="checkbox"/> Respiratory Disorders <input type="checkbox"/> Rupture <input type="checkbox"/> Severance <input type="checkbox"/> Silicosis <input type="checkbox"/> Sprain or Tear <input type="checkbox"/> Strain or Tear <input type="checkbox"/> Syncope (Fainting) <input type="checkbox"/> Vascular <input type="checkbox"/> Video Display Terminal Related Diseases <input type="checkbox"/> Vision Loss	

<p><u>Primary Cause of Injury:</u></p> <input type="checkbox"/> Burn or Scald-Heat or Cold Exposures-Contact With <input type="checkbox"/> Caught In, Under, or Between <input type="checkbox"/> Cut, Puncture, Scape Injured By <input type="checkbox"/> Fall, Slip, or Trip Injury <input type="checkbox"/> Miscellaneous Causes <input type="checkbox"/> Motor Vehicle <input type="checkbox"/> Rubbed or Abraded By <input type="checkbox"/> Strain or Injury By <input type="checkbox"/> Striking Against or Stepping On <input type="checkbox"/> Struck or Injured By	<p><u>Source of Injury Category:</u></p> <input type="checkbox"/> Chemicals and Chemical Products <input type="checkbox"/> Containers, Furniture, and Fixtures <input type="checkbox"/> Machinery <input type="checkbox"/> Other Sources <input type="checkbox"/> Parts and Materials <input type="checkbox"/> Persons, Plants, Animals, and Minerals <input type="checkbox"/> Structures and Surfaces <input type="checkbox"/> Tools, Instruments, and Equipment <input type="checkbox"/> Vehicles
<p><u>Detailed Cause of Injury:</u></p>	<p><u>Specific Source of Injury:</u></p>
<p><u>Consequences of injury/illness:</u> Selecting a value other than None of the Above or First Aid will flag this incident as OSHA Recordable.</p> <input type="checkbox"/> Death <input type="checkbox"/> Missed a day of work or next shift <input type="checkbox"/> Restriction of work or transfer to another job <input type="checkbox"/> Medical treatment beyond first aid <input type="checkbox"/> Loss of consciousness <input type="checkbox"/> Occupational illness <input type="checkbox"/> First Aid <input type="checkbox"/> None of the Above	<p>Was injury or illnesses a needle stick or other sharp implement injury, hearing loss, or tuberculosis? Selecting Yes will flag this incident as OSHA Recordable.</p> <p style="text-align: center;"><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Date incident flagged as OSHA Recordable:</p> <p>Is injury expected to be disabling?</p> <p style="text-align: center;"><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Was employee exposed to a hazardous material?</p> <p style="text-align: center;"><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>MEDICAL TREATMENT</p>	
<p>Date of Treatment:</p>	<p>Name of Physician or Other Health Care Professional:</p>
<p>Was treatment given away from the worksite? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Name of Treatment Facility:</p>
<p>Was employee treated in an emergency room? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Facility Address and Phone:</p>
<p>Was employee hospitalized overnight as an in-patient? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	
<p>Did the employee suffer an amputation or lose an eye within 24 hours of the incident? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	
<p>RECORDKEEPING AND REPORTING</p>	
<p>Where did the incident occur?</p>	
<p>What was the employee doing just before incident occurred?</p>	
<p>How did the injury occur?</p>	
<p>What was the injury or illness?</p>	
<p>What object or substance directly harmed the employee?</p>	
<p>Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill.</p>	
<p>Is this a Privacy Case?</p> <p style="text-align: center;"><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Should this injury be redlined on the OSHA 300 log?</p> <p style="text-align: center;"><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>EMPLOYEE WORK BEHAVIOR</p>	
<p>Time employee began work:</p>	<p>Time employee ended work:</p>
<p>Was an allegedly defective tool or equipment involved? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	
<p>Were safety rules and safe work practices being followed? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	
<p>Did the employee's act or omission contributed to this alleged injury? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	
<p>Number of hours worked per day:</p>	
<p>Were safeguards or safety equipment provided? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	
<p>Was personal protective equipment required for this job? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	

Identify Required Personal Protective Equipment:

<input type="checkbox"/> Safety Shoes	<input type="checkbox"/> Hearing Protection
<input type="checkbox"/> Hardhats/Bump Caps	<input type="checkbox"/> Safety Harness – Fall Protection
<input type="checkbox"/> Eye Protection (goggles, glasses w/ side shields)	<input type="checkbox"/> Respirator: Dust Mask/Filter
<input type="checkbox"/> Rubber Gloves	<input type="checkbox"/> Leg Shin Guards
<input type="checkbox"/> Canvas Gloves	<input type="checkbox"/> High Visibility Vest
<input type="checkbox"/> Other Type Gloves	<input type="checkbox"/> Rubber Boots/Grips
<input type="checkbox"/> Face Shield	<input type="checkbox"/> Flashlight
<input type="checkbox"/> Other (identify) _____	

Of the items listed above, which ones were not being used by the employee? (list) _____

RESPONDERS

Did fire/emergency medical services respond to the incident? <input type="checkbox"/> Yes <input type="checkbox"/> No	Was HASC Global Health contacted? <input type="checkbox"/> Yes <input type="checkbox"/> No	Did police/security respond to the incident? <input type="checkbox"/> Yes <input type="checkbox"/> No
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INCIDENT ANALYSIS

Root Cause:

<input type="checkbox"/> Ergonomics	<input type="checkbox"/> Lack of Training	<input type="checkbox"/> Poor Lighting	<input type="checkbox"/> Tasks Not analyzed
<input type="checkbox"/> Fall Protection Needs Improvement	<input type="checkbox"/> Lockout/Tagout Needs Improvement	<input type="checkbox"/> Procedure Difficult to Use	<input type="checkbox"/> Unsafe Action
<input type="checkbox"/> Improper PPE	<input type="checkbox"/> No Procedure	<input type="checkbox"/> Procedure Not Available or Inconvenient to Use	<input type="checkbox"/> Work Package (Traveler) Permit Needs Improvement
<input type="checkbox"/> Improper Tool Selection	<input type="checkbox"/> No Supervision	<input type="checkbox"/> Road Wet/Slick/Slippery	<input type="checkbox"/> Worker Fatigues
<input type="checkbox"/> Improper/Inadequate Training	<input type="checkbox"/> Other	<input type="checkbox"/> Slip/Trip/Fall	<input type="checkbox"/> Worker Not Qualified
<input type="checkbox"/> Inadequate Design	<input type="checkbox"/> Pinch Points	<input type="checkbox"/> Slippery Walking Surfaces	<input type="checkbox"/> Workstation Design
<input type="checkbox"/> Other: _____			

Was a drug or alcohol test performed? <input type="checkbox"/> Yes <input type="checkbox"/> No	Retraining Required? <input type="checkbox"/> Yes <input type="checkbox"/> No
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Report Status: Open In Progress Ready for Approval Complete

Additional Remarks:

Analysis of the Incident:

Employee Training History (last two years):

Attachment 3: Safety Meeting Attendance Form

Meeting Type: <input type="checkbox"/> Supervisor <input type="checkbox"/> Toolbox <input type="checkbox"/> Training <input type="checkbox"/> Other: _____			
Date:		Time:	Location:
Discussion Topic:		Discussion Leader:	
ATTENDEES			Employee ID
Name (Print Legibly)	Signature		
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
Comments and/or Suggestions:			
Discussion Leader Signature:			

Attachment 4: Hazardous Condition Reporting Form

Name:	Date
Work Area or Jobsite Location:	
Description of hazardous or unsafe condition:	
Supervisor Acknowledgement:	Date:
Corrective Action taken to remove hazard and prevent recurrence:	
Date Condition is Resolved:	Supervisor Signature:

Employee Acknowledgement

I acknowledge that I have received and read a copy of MISTRAS' **Injury and Illness Prevention Program**, have been given the opportunity to discuss and ask questions regarding its content, and agree to comply with its contents.

Employee Signature:

Date: