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Health and Safety	08/29/2015	Escanaba Mill

Elevated Work Policy

A. PURPOSE

The purpose of the policy is to establish the minimum requirements for protecting Escanaba Operations team members while performing work at unguarded elevations of four feet or greater and to ensure the Escanaba Mill complies with MIOSHA parts 3, 4, 5, 33. This program is to ensure that any individual performing an assigned function in an elevated area has adequate protection through the means of appropriate standard barriers or personal fall arrest systems.

B. APPLICABLE DEFINITIONS

Anchorage: A secure point of attachment for lifelines, lanyards or deceleration devices.

Body Harness: Straps which may be secured about the employee in a manner that will distribute the fall arrest forces over at least the thighs, pelvis, waist, chest and shoulders with means for attaching it to other components of a personal fall arrest system.

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

Deceleration Distance: The additional vertical distance a falling employee travels, excluding lifeline elongation and free fall distance, before stopping, from the point at which the deceleration device begins to operate. It is measured as the distance between the location of an employee's body harness attachment point at the moment of activation of the deceleration device during a fall, and the location of that attachment point after the employee comes to a complete stop.

Free Fall: The act of falling before a personal fall arrest system begins to apply force to arrest the fall.

Lanyard: A flexible line of rope, wire rope, or strap which generally has a connector at each end for connecting the body harness to a deceleration device.

Lifeline: A component consisting of a flexible line for connection to an anchorage point at one end to hang vertically, or for connection to an anchorage at both ends to stretch horizontally, and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.

Fall Arrest System: A system used to arrest an employee in a fall from a working level (Ex. SRL)

Elevated Work Policy

Fall Restraint System: A system that consists of the equipment used to keep an employee from reaching a fall point, such as the edge of a roof or the edge of an elevated working surface (Ex. Tether)
Qualified person: Someone who has the education, training, and experience to identify and solve problems related to the work.

III. RESPONSIBILITIES

C. All employees are required to comply with the components of the Elevated Work Policy which include but are not limited to:
   1. proper selection and use of personal fall arrest systems
   2. inspection of personal fall arrest systems prior to use
   3. reporting unsafe conditions or equipment to their supervisor
   4. attending required Fall Protection Training
   5. Operations employees must comply at unguarded elevations of four feet or greater
   6. Maintenance, construction employees or contractors must comply at unguarded elevations of four feet or more

D. Management is responsible for enforcing compliance with the Elevated Work Policy by:
   1. auditing selection and use of personal fall arrest systems
   2. conducting spot checks to ensure proper use of fall arrest systems
   3. attending required Fall Protection Training
   4. ensuring employees are complying with the Elevated Work Policy
   5. ensuring resources are available for prompt emergency rescue or to document and verify that employees can rescue themselves

E. The Safety Department is responsible for:
   1. ensuring training is developed in compliance with applicable regulations, exceeding regulatory requirements where appropriate
   2. maintaining files for purposes of demonstrating compliance with regulatory requirements such as yearly inspection lists.
   3. providing resources to Operations/Maintenance to ensure compliance with regulations and the Fall Protection Policy
   4. ordering personal fall protection devices and equipment that meet regulatory requirements for all departments and areas of the Escanaba Mill.

IV. TRAINING REQUIREMENTS

A. Escanaba Operations will train all operations employees who may be exposed to a fall hazard, four feet or greater. The program will enable the employee to recognize the hazards of falling and educate them on the procedures to be followed to reduce or eliminate these hazards. Training shall include:
   1. the nature of the fall hazards found in the workplace

2. the correct procedures for erecting, maintaining, disassembling and inspecting the fall protection being used
3. the use and operation of guardrail systems, personal fall arrest systems and other fall protection that may be used
4. the limitations on the use of mechanical equipment during the performance of roofing work on low sloped roofs
5. the procedure for a pre-use fall arrest system inspection
6. the regulatory requirements of OSHA Standard 1026.500 Subpart M

B. Escanaba Operations will verify compliance through the utilization of written certification. All affiliated training documentation must include the following elements:
   1. Employee's name
   2. Employee's identification number
   3. Date of training
   4. Trainer's name
   5. Knowledge verification quiz

   Upon completion of this training, the designated trainer will transfer all documentation to the Safety Department for records retention.

C. Escanaba Operations will perform refresher training when there is reason to believe that an employee, who has received prior training, no longer demonstrates proficiency and skills required by this program. Cases where refresher training are required include, but are not limited to:
   1. changes in the workplace render previous training obsolete
   2. changes in the types of personal fall protection systems or equipment used renders previous training obsolete
   3. inadequacies in covered employees knowledge or use of personal fall protection systems or equipment demonstrates the employee has not retained the necessary level of understanding or skill

V. PROCEDURES AND GUIDELINES FOR PERSONAL FALL ARREST SYSTEMS

Below are the requirements to be followed whenever using personal fall arrest systems:

A. Any operations employee must utilize fall protection when working at unguarded elevations of four feet or greater. Acceptable fall arrest systems include:
   1. full body harness and lanyard
   2. safety net
   3. approved guardrail system

B. Fall protection will not be required when employees are unloading railcars of corrosive materials. The potential hazards of not being able to remove yourself from a serious release of corrosive material, is deemed more potentially hazardous than not utilizing fall protection. However, full body protection through the use of PPE is required as outline in the personal protective equipment Policy.

C Body belts are never to be used as part of a personal fall arrest system. The use of a safety belt in combination with a lifeline or lanyard shall be for restricting the movement of a person towards a potential fall hazard only.

D. A full body harness is the only approved form of personal protective equipment to be used as part of a personal fall arrest system
E. All anchorage for personal fall arrest systems will be independent of any anchorage being used to support or suspend platforms
F. Anchorages must be used as follows:
   1. anchorage must be part of a complete personal fall arrest system that has a rating of at least 5000 pounds per person
   2. used only under the supervision of a person familiar with the work being done and the hazards associated with that work
   3. rigging must be completed in a manner that an employee can not free fall more than six feet or meet any lower levels
   4. It must bring an employee to a complete stop and limit maximum deceleration distance to no more than three and one half feet
   5. Anchor points should be at shoulder height or above whenever possible.
G. The attachment point of the body harness will be in the center of the user's back near shoulder level or above the user's head
H. All personnel intending to use a personal fall arrest system will inspect all components of that system prior to its use. The inspection will examine for wear, damage and other deterioration. Any components found to be defective will be removed from service immediately and destroyed
I. Escanaba Operations employees or contractors will not anchor personal fall arrest systems to guardrails, hoists, conduit or electrical cable trays

VI. PROCEDURE AND GUIDELINES FOR GUARDRAIL SYSTEMS

Open sided floors, platforms and runways greater than 4 feet in height will have a standard guardrail installed.
Top edge height of guardrails will be 42 inches above the walking/working surface level.

Escanaba Operations will install midrails, screens, mesh, intermediate, vertical members, or the equivalent intermediate structural members of the top edge of the guardrail system and the walking/working surface when there is an opening of at least 21 inches in height. Guardrail/midrail requirements include:

A. Midrails that are installed must be midway between the top edge of the guardrail system and the walking/working surface
B. Guardrail surfaces will be installed in a manner that eliminates the potential for lacerations, punctures and snagging of clothing

C. Top rails and midrails will be at least one and one-half inch nominal diameter or thickness to prevent cuts or lacerations
D. For pipe railings, posts, top rails and intermediate railings, the diameter will be at least one and one-half inches nominal diameter (schedule 40) piping with posts spaced not more than eight feet apart on center
E. Harness and lanyard will be required for personnel on a scaffold when a standard railing with a mid-rail is not in place.

VIII. PROCEDURES AND GUIDELINES FOR PROTECTION FROM FALLING OBJECTS

Below are the general requirements to follow to prevent injury from being struck by falling objects:
A. Toeboards will be four inches in vertical height. This measurement is from the top edge to the level of the walking/working surface. Using a variance of three and one-half inches is acceptable. Area supervision and the Safety Department must approve and document any variance
B. Toeboards will not have more than one-quarter of an inch clearance above the walking/working surface and the bottom of the toe board
C. Toeboards will be constructed of a solid material
D. Where tools, equipment or other materials are stacked higher than the top edge of a toeboard screening will be installed from the walking/working surface to the guardrail for a distance sufficient to protect individuals below
E. Materials or equipment will not be stored within six feet of a roof's edge unless guardrails with toeboards are installed at the roof's edge

IX. CONTRACTOR REQUIREMENTS

Any contractor engaged in activities at Escanaba Operations shall follow Escanaba mill policy.

X SCAFFOLDING

Below are the hazard controls and safe work practices to follow when site personnel are using scaffolds.
A. Working from Scaffolds
    a. All scaffolds must be designed by a qualified person and installed under supervision of a competent person.
    b. Do not access scaffolds until the competent person has completed the work shift inspection and has authorized access.
    c. Follow all requirements established by the competent person or as identified on the scaffold tag.
    d. Do not access scaffolds that are damaged or unstable at any time and for any reason.

e. Only access scaffolds by means of a ladder, stair tower, ladder stand, ramp, integral prefabricated scaffold access, or other equivalent safe means of access. Scaffold cross bracing shall not be used to access scaffold platforms.
f. Remain within the scaffold guardrail system when provided. Leaning over or stepping across a guardrail system is not permitted.
g. Use of personal fall arrest systems when required by the competent person and when working from suspension scaffolds or boatswains' chairs.
h. Do not stand on objects (boxes, buckets, bricks, blocks, etc.) or ladders on top of scaffold platforms to increase working height unless the platform covers the entire floor area of the room.
i. Do not overload scaffold planks over their rated weight bearing capacity. When feasible, place loads directly over the scaffolds vertical weight bearing structures.

B. Supported Scaffolds

This section covers the erection, use, and dismantling of supported scaffolds. Supported scaffolds consist of one or more platforms supported by outrigger beams, brackets, poles, legs, uprights, posts, frames, or similar rigid support. Supported scaffolds include frame, fabricated frame, tube and coupler, pole, bricklayers, and step platform. The common requirements for all supported scaffolds are addressed here; the competent person shall ensure scaffold type specific requirements are included as applicable.

a. Contractors or employees erecting, dismantling, or working on scaffolds must complete appropriate training.
b. Qualified person(s) shall be assigned to direct and oversee erection, dismantling, and use of scaffolds. Additionally, they must inspect scaffolds each day prior to use.
c. Stationary scaffolds over 125 feet in height and rolling scaffolds over 60 feet in height must be designed by a professional engineer.
d. A tag and permit system shall be used to inform personnel of the construction status of the scaffold. At a minimum, the system used shall inform users when a scaffold is complete and safe to be used and when a scaffold is under construction and is not ready to be used. When additional precautions are required to use the scaffold safely, for example, the use of fall protection systems, the system shall identify the precautions to be taken. The tag or permit shall be placed at each means of access to the scaffold. The competent shall be responsible for the tag and permit system.
e. Scaffold shall be inspected daily by competent person. Scaffolds should be marked with the following color coding:
    i. Green Tag- Indicates the scaffold has passed inspection and should be dated with the last inspection date.
    ii. Yellow Tag- Indicates the scaffold is authorized for conditional use in conjunction with additional fall protection. The tag should identify the deficiency preventing the scaffold from passing inspection.
    iii. Red Tag- The scaffold is deemed to be unsuitable for use in its current state.

f. A daily safety briefing shall be conducted with all scaffold personnel to discuss the work planned for the day and the safety requirements to be followed.
g. Scaffolds and scaffold components must be capable of supporting, without failure, their own weight and at least 4 times their maximum intended load.
h. The site must be inspected to determine ground conditions, strength of supporting structure, and for the proximity of electric power lines, overhead obstructions, wind conditions, the need for overhead protection or weather protection coverings.
i. Supported scaffolds must be set on base plates, mudsills, or other adequate firm foundation.
j. Frame spacing and mudsill size can only be determined after the total loads to be imposed on the scaffold and the strength of the supporting soil or structure are calculated and considered. This analysis must be done by a qualified person.
k. Base plates or screw jackets with base plates must be in firm contact with both the sills and the legs of the scaffolding. Compensate for uneven ground with screw jacks with base plates. Do Not Use unstable objects such as blocks, loose bricks, etc.
l. Scaffolds and scaffold components must be inspected for visible defects before each shift by a competent person, and after each occurrence that could affect a scaffolds integrity.
m. Maintain scaffolding and materials at least 10 feet from overhead power lines for voltages of 50kV or less, and 10 feet plus .4 inch for every 1kV over 50 kV.
n. All portable electric equipment must be protected by ground-fault circuit interrupters (GFCIs) or an assured equipment grounding conductor program.

C. Suspended Scaffolding

Suspension scaffolds consist of one or more platforms suspended by ropes or other non-rigid means from an overhead structure(s). The common requirements for suspended scaffolds are addressed here; the competent person shall ensure scaffold type specific requirements are included as applicable.

a. Contractors or employees erecting, dismantling, or working on scaffolds must complete appropriate training. Staff must also receive project-specific scaffold training from a qualified person. Staff shall not use scaffold systems for which they have not been trained.
b. A scaffold competent person shall be assigned to direct and oversee the erection, dismantling, and use of scaffold. Additionally, they must be inspected.

XI AERIAL LIFTS

All operators of aerial lifts (vertical elevating lift or extended boom lift) must receive training, pass a written exam and demonstrate their proficiency at operating the equipment. Both Federal and State OSHA programs require tie-off (harness & lanyard) when working in an extended boom lift. The use of a body harness or a restraining belt with a lanyard attached to the boom or bucket is required per

manufacturer instructions. Training must be documented and maintained on file until retrained. Refer to Powered Aerial Lift Policy.

XII REVIEWS AND REVISIONS

This Elevated Work Policy will be reviewed at least annually or as processor regulatory changes dictate. Any program changes made will be communicated to all affected employees and incorporated into the training program. Revision dates and policy numbers will be maintained to reflect any revision or review activity.