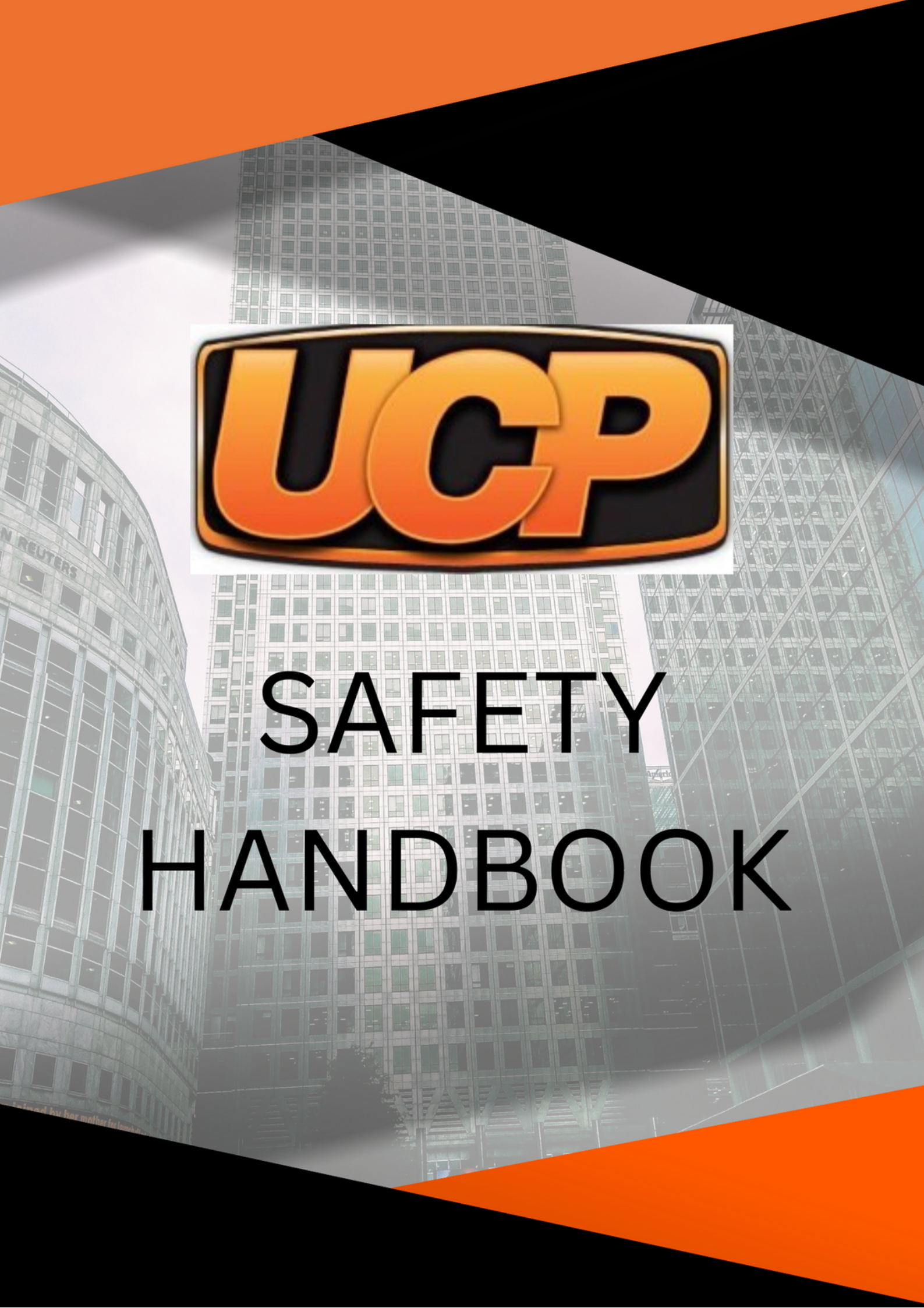

SAFETY HANDBOOK

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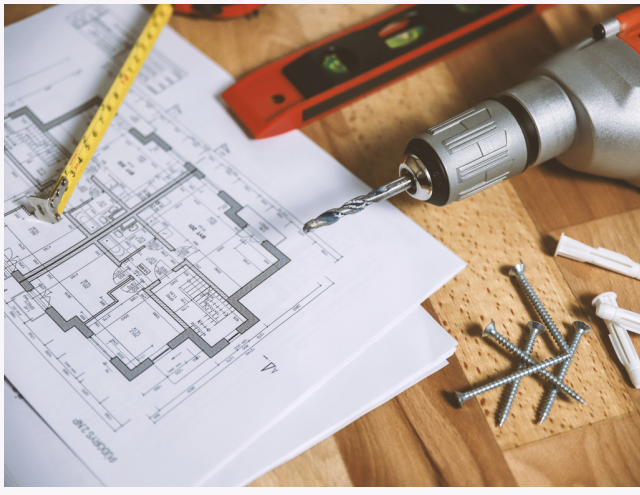


Welcome Message

Dear valued members of our organization,

It is with great pleasure that we welcome you to our UCP safety binder. This binder is an essential tool that contains important information and guidelines aimed at promoting safety and reducing risk within our organization.

At UCP, we are committed to ensuring that everyone in our organization remains healthy and happy. We understand that accidents and incidents can happen, but we believe that by working together and adhering to the guidelines and procedures outlined in this binder, we can minimize these risks.

Our commitment to safety extends to each and every contact we have. We also strive to be accountable and responsible. We believe that by taking a proactive approach to safety and risk reduction, we can help create a better working environment for all.

We encourage you to take the time to familiarize yourself with the contents of this binder and to follow the guidelines and procedures outlined within. If you have any questions or concerns, please do not hesitate to reach out to our safety team:

Scott Hollingshead
(435) 429-2699
Scott@psucp.com

Thank you for your commitment to safety and for helping us create a healthy and happy work environment.

Sincerely,
UCP Staffing Team

ACCIDENT PREVENTION POLICY

Scope and Application

UCP Staffing provides a safe and healthful workplace and promoting safe and efficient operations. A Safety and Health Manual is in place and all staff are trained at orientation, as well as annually thereafter via the manual. Additionally, for every position there is a respective Job Safety Analysis outlining specific safety and health behaviors and responsibilities. These are mandatory. UCP Staffing has zero tolerance for not following safety and health requirements.

This policy applies to all locations or projects where any potential for an accident is present.

Your job may require specific equipment or apparel occasionally based on a Hazard Assessment completed for your position. This may be supplied by the organization, or it may be your personal responsibility. When in doubt about the need to use specialized equipment or protective wear, ask.

Implementation

It is the responsibility of management to administer this procedure. It is the responsibility of any employee or contractor involved to adhere fully to this policy.

Take all reasonable precautions to guard your health and well-being, as well as that of co-workers. Your cooperation and assistance are necessary for UCP Staffing to extend a safe work effort.

The following is not an inclusive list, but reflects the conduct required for employees to perform their jobs safely:
1. Use necessary safety equipment as required based on the tasks performed.
2. Keep walkways and work areas clear.
3. Make sure there is no horseplay.
4. Cooperate in any accident or incident investigation.
5. Wear seat belts while operating any vehicle while on Organization business.

If you have questions about workplace hazards or concerns, contact your supervisor.

Procedure

1.0 Employee Responsibilities for Injuries and Accidents

ACCIDENT PREVENTION POLICY

A. UCP Staffing has reporting procedures for all work related injuries and unsafe conditions, as well as Near Misses.

1. A Near Miss is a situation that could have resulted in an injury, but did not.

2. A process should be in place to track and trend all incidents and near misses.

a) This provides valuable data to mitigate loss sources.

B. These procedures are mandatory; not following these procedures will result in disciplinary action:

1. Knowingly disregarding a safety procedure is grounds for immediate termination.

a) All injuries must be reported immediately to your supervisor.

b) If your injury requires medical care, you will receive treatment, and if needed we will transport you or meet you at the treating physician.

c) When necessary, temporarily modified duties will be provided by the doctor, and we will help you get back to work immediately.

d) All work related injures will be reviewed by the Safety and Risk Manager.

e) Any unsafe conditions noted are to be reported to our safety hotline (435) 429-2699.

2. It is your responsibility to remain within any physical limitations established by your treating physician while working in a light duty capacity.

a) Failure to do so may result in disciplinary action up to and including termination.

b) It is your responsibility to notify your supervisor immediately of all changes in your medical condition, physical limitations, etc.

c) All communication and contact should be performed in accordance with established Organization policies and procedures.

Drug & Alcohol Policy

2.0 (NOTE: this section requires review and modification by your organization's legal counsel to specific regional rules and statutes and your organization's written drug policy)

A. UCP Staffing is strongly committed to providing a safe and productive working environment for our employees and products and services of the highest possible quality.

1. We recognize that employees who are unable to do their best work in a safe manner, due to the effects of alcohol or drug use, interfere with these commitments.

B. We expect and require the support of all of our employees in meeting our commitments to safety, quality and service.

1. Each employee is expected and required to report for work on time and in appropriate mental and physical condition to work safely and effectively.

C. Rules

1. The use, sale, transfer or possession of any controlled substance on Organization premises, in Organization vehicles or while conducting Organization business off Organization premises is prohibited.

2. Reporting for work, working or engaging in any activity on the Organization's behalf with a prohibited substance in your system is prohibited.

3. Each employee must report to his or her immediate supervisor the use of any prescription or over-the-counter medication which may inhibit the employee's ability to safely and effectively perform job duties.

a) It is the employee's responsibility to determine whether any prescribed drug or other medication may impair job performance.

b) Employees are also required to provide medical authorization to work, upon request.

4. In accordance with our Drug Policy, employees covered by the Drug Policy are required to submit to drug testing when required, to complete related paperwork and to participate and cooperate fully in specimen collection procedures.

5. Violation of these rules will subject an employee to disciplinary action up to and including discharge.

D. Testing

1. Drug testing may be required in the following situations and in accordance with our Drug Policy:

a) Pre-employment, following a conditional offer of employment.

b) Annual physical.

c) When there is reasonable suspicion, as determined by the Organization, that an employee may be in violation of this policy.

d) When an employee has been determined by the Organization to have caused or contributed to an accident or injury.

e) On a random basis.

2. Alcohol testing may be required when there is reasonable suspicion, as determined by the Organization, that an employee is under the influence of a controlled substance.

3. Disciplinary action may be imposed when there is a positive test for the presence of a controlled substance in violation of this policy up to and including termination. If eligible for continued employment, an employee will be required to participate in an Employee Assistance Program.

E. Treatment

1. If you think you may have a problem with drugs or alcohol, we encourage you to share your concerns with your Supervisor, who will assist you in the process of obtaining an evaluation.

2. No employee coming forward voluntarily for such help will be subject to disciplinary action solely as a result of seeking assistance.

PREVENCIÓN DE ACCIDENTES

Alcance y aplicación

UCP Staffing se compromete a proporcionar un lugar de trabajo seguro y saludable y a promover operaciones seguras y eficientes. Se cuenta con un Manual de seguridad y salud y todo el personal está capacitado en el período de orientación, así como todos los años a través del manual. Además, para cada puesto de trabajo hay un Análisis de seguridad en el trabajo (JSA) correspondiente que esboza las conductas y responsabilidades específicas en lo que respecta a la salud y la seguridad. Estos son obligatorios. UCP Staffing tiene una política de tolerancia cero para el incumplimiento en materia de salud y seguridad.

En ciertas ocasiones, su trabajo puede requerir equipos o indumentaria específica según la Evaluación de Riesgos realizada para su puesto. Estos pueden ser suministrados por la empresa, o pueden ser su responsabilidad personal. En caso de duda sobre la necesidad de utilizar equipos especializados o ropa de protección, pregunte.

Implementación

Tome todas las precauciones razonables para proteger su salud y bienestar, así como los de sus compañeros de trabajo. Su cooperación y asistencia son imprescindibles para que UCP Staffing siga trabajando por un entorno seguro.

La siguiente no es una lista exhaustiva, pero ilustra la conducta de los empleados para realizar su trabajo con seguridad:
A. Utilice el equipo de seguridad requerido en base a las tareas realizadas.
B. Mantenga los pasillos y áreas de trabajo sin obstrucciones.
C. Asegúrese de que no haya bromas pesadas.
D. Coopere en todas las investigaciones de accidentes e incidentes.
E. Use el cinturón de seguridad al conducir un vehículo para realizar tareas relacionadas con la organización.

Si tiene alguna pregunta o inquietud acerca de los riesgos laborales, comuníquese con su supervisor.

Procedimiento

1.0 Responsabilidades del empleador por daños y accidentes

PREVENCIÓN DE ACCIDENTES

A. UCP Staffing también tiene procedimientos de denuncia para todas las lesiones relacionadas con el trabajo y las condiciones inseguras, así como los casi-accidentes.

1. Un casi-accidente es una situación que podría han provocado una lesión, pero no lo hizo.

a) Esto proporciona datos valiosos para mitigar y eliminar las fuentes de pérdidas.

B. Estos procedimientos son obligatorios; la no observación de los mismos dará lugar a medidas disciplinarias.

1. No tener en cuenta un procedimiento de seguridad intencionalmente es motivo de despido inmediato.

a) Todas las lesiones deben ser notificadas de inmediato a su supervisor.

b) Si su lesión requiere atención médica, usted recibirá el tratamiento, y si es necesario lo transportaremos o nos encontraremos con usted en el consultorio del médico.

c) Cuando sea necesario, el médico indicará tareas temporalmente modificadas, y nosotros lo ayudaremos a que se reincorpore al trabajo de inmediato.

d) Todas las lesiones relacionadas con el trabajo serán revisadas por el gerente de seguridad.

e) Todas las condiciones inseguras que se detecten deben ser notificadas a nuestra línea de seguridad (435) 429-2699

2. Es su responsabilidad mantenerse dentro de las limitaciones físicas establecidas por su médico mientras trabaja con tareas livianas modificadas.

a) De no hacerlo, pueden aplicarse medidas disciplinarias o incluso el despido.

b) Es su responsabilidad notificar a su supervisor de inmediato acerca de todos los cambios en su estado de salud, limitaciones físicas, etc.

c) Toda la comunicación y el contacto se deben realizar de conformidad con las políticas y procedimientos establecidos por la organización.

Política de Drogas y Alcohol

2.0 A. UCP Staffing está firmemente comprometida a proporcionar un entorno de trabajo seguro y productivo para nuestros empleados, y productos y servicios de la más alta calidad posible.

1. Reconocemos que los empleados que no son capaces de trabajar bien y de manera segura debido a los efectos del consumo de alcohol o drogas interfieren con este compromiso.

B. Esperamos y solicitamos el apoyo de todos nuestros empleados en el cumplimiento de nuestro compromiso con la seguridad, la calidad y el servicio.

1. Cada empleado está obligado a asistir al trabajo en el horario apropiado y en condiciones mentales y físicas adecuadas para trabajar con seguridad y eficacia.

Reglas

C.

1. Queda terminantemente prohibido el uso, venta, transferencia o posesión de cualquier sustancia controlada en las instalaciones de la Organización, en los vehículos de la Organización o durante la realización de tareas relacionadas con la Organización.

2. Queda terminantemente prohibido asistir al trabajo, trabajar o realizar cualquier actividad en nombre de la Organización con una sustancia prohibida en su organismo.

PREVENCIÓN DE ACCIDENTES

3. Todos los empleados deben informar a su supervisor de inmediato sobre el uso de cualquier medicamento recetado o de venta libre que pueda inhibir la capacidad del empleado para realizar sus tareas de forma segura y eficaz.

a) Es responsabilidad del empleado determinar si un medicamento recetado u otros pueden afectar el desempeño de su trabajo.

b) Los empleados también deben proporcionar una autorización médica para trabajar si así se les solicita.

4. Según nuestra Política de Drogas, los empleados cubiertos por la Política de Drogas tienen la obligación de someterse a pruebas de drogas cuando sea necesario, de completar los documentos relacionados y de participar y cooperar plenamente en los

D. procedimientos de obtención de muestras.

5. La violación de estas reglas hará que el empleado quede sujeto a una acción disciplinaria, que puede incluir el despido.

Pruebas

1. Las pruebas de drogas pueden ser necesarias en las siguientes situaciones y de acuerdo con nuestra Política de Drogas:

a) Pre-empleo, a raíz de una oferta condicional de empleo.

b) Examen físico anual.

c) Cuando hay una sospecha razonable, según lo determine la Organización, de que un empleado puede estar violando esta política.

d) Cuando la Organización haya determinado que un empleado ha causado o contribuido a un accidente o lesión.

E. e) De forma aleatoria.

2. Las pruebas de alcohol pueden ser necesarias cuando hay una sospecha razonable, según lo determine la Organización, de que un empleado está bajo la influencia de una sustancia controlada.

3. En caso de que la prueba de sustancias controladas resulte positiva, en violación de esta política, pueden tomarse medidas disciplinarias e incluso el despido. Si un empleado es elegible para el empleo continuo, deberá participar en un Programa de Asistencia a Empleados.

Tratamiento

6. Si cree que tiene un problema con las drogas o el alcohol, lo animamos a compartir sus inquietudes con su supervisor, quien le ayudará en el proceso de obtención de una evaluación.

7. Un empleado que se presenta voluntariamente para recibir este tipo de ayuda no estará sujeto a medidas disciplinarias únicamente por solicitar ayuda.

AERIAL LIFTS

Scope and Application

To provide requirements for safe use and proper operation of aerial lifts and scissor lifts.

This applies to all locations or projects involving the use of scissors lifts, extensible boom platforms, aerial ladders, articulating boom platforms, vertical towers or any combination thereof.

Implementation

It is the responsibility of the management to administer this procedure. It is the responsibility of any employee or contractor involved to adhere fully to this policy.

General Requirements

1.0 Equipment Requirements

A. Aerial lifts acquired for use after January 22, 1973, shall be designed and constructed in conformance with the applicable requirements of the American National Standards for "Vehicle Mounted Elevating and Rotating Work Platforms," ANSI A92.2-1969, including appendix. Procedures.
B. Lifts must utilize standard guardrails unless specifically required by the manufacturer.

2.0 Equipment Modifications

A. Never field modify an aerial lift for uses other than those intended by the manufacturer.
B. Any modifications for uses other than those intended by the manufacturer must have authorization from the manufacturer that is certified in writing.
C. Alteration of the insulated portion of an aerial lift that may reduce the insulating value is not permitted.

3.0 Documentation

A. The manufacturer's operating instruction manual must be available on site.
B. File the following documents in the Shop/Project Health and Safety File.
1. Copy of the cover page of the Manufacturer's Operation Manual.
2. Training documentation.
3. List of authorized employees.
4. Daily inspections.

4.0 Operator Training

A. Only trained and authorized personnel are allowed to operate aerial lifts.

5.0 Maintenance and Inspection

AERIAL LIFTS

A. Inspect the unit for unsafe conditions each day prior to use. Units that have been damaged or weakened from any cause must be taken out of service until repairs are completed.
B. Test the lift controls every day, prior to operation, to ensure they are in safe working order.

6.0 Fall Protection

A. Wear fall protection in the form of a full body harness and lanyard attached to the manufacturer's prescribed anchorage point.
B. Fall protection is not required for scissors.

7.0 Set Up

A. Requires that both lower and platform controls be plainly marked as to their function.
B. Survey the route to be traveled immediately prior to the work trip to check for overhead obstructions, holes in pavement, slopes, ditches, or other potential hazards.
C. Set the braking system before elevating the basket.
D. Install wheel chocks before using an aerial lift on an incline, provided they can be safely installed.
E. Electrically ground or barricade aerial lifts when working near energized lines or equipment and consider the lift to be energized equipment.

8.0 Operation

A. Stand firmly on the floor of the basket when working from an aerial lift. Sitting or climbing on the edge of the basket and/or use of planks, ladders, or other devices for work position are prohibited.
B. Never exceed the boom and basket load limits set by the manufacturer.
C. Do not pass equipment between a pole or structure and an aerial lift while an employee working from the basket is within reaching distance of energized conductors or equipment that are not covered with insulating protective equipment.
D. Do not operate lower controls unless permission has been obtained from the employee in the basket, except in case of emergency.
E. Aerial lift truck must not be moved when the boom is not secured in traveling position and with workers in the basket.
F. Aerial ladders must be secured in the traveling position by the locking device on top of the truck cab, and the manually operated device at the base of the ladder before the truck is moved for travel.
G. Belting off to another structure or pole, while working from the lift is not permitted.

AERIAL LIFT SAFETY EVALUATION

Set up a small course for trainees to go through. Set the course up such that trainees need to perform all functions of Elevated Work Platforms (e.g., backing, raising load and placing it, moving with load, moving through a blind spot, handling a pedestrian approaching vehicle, etc.).

NOTE: set up the course in a safe area away from others and traffic; ASSURE all are supervised by a competent person and have them complete their evaluation only after their training and when comfortable with the aerial lift or elevated work platform.

Employee: _____ Evaluator: _____

Date: _____ Aerial lift video/quiz review date: _____

Employee written test passed: Yes _____ No _____

EVALUATION ITEM YES/NO

1. Does pre-inspection to manufacturer requirements of equipment _____
2. Knows equipment operating and manufacturer instructions, and limitations _____
3. Drives at acceptable speeds _____
4. Assures good visibility prior to moving through transition points _____
5. Looks behind before and while backing _____
6. Operates equipment smoothly without abrupt movement _____
7. Verifies load capacity and prevents overloading of lift _____
8. Lowers lift when moving _____
9. Uses fall protection and never stands on rails or moves out of work platform _____
10. Guardrails in place and gates latched _____
11. Slows at all transition points _____
12. Stops at blind spots before proceeding _____
13. Knows and never exceeds posted weight limits with gear _____
14. Assures controls and alarms are operative _____
15. Assures a clear path of travel before raising the lift _____
16. Verification of clearance near power lines _____
17. Aware of need for lock-out for maintenance or work _____
18. For fueling, knows to control ignition sources (e.g., smoking, engine off, etc.) _____
19. Keeps ALL out of fall zone and away from elevated platform _____
20. Maintains 10 feet of clearance when boom is raised _____
21. Watches for overhead hazards, electrical, and pinch points _____
22. Proper precautions to shut down and charge lift (if necessary), lower and remove key, wears skin and eye protection when handling battery _____
23. Takes precautions for entering enclosed spaces and prevents exhaust exposure _____
24. Excellent use of controls _____

Other observations:

_____
_____
_____
_____

PLATAFORMAS AÉREAS

Alcance y aplicación

Proporcionar requisitos para el uso seguro y el correcto funcionamiento de las plataformas aéreas y elevadores de tijera.

Esto se aplica a todos los lugares o proyectos que impliquen el uso de elevadores de tijera, plataformas de brazo extensible, escaleras aéreas, plataformas de brazo articulado, torres verticales o cualquier combinación de estos.

Implementación

Es responsabilidad de la dirección administrar este procedimiento. Es responsabilidad de cualquier empleado o proveedor involucrado cumplir plenamente con esta política.

Requisitos generales

1.0 Equipos requeridos

A. Las plataformas aéreas adquiridas para usar después del 22 de enero de 1973 deberán estar diseñadas y construidas de conformidad con los requisitos aplicables de la American National Standards para "Vehicle Mounted Elevating and Rotating Work Platforms" (Plataformas de Trabajo por Elevación y Rotación Montadas en Vehículos), ANSI A92.2-1969, incluyendo el apéndice. Procedimientos.

B. Las plataformas deben utilizar barandillas estándar a menos que el fabricante requiera específicamente otra cosa.

2.0 Modificaciones de equipos

A. Nunca modifique una plataforma aérea en campo para usos que no sean los previstos por el fabricante.

B. Las modificaciones para usos que no sean los previstos por el fabricante deben tener autorización certificada por escrito del fabricante.

C. No se permiten las alteraciones de la parte aislada de una plataforma aérea que puedan reducir su valor aislante.

3.0 Documentación

A. El manual de instrucciones de operación del fabricante debe estar disponible in situ.

B. Archivar los siguientes documentos en el Legajo de Salud y Seguridad del Proyecto/Compra.

1. Copia de la portada del Manual de Operación del Fabricante.
2. Documentación de capacitación.
3. Lista de empleados autorizados.
4. Inspecciones diarias.

4.0 Capacitación del operador

A. Solo el personal capacitado y autorizado puede operar plataformas aéreas.

PLATAFORMAS AÉREAS

5.0 Mantenimiento e inspección

A. Inspeccionar la unidad para detectar condiciones inseguras cada día antes de utilizar. Las unidades dañadas o debilitadas por cualquier motivo deben retirarse del servicio hasta que se realicen las reparaciones.
B. Probar los controles de elevación cada día, antes de la operación, para garantizar que funcionen de manera segura.

6.0 Protección contra caídas

A. Usar protección contra caídas en forma de un arnés de cuerpo completo y amarre conectado al punto de anclaje prescrito por fabricante.
B. La protección contra caídas no es obligatoria para las tijeras.

7.0 Preparación

A. Requiere que los controles inferiores y de la plataforma tengan su función claramente marcada.
B. Supervisar la ruta por la que debe viajar inmediatamente antes del viaje para detectar obstrucciones aéreas, agujeros en el pavimento, pendientes, zanjas u otros peligros potenciales.
C. Activar el sistema de frenado antes de elevar la cesta.
D. Instalar las cuñas de las ruedas antes de utilizar una plataforma aérea en una pendiente, siempre que se puedan instalar de manera segura.
E. Conectar eléctricamente a tierra o barricar en las plataformas aéreas al trabajar cerca de líneas o equipos de alta tensión, y considerar a la plataforma como un equipo energizado.

8.0 Operación

A. Pararse firmemente en el suelo de la cesta al trabajar desde una plataforma aérea. Está prohibido sentarse o colgarse del borde de la canasta, así como el uso de tablones, escaleras u otros dispositivos de posición.
B. Nunca sobrepasar los límites de carga del brazo y de la cesta indicados por el fabricante.
C. No pasar equipos entre un poste o estructura y una plataforma aérea mientras un empleado que trabaja desde la cesta está al alcance de conductores o equipos energizados que no estén cubiertos con equipos de protección aislante.
D. No operar los controles inferiores a menos que el empleado en la cesta lo haya autorizado, excepto en caso de emergencia.
E. No se debe mover la plataforma aérea si el brazo no está asegurado en posición de viaje y con trabajadores en la cesta.
F. Las escaleras aéreas deben fijarse en la posición de viaje mediante el dispositivo de bloqueo en la parte superior de la cabina del camión y el dispositivo de accionamiento manual en la base de la escalera antes de que el camión se mueva para viajar.
G. No está permitido el uso de correas con otra estructura o poste mientras se trabaja desde la plataforma.

EVALUACIÓN DE SEGURIDAD DE PLATAFORMAS AÉREAS

Cree un pequeño curso para que realicen los alumnos. Diseñe el curso de manera tal que los alumnos deban realizar todas las funciones de operación del montacargas (p. ej., retroceder, elevar la carga y colocarla, moverse con carga, moverse a través de un punto ciego, lidiar con un peatón que se aproxima al vehículo, etc.).

NOTA: realice el curso en una zona segura lejos del tráfico y de otros vehículos; ASEGÚRESE de que todos sean supervisados por una persona competente y haga que completen la evaluación solo después de la capacitación, una vez que estén cómodos con el montacargas.

Empleado: _____ Evaluador: _____

Fecha: _____ Fecha de revisión de video/cuest. de plat. aérea:_____

El empleado aprobó la prueba escrita: Sí _____ No _____

ELEMENTO DE EVALUACIÓN SÍ/NO

1. Realiza inspección previa según los requerimientos del fabricante del equipo _____
2. Conoce instrucciones de op. del equipo y limitaciones del fabricante _____
3. Conduce a velocidades aceptables _____
4. Verifica visibilidad antes de moverse a través de puntos de transición _____
5. Mira hacia atrás antes y durante el retroceso _____
6. Opera equipo suavemente, sin movimientos abruptos _____
7. Verifica la capacidad de carga y evita la sobrecarga de la plataforma _____
8. Baja la plataforma al moverse _____
9. Utiliza protección contra caídas y nunca se para sobre los rieles ni se mueve fuera de la plataforma de trabajo _____
10. Barandillas en su lugar y puertas trabadas _____
11. Disminuye la velocidad en todos los puntos de transición _____
12. Se detiene en los puntos ciegos antes de continuar _____
13. Conoce y nunca supera los límites de peso publicados con el equipo _____
14. Comprueba que funcionen los controles y alarmas _____
15. Comprueba que haya un paso despejado antes de elevar la plataforma _____
16. Verificación de despeje cerca de líneas eléctricas _____
17. Consciente de la necesidad de lock-out para mantenimiento o trabajo _____
18. Para la carga de combustible, sabe controlar fuentes de ignición (p. ej., no fumar, motor apagado, etc.) _____
19. Mantiene a TODOS fuera de zona de caídas y alejados de plataforma elevada _____
20. Mantiene 10 pies de distancia cuando el brazo está levantado _____
21. Presta atención a peligros elevados y eléctricos y a puntos de compresión _____
22. Precauciones apropiadas para apagar y cargar la plataforma (si es necesario), bajar y quitar la llave, usa protección para piel y ojos al manipular la batería _____
23. Toma precauciones al entrar en espacios cerrados y evita exposición al escape _____
24. Excelente uso de los controles _____

EVALUACIÓN DE SEGURIDAD DE PLATAFORMAS AÉREAS

Otras observaciones:

_____
_____
_____
_____

BACK INJURY PREVENTION AND ERGONOMICS EVALUATION

Scope and Application

This procedure applies to operations where personnel perform manual lifting and have the potential for material handling and ergonomic stresses.

The purpose of this procedure is to prevent back injuries and Work-Related Muscular Skeletal Disorders (WMSDs) or cumulative trauma injuries to personnel.

Implementation

Implementation of this program is the responsibility of on-site management.

Procedure

1.0 Safe Lifting Practices Management

A. Evaluate all assignments to assess if it can be completed without risk of back injury, e.g., moving boxes, computers, equipment, etc.

B. Require that heavier items are stored on lower shelving units; ideally below knee and shoulder height. C. Recognize lifting-intensive tasks (poor lift design, high frequency, and/or excessive weight),

and provide the means by which personnel can perform lifting duties without risk of injury, e.g. carts, dollies, trucks with lift gates.

D. Secure outside assistance if personnel cannot safely accomplish the job, e.g., additional staff,

contract movers.

E. Contact the supervisor and or manager when assistance is necessary to evaluate a lifting task that

may pose a back injury risk to assigned personnel.

F. Ensure that personnel receive the required training outlined below.

2.0 Training Management

A. Require that personnel who may have lifting as part of their duties receive training that includes the following topics:

1. Recognizing potential hazards and how to correct and prevent them.
2. Proper workstation set up and maintenance.
3. How to avoid unnecessary physical stress and strain.
4. How to comfortably handle lifting jobs without undue strain.
5. Proper use of equipment.
6. Stretching and strengthening exercises to minimize risk of injury.

B. Complete training prior to an employee being assigned to a task that involves lifting.

3.0 Office Moves and Relocations

A. Utilize professional movers for moving office furniture for both offsite moves and interoffice moves.

1. Desks, file cabinets, bookcases, etc.
2. Intensive moving of file boxes
3. Any other heavy equipment or materials.

B. Ensure that the moving contractor is appropriately evaluated and insured.

C. Assure as applicable that all unstable items (e.g., bookcases) are secured to prevent tip over in transit, and when placed.

4.0 Workplace Evaluations

A. Complete at all workstations.

B. Determine if stresses exist and what prevention injury controls will need to be put in place.

C. Use the forms at the end of this procedure.

1. Do “Caution Job Assessment” first.
2. Complete a “Risk Factor Assessment” for any “Caution Zone Task” that is identified.

a) “Risk Factor Assessments” are used to determine specific causal factors and to work on designing these away.

BACK INJURY PREVENTION AND ERGONOMICS EVALUATION

5.0 Medical Management

A. Ensures that all employees, existing and prospective, are properly placed based on the demands of a job and the capacities of the individual.

B. Employees with reported cumulative trauma or work-related muscular skeletal disorders (WMSDs) are provided with the following:

1. Access to prompt and effective medical evaluation, treatment and follow-up.
2. Work task assessments to identify any stresses and possible corrective actions.
3. Work restrictions recommended by the medical provider.

BACK INJURY PREVENTION AND ERGONOMICS EVALUATION

Appendix A: Computer Workstation Checklist

Work Area _____ Date _____

Conducted By _____Reviewed By _____

1. Does the workstation ensure proper worker posture, such as: YES NO

Horizontal thighs?

Vertical lower legs?

Feet flat on floor or footrest?

Neutral wrists?

2. Does the chair:

Adjust easily?

Have a padded seat with a rounded front?

Have an adjustable backrest?

Provide lumbar support?

Have casters?

3. Are the height and tilt of the work surface on which the keyboard is located adjustable?

4. Is the keyboard detachable and adjustable?

5. Do keying actions require minimal force?

6. Is there an adjustable document holder?

7. Are arm rests provided where needed?

8. Are glare and reflections avoided?

9. Does the monitor have brightness and contrast controls?

10. Do the operators judge the distance between eyes and work to be satisfactory for their viewing needs?

11. Is there sufficient space for knees and feet?

12. Can the workstation be used for either right- or left-handed activity?

13. Are adequate rest breaks provided for task demands?

Appendix A: Computer Workstation Checklist (continued)

	Yes	No
14. Are high stroke rates avoided by		
Job rotation?		
Self-pacing?		
Adjusting the job to the skill of the worker?		
15. Are employees trained in		
Proper postures?		
Proper work methods?		
When and how to adjust their workstations?		
How to seek assistance for their concerns?		
16. Do operators use computer workstations for more than 4 hours a day?		
17. Environment		
Is the temperature too hot or too cold?		
Are the worker's hands exposed to temperatures less than 70 degrees Fahrenheit?		
Is the workplace overly or poorly lit?		
Is there excessive noise that is annoying, distracting, or producing hearing loss?		
Is there upper extremity or whole body vibration?		
Is air circulation too high or too low?		

PREVENCIÓN DE LESIONES DE ESPALDA Y EVALUACIÓN ERGONÓMICA

Alcance y aplicación

Este procedimiento se aplica a las operaciones donde el personal realiza levantamiento manual y tienen potencial de estrés ergonómico y de manipulación de materiales.

El objetivo de este procedimiento es prevenir las lesiones de espalda y Trastornos Músculo-Esqueléticos Relacionados con el Trabajo (WMSD) o lesiones traumáticas acumulativas al personal.

Implementación

La implementación de este programa es responsabilidad del Gerente del sitio.

Procedimiento

1.0 Gestión de Prácticas de Levantamiento Seguro

A. Evaluar todas las asignaciones para determinar si se puede completar sin riesgo de lesiones en la espalda, p. ej., al mover cajas, computadoras, equipos, etc.

B. Solicitar que los elementos más pesados se almacenen en los estantes más bajos, idealmente por debajo de la altura de la rodilla y el hombro.

C. Reconocer las tareas de levantamiento intensivas (mal diseño de levantamiento, alta frecuencia y/o peso excesivo) y suministrar los medios para que el personal pueda realizar las tareas de levantamiento sin riesgos de lesiones, p. ej., carros, carretillas, camiones con puertas de elevación.

D. Asegurar la asistencia externa si el personal no puede realizar el trabajo de manera segura, p. ej., personal adicional, proveedores de mudanza.

E. Contactar al Supervisor cuando se necesite asistencia para evaluar una tarea de levantamiento que pueda suponer un riesgo de lesión en la espalda al personal asignado.

F. Garantizar que el personal reciba la capacitación necesaria que se describe a continuación.

2.0 Gestión de capacitación

A. Exigir que el personal cuyas tareas puedan incluir el levantamiento reciba capacitación que incluya los siguientes temas:
1. Reconocer los peligros potenciales y cómo corregirlos y prevenirlos.
2. Configuración y mantenimiento adecuados de la estación de trabajo.
3. Cómo evitar el estrés y la tensión física innecesarios.
4. Cómo manejar cómodamente las tareas de levantamiento sin tensión excesiva.
5. Uso adecuado de los equipos.
6. Ejercicios de estiramiento y fortalecimiento para minimizar el riesgo de lesiones.

B. Capacitación completa antes de que un empleado sea asignado a una tarea que requiere levantamiento.

3.0 Mudanzas y traslados de oficinas

A. Utilizar mudadores profesionales para trasladar muebles de oficina, tanto para mudanzas fuera del sitio como para traslados dentro de la oficina.
1. Escritorios, archivadores, estanterías, etc.
2. Movimiento intenso de cajas de archivo
3. Cualquier otro equipo o material pesado.

B. Asegurar que el contratista de mudanza esté adecuadamente evaluado y asegurado.

C. Garantizar que todos los elementos inestables (p. ej., estanterías) se aseguren para evitar que se vuelquen en tránsito y durante la colocación.

4.0 Evaluaciones del Lugar de Trabajo

A. Realizar en todas las estaciones de trabajo.

B. Determinar si existen tensiones y qué controles preventivos de lesiones deberán implementarse.

C. Utilizar los formularios al final de este procedimiento.

PREVENCIÓN DE LESIONES DE ESPALDA Y EVALUACIÓN ERGONÓMICA

1. Primero realizar la "Evaluación de Precaución para el Trabajo".
2. Realizar una "Evaluación de Factores de Riesgo" para cualquier "Tarea en Zona de Precaución" que se identifique.
   a) Las "Evaluaciones de Factores de Riesgo" se utilizan para determinar factores causales específicos y para trabajar en su diseño.

5.0 Gestión Médica

A. Asegurar que todos los empleados, existentes y futuros, se coloquen correctamente según las demandas de cada tarea y las aptitudes del individuo.
B. Los empleados con traumas acumulados o trastornos músculo-esqueléticos relacionados con el trabajo (WMSDs) deben contar con:

1. Acceso a evaluación, tratamiento y seguimiento médicos oportunos y eficaces.
2. Evaluaciones de tareas para identificar tensiones y posibles medidas correctivas.
3. Restricciones laborales recomendadas por el médico.

PREVENCIÓN DE LESIONES DE ESPALDA Y EVALUACIÓN ERGONÓMICA

Apéndice A: Lista de Comprobación de Estación de Trabajo de Computadora

Área de trabajo _____ Fecha _____

Realizada por _____Revisada por _____

Si no

1. ¿La estación de trabajo garantiza la postura adecuada del trabajador, como: SÍ

muslos horizontales?

pantorrillas verticales?

pies planos sobre el suelo o reposapiés?

muñecas neutrales?

2. ¿La silla:

se ajusta fácilmente?

tiene un asiento acolchado con frente redondeado?

tiene un respaldo ajustable?

proporciona soporte lumbar?

tiene ruedas?

3. ¿La altura y la inclinación de la superficie de trabajo donde se encuentra el teclado son ajustables?

4. ¿El teclado es desmontable y ajustable?

5. ¿El tipeo requiere fuerza mínima?

6. ¿Hay un sostén para documentos ajustable?

7. ¿Hay apoyabrazos donde son necesarios?

8. ¿Se evitan los reflejos y el brillo intenso?

9. ¿El monitor tiene controles de brillo y contraste?

10. ¿Los operadores opinan que la distancia entre los ojos y el trabajo es satisfactoria para sus necesidades visuales?

11. ¿Hay espacio suficiente para las rodillas y los pies?

12. ¿La estación de trabajo puede utilizarse para actividades tanto diestras como zurdas?

13. ¿Se proporcionan períodos de descanso adecuados para las exigencias de la tarea en cuestión?

Apéndice A: Lista de Comprobación de Estación de Trabajo de Computadora (continuación)

Si no

14. ¿Se evitan las altas tasas de huelga por medio de Sí

la rotación de trabajo?

el ritmo propio?

ajustar el trabajo a la aptitud del trabajador?

15. ¿Los empleados están capacitados en

las posturas adecuadas?

los métodos de trabajo correctos?

cuándo y cómo ajustar sus estaciones de trabajo?

cómo solicitar ayuda para sus inquietudes?

16. ¿Los operadores utilizan estaciones de trabajo de computadora por más de 4 horas al día?

17. Ambiente

¿La temperatura es demasiado alta o demasiado baja?

¿Las manos del trabajador están expuestas a temperaturas de menos de 70 grados Fahrenheit?

¿El lugar de trabajo está demasiado iluminado o mal iluminado?

¿Hay ruido excesivo que resulta molesto, distrae o produce pérdida de la audición?

¿Hay vibraciones en las extremidades superiores o en todo el cuerpo?

¿La circulación de aire es demasiado alta o demasiado baja?

CONFINED SPACE ENTRY

Scope and Application

This procedure applies to all operations involving confined space entry, and is intended to protect employees from the hazards of entry into confined spaces. A confined space is:

1. Large enough for personnel entry
2. Has limited or restricted means for entry or exit
3. Is not designed for continuous occupancy.

Examples are pits, vaults, tanks, sewers systems, and hoppers.

A **non-permit space** is a confined space that does not present any potential hazards, nor will the work performed therein create a hazardous condition.

A **permit-required space** is a confined space that may present one or more potential hazards including hazardous atmospheres, fire/explosion, engulfment, entrapment, electrical, mechanical, or any other serious hazard. It is advised that the Permit approach be used for all confined space work as a means to evaluate and properly control hazards present.

Permit-required confined space hazards include risks of falls, crushing, asphyxiation, fire, explosion, chemical exposure, engulfment, drowning, electrocution, or dismemberment.

This procedure applies to all permit-required confined space entry activities performed by employees or any contractor and/or subcontractor.

Entry occurs whenever any body part crosses the plane of entry of the space when the intent is to enter.

Implementation

Implementation of this program is the responsibility of the on-site Manager.

Procedure

1.0 The Entry Supervisor for the Operation is the on-site Manager.

A. This person is responsible for:

1. Determining hazards and potential exposures of the confined space and created by work to be done in the space.
2. Onsite verification of acceptable entry conditions prior to entry.
3. Assigning appropriately trained and medically qualified personnel to the project.
4. Having knowledge of required confined space entry procedures and equipment.
5. Has the ability to recognize and test hazardous atmospheres.
6. Training on and performing a thorough hazard assessment (see Appendix A) of the space and of the work that will be performed therein.

7. Understanding and explaining how to execute a Confined Space Permit as well as any other required permits, such as a Hot Work permit, Fall Protection, Trenching and Shoring Requirements.
8. Evaluating work in process, stopping work as needed and taking corrective actions when conditions change.
9. Completing all initial and annual refresher trainings and practicing all learned as a confined space Entry Supervisor.
10. Permit system

a) Utilize the Confined Space Entry Control Worksheet, and Permit forms (Appendices A & B) for permit space entry evaluation and establishment of required controls.
b) Require Confined Space Entry Permits to be issued at least each shift by the Entry Supervisor.

11. Posting

a) "Danger- Confined Space; Enter by Permit Only" signs are to be posted at the entry point of all confined spaces.

2.0 Confined Space Entry Planning

A. The entry supervisor:

1. Contacts facility representatives to gather information about the confined space, work to be done, materials to be used in the confined space.
2. Utilizes the Confined Space Entry Control Worksheet, and Permit forms (Appendices A & B) for permit space entry evaluation and establishment of required controls.
3. Assesses whether those hazards that create the "permit required confined space" can be eliminated without employee entry into the space, and respective controls to eliminate or properly control these hazards.
4. Identifies any potential immediately dangerous to life or health atmospheric hazards and requirements to control exposure to workers.
5. Determines rescue requirements for the space - if so designated as a "permit required confined space" and assures response, training and equipment is effective.
6. Arranges for qualified and adequate numbers of Entrants and Attendants.
7. Obtains and assures the Confined Space Entry and Hot Work (if applicable) permits are fully and accurately completed.
8. Identifies all equipment, including personal protective equipment, needed for the job is ready and onsite.
9. Coordinates confined space entry activities with other site employers that may be affected by the entry and that all work is compliant with the permit, and that the procedures of the contractors at a minimum, complies with this written program.

B. Preparation of confined space

1. Isolation of the space

a) Drain, clean and purge the confined space as appropriate.
b) Isolate all forms of kinetic and potential (stored) energy inside the confined space, including:

- Electrical
- Hydraulic
- Mechanical

CONFINED SPACE ENTRY

• Thermal
• Pneumatic
• Hydraulic

c) Isolate all lines carrying fuels, liquids or gases into the space. Purge and assure clean and free of residual material.

d) Develop alternate controls and affirm their function for protection of entrants for lines that may not be controlled such as lines through stormwater or sewer vaults.

• Blank lines as needed.
• Implement any needed alternate practices to assure worker protection.

e) Provide barricades and post the entrance of the space with a sign stating "Danger Confined Space Do Not Enter" or equivalent wording.

• Address traffic control needs as well with an approved Traffic Safety Control Plan.

f) Prohibit entry of compressed gas cylinders in a confided space.

g) Assure that a rescue plan is in place and functional, with adequate response time before executing the permit or allowing entry.

2. Personal Protective Equipment (PPE) and other required equipment

a) Using the Confined Space Entry Control Worksheet and your Job Hazard Assessment tool, establish all needed personal protective equipment (PPE), and other equipment needed (e.g., ventilation, GFCIs, monitoring instruments, retraction and fall gear, egress and access gear, etc.)

b) Assure all equipment is in ready to use state and current on inspections.

c) Assure all staff are fully trained and competent in the use.

d) Specific on the Permit all required equipment and review in pre-entry meeting.

3. Electrical equipment

a) Provide electrical equipment that meets the electrical classification of the area.

b) Assure all electrical equipment is grounded, gear is inspected and safe for use.

c) Use ground fault circuit interruption (GFCI) for power sources.

4. Atmospheric tests

a) It is our policy that entry will be permitted only if atmospheres are proven to be safe for entry with adequate oxygen, contaminant levels below adopted exposure limits, and less than 10% Lower Flammable Limit (LFL) maintained.

b) Atmospheres are considered Immediately Dangerous to Life and Health (IDLH) until proven otherwise.

• IDLH is defined by the US National Institute for Occupational Safety and Health (NIOSH) as exposure to airborne contaminants that is "likely to cause death or immediate or delayed permanent adverse health effects or prevent escape from such an environment."
• Examples include smoke or other toxic contaminant concentrations at sufficiently high concentrations.

CONFINED SPACE ENTRY

• OSHA regulations define the term as "an atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere."

c) Atmospheres must have adequate oxygen.

• Ambient air at sea level has about 20.9% oxygen. Greater than 19.5% is required for entry but **NOTE** that if there is less than 20.9% oxygen, there is another gas or vapor present that needs to be identified and quantified; or the meter is not calibrated or working correctly.

d) Atmospheres must also be safe from a flammability standpoint with the Lower Flammable Limit (LFL) being less than 10% required.

• Once again, if there is any amount of a flammable present, it can affect the oxygen or toxics levels and must be completely evaluated.

e) Atmospheres must also be safe from a "Toxic" standpoint with atmospheres containing less than applicable OSHA and ACGIH established exposure limits.

f) Calibrate (zero and span gasses) monitoring equipment and record information on the Daily Instrument Calibration Form.

• Record all results on the permit, sign and initial where indicated.

g) Make initial atmospheric tests of the space. Assess all sections of the space and consider vapor density of materials that could have been present.

h) Attach extension probes to the monitoring equipment, or lengths of inert tubing material to reach all section and to the bottom of the space.

• For horizontal spaces, the probe may need to be attached to a pole.

i) Take atmospheric measurements in all needed locations, sections, sub-spaces of the space.

• Allow needed time for remote samples to reach the instrument to assure accuracy of data.

j) Obtain a reading for oxygen first, followed by %LFL, then for toxic contaminants of concern (as applicable).

• The assessment of toxics is based on the materials stored or used in the space, and any materials expected to be used or present in the environment.

k) Record all results on the permit, sign and initial where indicated.

l) Determine if acceptable entry conditions exist with respect to oxygen, %LFL, and other hazardous atmospheres.

• Evaluate the hazards of any materials to be used in or atmospheres that could be created during the work in the space!

• Determine the monitoring and ventilation approaches needed to control all atmospheric issues.

m) If entry conditions are not in accordance with the atmospheric requirement or permit requirements indicated, correct the condition(s) and retest before proceeding.

n) If acceptable entry conditions exist, determine the means for continuous monitoring and communication and documentation of readings.

o) Monitor continuously for oxygen, %LFL and applicable toxics if hot work will be performed in the space.

CONFINED SPACE ENTRY

5. Ventilation

a) Ventilation is required for all entries.

b) Open as many openings as possible in the space to aid in cross ventilation.

• Evaluate and address poorly configured areas, sub-spaces, and the vapor densities of materials to assure adequate ventilation of all areas.

c) Never ventilate confined spaces with oxygen.

d) Provide five (5) air changes per hour, or at least 10,000 cfm for large spaces minimum.

• Provide at least 2,000 cfm of active exhaust ventilation for each welder or torch operating under a Hot Work Permit within the space.

e) If any motorized equipment is used, be sure that the exhaust does not enter the space and never have this gear operating in a space.

• Carbon monoxide monitoring may be required as a toxic as well as oxygen content.

f) Place ventilation gear and ducting such that it does not create a hazard by impairing the access/ egress or vision and communication with attendants and entry staff.

• Exhaust to safe areas and do not direct contaminants to other workers.

g) Use fire/explosive proof (appropriate electrical equipment for Hazardous Areas Classifications) equipment, including ventilating equipment that is properly grounded when exhausting flammable or combustible gases, vapors and dusts from confined spaces.

6. Authorizing the permit

a) Prior to signing the permit, the entry supervisor is to personally inspect the space, and surrounding area, and work to be done in the space, and review all monitoring, ventilation and other gear and materials to be used; and confirm that all necessary precautions have been taken and all relevant information concerning the entry parameters are documented on the permit.

b) The entry supervisor is to conduct a safety briefing informing all entrants and attendants of space conditions; review work to be done in the space; time of permit and communication and rescue procedures.

c) The entry supervisor is to require the entrant(s) and attendant(s) to each print their names and sign the permit; and outline the rescue procedures.

d) The permit is to be reviewed and affixed to a location near the space entrance.

7. Entry operations

a) Prohibit entry when oxygen deficient, greater than 10% lower flammable limit atmospheres, toxic (above established exposure limits without proper respiratory equipment), or IDLH levels are present in the space.

• Re- clean, purge, and ventilate spaces as needed and re-test to assure they are safe for entry.

b) Assure a safe access and egress is established.

c) Limit entry to qualified entrants listed on the permit and only for the purpose(s) stated on the permit.

d) Require entrants to follow all PPE, equipment and procedural requirements listed on permit.
e) Attach body harness, if required, to a lifeline, and the other end of the life line is attached to an approved anchor point and mechanical lifting device outside the space at all times the entrant(s) are in the space.
f) Attendant(s) are required to remain at the entrance whenever an entrant is inside the confined space.
• The attendant may not be assigned other duties that may distract him/her from maintaining uninterrupted contact and communication with the entrant(s).
• The attendant may only attend to one confined space entry at any one time.
• Each space must have its own attendant.

C. Exiting the confined space

1. Assure a safe access and egress is established.
2. Entry staff are to immediately evacuate and the attendant is to order entrant(s) to immediately evacuate the space whenever:
a) Atmospheric conditions change.
b) A new or prohibited condition on the entry permit develops.
c) The surrounding work area becomes unsafe.
d) Any monitoring instrumentation, rescue equipment, ventilation, etc. becomes compromised.
e) Possible symptoms of exposure are noted in the entrant(s).
f) Entrant(s) express any type of concern regarding any safety or health aspect of the entry or work being done.

D. Rescue requirements

1. Assure that a rescue plan is in place and functional, with adequate response time before executing the permit or allowing entry.
2. Non-entry rescue procedures shall be established for every entry.
3. Fully trained, equipped, and qualified entry rescue staff are to be established prior to entry, and be available for the duration of the entry.
4. Assure communication is established and maintained between the attendants and Rescue staff at all times.

E. Completion of entry work

1. Inspect and assure all items are cleaned, and equipment is back in a ready to use state.
2. Cancel the permit by obtaining the signature of the entry supervisor and recording the time and date on the permit.
3. The entry supervisor is to inspect the area and assure all is safe and ready to be put back into operation.
4. The space can then be put back in operation, openings closed, signs and barricades removed, etc.
a) Reference the permit to assure all have been addressed in re-activating a space.
b) If the space cannot be closed until a later time, provisions must be maintained (barricades, warning signs) to prevent in all cases any persons from falling into or entering the space.

CONFINED SPACE ENTRY

2.0 Training

A. All entry supervisors, entrants, attendants, and rescue staff are to be trained prior to any assignments and are to have all needed knowledge of equipment, hazard assessments, permitting requirements, and all health and safety aspects associated with entry.

B. Training is to be repeated:

1. Whenever a near miss (a near miss is an unplanned event that did not result in injury, illness, or damage – but had the potential to do so) or incident occurs
2. At least annually
3. After results of annual program audits are performed

3.0 Medical Surveillance

A. All entry supervisors, entrants, attendants, and rescue staff will be medically qualified for confined space entry work including fit testing and medically qualified for wearing respirators assigned.

OSHA® Occupational Safety and Health Administration

COVID-19 Guidance on the Use of Cloth Face Coverings while Working Indoors in Hot and Humid Conditions

During the COVID-19 pandemic, OSHA generally recommends that employers encourage workers to wear cloth face coverings at work to help reduce the spread of COVID-19. However, workers who wear cloth face coverings in hot and humid environments or while performing strenuous activities indoors, such as those in bakeries, kitchens, laundries, electric utilities, fire services, mills, foundries, manufacturing, and warehousing, can find cloth face coverings to be uncomfortable.

Employers should follow the below practices to protect against the spread of COVID-19 and the risk of heat-related illness:

Acclimatize new and returning workers to environmental and work conditions while wearing cloth face coverings.

Prioritize the use of cloth face coverings when workers are in close contact with others (less than 6 feet), such as during group travel or shift meetings.

Allow workers to remove cloth face coverings when they can safely maintain at least 6 feet of physical distance from others.

Evaluate the feasibility of wearing cloth face coverings for each worker and consider alternatives (e.g., face shields) when appropriate.

Photo: USDA

Increase the frequency of hydration and rest breaks in cooled environments.

Incorporate at least 6 feet of physical distancing into break areas by staggering breaks, spacing workers, or limiting the number of workers on break at a time, where feasible.

Enhance ventilation throughout the worksite, including in break areas, where feasible.

Allow workers to return to personal vehicles during breaks to use air conditioning, when possible. Multiple workers should generally not return to the same car.

If fans are used, avoid directing the fan so it pushes air over multiple people at the same time, since fans may increase the distance respiratory droplets can travel.

Encourage workers to use cloth face coverings that optimize fit and comfort and are made out of breathable, moisture-wicking materials.

Encourage workers to change cloth face coverings when wet, as wet face coverings make it more difficult to breathe and are not as effective. Provide clean replacement cloth face coverings or disposable face masks, as needed, for workers to change into throughout the work shift.

Ensure workers use handwashing facilities or hand sanitizers with at least 60% alcohol often, as heat or moisture build-up may cause workers to put on and take off cloth face coverings frequently.

Allow workers to wear personal passive cooling items (e.g., icepack vests, cooling bandanas) and loose-fitting and breathable clothes, as long as these items do not present a safety hazard.

Plan for heat emergencies and train workers on heat stress prevention and treatment.

Increase the frequency of communication to workers and encourage workers to monitor themselves and others for signs of heat illness.

Note: Cloth face coverings should not be considered a substitute for engineering and administrative controls, safe work practices, or necessary personal protective equipment (PPE).

For interim guidance and other resources on protecting workers from COVID-19, visit OSHA's COVID-19 webpage.

For guidance and other resources on protecting workers from heat stress, visit OSHA's occupational heat exposure webpage.

For guidance on heat illness prevention during the COVID-19 pandemic, visit the Centers for Disease Control and Prevention's webpages for workers and employers.

For the latest information on the symptoms, prevention, and treatment of COVID-19, visit the Centers for Disease Control and Prevention's COVID-19 webpage.

For the latest information on masks, visit the Centers for Disease Control and Prevention's COVID-19 and masks webpage.

For the latest information on COVID-19 in the workplace, visit the National Institute for Occupational Safety and Health's COVID-19 webpage.

U.S. Department of Homeland Security
Cybersecurity & Infrastructure Security Agency
Office of the Director
Washington, DC 20528

August 10, 2021

ADVISORY MEMORANDUM ON ENSURING ESSENTIAL CRITICAL INFRASTRUCTURE WORKERS' ABILITY TO WORK DURING THE COVID-19 RESPONSE

FROM: Jen Easterly
Director

As the Nation continues to respond to COVID-19, it remains vital that essential critical infrastructure workers can perform their jobs safely, securely, and without interruption from COVID-19 and the new variants of the virus. Doing so is not only fundamentally good for our individual essential workers and communities, it is also critical to the resilience of our National Critical Functions. Government officials and the owners and operators of critical infrastructures can use this guidance to reduce risk in a number of ways including by encouraging essential workers to be vaccinated, providing the appropriate protective gear, and creating and promoting policies and procedures that prevent the spread of illness among the essential workforce.

With newer and more contagious variants of the virus that causes COVID-19 now emerging, we are entering a new phase of the pandemic response. For this reason, we are updating the Essential Critical Infrastructure Workforce Guidance. Although the contents of the list are largely unchanged from the August 2020 release, we want to newly encourage the use of it to further reduce the frequency and severity of the virus' impact on essential workers and the infrastructures they operate. Protecting our workforce protects our critical infrastructures, our local communities, and speeds our Nation's progress toward recovery.

The Cybersecurity and Infrastructure Security Agency (CISA), in collaboration with other federal agencies, State, local, tribal, and territorial governments and the private sector, originally issued the Essential Critical Infrastructure Workforce Guidance in support of COVID-19 response efforts. This 4.1 Version is the latest iteration of the guidance, which has evolved over time based on lessons learned from the pandemic and as additional essential workers returned to work. The earlier versions of the list were meant to help officials and organizations in their efforts to identify essential work functions, including developing policies to allow essential workers access to their workplaces during times of community restrictions. As circumstances have changed over the course of the pandemic, so has the application of this guidance. Given the emergence of a more transmissible variant of the virus, the wide availability of vaccines, and the resurgence of increased nationwide infection and subsequent community restrictions, infrastructure owners and operators may use this guidance to fulfill their responsibility to encourage that essential workers are vaccinated, well protected in the workplace, and well-informed about COVID and vaccines.

The list identifies workers who conduct a range of operations and services that may be essential to continued critical infrastructure operations, including staffing operations centers, maintaining and repairing critical infrastructure, operating public safety call centers, working construction, and performing operational functions, among others. It includes workers who support crucial supply chains and enable cyber and physical security functions for critical infrastructure. The industries that essential workers support represent, but are not limited to, medical and healthcare, telecommunications, information technology systems, defense, food and agriculture,

Guidance on the Essential Critical Infrastructure Workforce: Ensuring Community and National Resilience in COVID-19 Response

Version 4.1 (August 5, 2021)

ENSURING ESSENTIAL CRITICAL INFRASTRUCTURE WORKERS HAVE THE ABILITY TO WORK SAFELY

Functioning critical infrastructure is imperative during the response to the COVID-19 emergency for both public health and security as well as community well-being. While stopping the spread of the virus and protecting the most vulnerable among us rightfully remain national priorities, a degradation of infrastructure operations and resilience only makes achieving those missions more difficult. Recognizing this, CISA published guidance identifying Essential Critical Infrastructure Workers at the outset of the COVID-19 pandemic. This guidance was adopted broadly across the country and was subsequently updated as the response evolved. This update, Version 4.1, continues to advance the guidance considering developments in pandemic response to support a risk-based approach towards worker safety to ensure the continuity of critical functions.

CISA appreciates the partnership with the critical infrastructure community in developing the guidance. The Nation's infrastructure resilience was undoubtedly enhanced by a common approach to, and prioritization of, essential critical infrastructure workers being able to work during periods of community restrictions. As with previous guidance, this list is advisory in nature. It is not, nor should it be considered, a federal directive or standard. Individual jurisdictions and critical infrastructure owners and operators should add or subtract essential workforce categories based on their own requirements and discretion.

Central to the value of the guidance in the early months of the pandemic was the discrete problem it was intended to support solutions for – enabling essential workers to work during community restrictions. While CISA continues to engage with stakeholders to identify workforce limitations that may impact infrastructure resilience, it is our assessment that, for the most part, essential workers are able to work – what is now most important is that essential workers are able to work in a safe environment, even as variants of COVID-19 threated to cause the re-imposition of some community restrictions and re-imposition of non-medical interventions.

Recognizing this, the Essential Critical Infrastructure Workers guidance can add the most value going forward by illuminating the universe of workers that require particularly thoughtful and deliberate risk management strategies so that they can continue to *work safely and critical infrastructures continue to operate in an uninterrupted fashion.*.

CISA recognizes that states and localities across the country have undergone a phased re-opening of businesses, public lands, and other places of community and civic importance. As we enter the next stage in the pandemic response and schools and additional businesses reopen, CISA encourages jurisdictions and critical infrastructure owners to use the list to assist in prioritizing the ability of essential workers to work safely to ensure ongoing infrastructure operations and resilience.

Doing so will require looking at the universe of workers on the Essential Critical Infrastructure Workforce list and identifying tailored risk mitigation strategies for specific workplace settings. These could include:

Creating a Risk Categorization Methodology for Worker Safety. We recommend that organizations continue to categorize their employees against a risk factor matrix so that mitigation strategies can be implemented to enhance safety. The risk categorization factors that should be considered include:

Setting: Are workers indoors or outdoors?

Vaccination Status: Are employees vaccinated?
Proximity: How physically close are workers (and customers) to each other?

Type of contact: Do workers touch shared surfaces, common items, and other workers or customers?
Duration: How long does an average interaction last?
Number of different contacts: How many interactions occur daily?
Employee risk factors: Which workers face heightened risk due to their age or underlying medical conditions?
Capability to assess possible infection: Are there screening protocols that protect workers (and customers) from interactions with contagious people?
Cleaning: How frequently can the facility be sanitized and cleaned?

Based on the responses to these risks, organizations can categorize the conditions that their workers face and continue to implement measures to increase worker well-being. In other words, increased protective measures should be based on those with high risk factors. Risk categorization guidance assistance can be found at OSHA.

In addition to the aforementioned characteristics of the worker and workplace, there may be local factors that influence COVID-19 risk mitigation plans including, vaccination and infection rates and trends, the availability and timeliness of testing, the criticality of the business and worker to the local or state economy, and the need to prepare and respond to other localized events such as hurricanes, wildfires, or tornadoes.

The following links can provide additional guidance on health, workplace, and worker safety issues related to the pandemic:

CDC Safety Practices for Critical Infrastructure Workers: Implementing Safety Practices for Critical Infrastructure Workers Who May Have Had Exposure to a Person with Suspected or Confirmed COVID-19

OSHA/HHS Workplace Guidance: Guidance for Preparing Workplaces for COVID-19

CISA Telework Guidance: Telework Guidance and Resources

CISA General Guidance: CISA Information & Updates on COVID-19

CISA will continually solicit and accept feedback on the list and will evolve the list in response to stakeholder feedback. We will also use our various stakeholder engagement mechanisms to work with partners on how they are using this list and share those lessons learned and best practices broadly. Feedback can be sent to CENTRAL@CISA.DHS.GOV.

CONSIDERATIONS FOR GOVERNMENT AND BUSINESS

This list was developed in consultation with federal agency partners, industry experts, and State and local officials, and is based on several key principles:

1.Response efforts to the COVID-19 pandemic are locally executed, state managed, and federallysupported.

2.Critical infrastructure workers and employers should follow Businesses and Workplace guidance from the Centers for Disease Control and Prevention (CDC), as well as state and local government officials, regarding strategies to limit disease spread.

3.Employers must comply with applicable Occupational Safety and Health Administration (OSHA) requirements and guidance for protecting critical infrastructure workers who remain on or return to the job during the COVID-19 pandemic. As the nation relies on these workers to protect public health, safety, and community well-being, they must be protected from exposure to and infection from the virus so that they can continue to carry out their responsibilities. OSHA has guidance and enforcement information for workplaces at www.osha.gov/coronavirus.

4.Critical infrastructure employers should create a clear COVID-19 vaccination policy for its workforce that encourages vaccination and reduces barriers to vaccination. In addition, critical infrastructure employers should maximize protection from the Delta variant—especially for workers at increased risk for severe disease due to weakened immune system, age, or underlying medical conditions—such as through mandating indoor mask use in areas of substantial or high transmission.

5.Businesses and government agencies may continue to implement organization-specific measures as appropriate and consistent with applicable Federal, state, local, or other requirements, which protect the workforce while meeting mission needs.

6.Consider the impact of workplace sick leave policies that may contribute to an employee decision to delay reporting medical symptoms. Sick employees should not return to the workplace until they meet the criteria to stop home isolation. CDC has the following guidance on when it is safe to stop home isolation at https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/end-home-isolation.html.

7.Critical infrastructure employers have an obligation to limit to the extent possible the reintegration of in-person workers who have experienced an exposure to COVID-19 but remain asymptomatic in ways that best protect the health of the worker, their co-workers, and the general public. An analysis of core job tasks and workforce availability at worksites can allow the employer to match core activities to other equally skilled and available in-person workers who have not experienced an exposure. CDC guidance on safety practices for critical infrastructure workers is maintained at https://www.cdc.gov/coronavirus/2019-ncov/community/critical-workers/implementing-safety-practices.html.

8. All organizations should implement their business continuity and pandemic plans or put plans in place if they do not exist. Delaying implementation is not advised and puts at risk the viability of the business and the health and safety of workers. The CDC and OSHA have guidance for workplaces and businesses to assist them plan, prepare, and respond to the pandemic at https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/businesses-employers.html and https://www.osha.gov/SLTC/covid-19.

9. Ensure that certain workers have consistent access to specific sites, facilities, and assets to ensure continuity of functions. Most of our economy relies on technology and therefore information technology (IT) and

operational technology (OT) workers for critical infrastructure operations are essential. This includes workers in many roles, including workers focusing on management systems, control systems, and Supervisory Control and Data Acquisition (SCADA) systems, and data centers; cybersecurity engineering; and cybersecurity risk management

10. Government workers, such as emergency managers, and the business community need to establish and maintain the practice of openly communicating with one another on such issues as workforce needs and safety as well as the continuity of critical functions.

11. Ensure that essential critical infrastructure workers have continued and unimpeded access to sites, facilities, and equipment within quarantine zones, containment areas, areas under curfew restrictions, or other areas where access or movement is limited, in order to perform functions for community relief and stability; for public safety, security and health; for maintaining essential supply chains for maintaining critical information technology services, and preserving local, regional, and national economic well-being.

12. Whenever possible, local governments should consider adopting specific provisions of state orders or guidance on sustained access and mobility of essential workers to reduce potential complications of workers crossing jurisdictional boundaries to perform critical functions, including during times of quarantine. When this is not possible, local jurisdictions should consider aligning access and movement control policies with neighboring jurisdictions to reduce the burden of cross-jurisdictional movement of essential critical infrastructureworkers.

IDENTIFYING ESSENTIAL CRITICAL INFRASTRUCTURE WORKERS

The following list of identified essential critical infrastructure workers is intended to be overly inclusive reflecting the diversity of industries across the United States.

HEALTHCARE / PUBLIC HEALTH

- Workers, including laboratory personnel, that perform critical clinical, biomedical and other research, development, and testing needed for COVID-19 or other diseases.
- Healthcare providers including, but not limited to, physicians (MD/DO/DPM); dentists; psychologists; mid-level practitioners; nurses; emergency medical services personnel, assistants and aids; infection control and quality assurance personnel; phlebotomists; pharmacists; physical, respiratory, speech and occupational therapists and assistants; social workers; optometrists; speech pathologists; chiropractors; diagnostic and therapeutic technicians; and radiology technologists.
- Workers required for effective clinical, command, infrastructure, support service, administrative, security, and intelligence operations across the direct patient care and full healthcare and public healthspectrum. Personnel examples may include, but are not limited, to accounting, administrative, admitting and discharge, engineering, accrediting, certification, licensing, credentialing, epidemiological, source plasma and blood donation, food service, environmental services, housekeeping, medical records, information technology and operational technology, nutritionists, sanitarians, etc.

  oEmergency medical services workers including clinical interns.

  oPrehospital workers included but not limited to urgent care workers.

  oInpatient & hospital workers (e.g. hospitals, critical access hospitals, long-term acute care hospitals, long-term care facilities including skilled nursing facilities, inpatient hospice, ambulatory surgical centers, etc.).

  oOutpatient care workers (e.g. end-stage-renal disease practitioners and staff, Federally Qualified Health Centers, Rural Health Clinics, community mental health clinics, organ transplant/procurement centers, and other ambulatory care settings/providers, comprehensive outpatient rehabilitation facilities, etc.).

  oHome care workers (e.g. home health care, at-home hospice, home dialysis, home infusion,etc.).

  oWorkers at Long-term care facilities, residential and community-based providers (e.g. Programs of All-Inclusive Care for the Elderly (PACE), Intermediate Care Facilities for Individuals with Intellectual Disabilities, Psychiatric Residential Treatment Facilities, Religious Nonmedical Health Care Institutions, etc.).

  oWorkplace safety workers (i.e., workers who anticipate, recognize, evaluate, and control workplace conditions that may cause workers' illness or injury).

- Workers needed to support transportation to and from healthcare facility and providerappointments.
- Workers needed to provide laundry services, food services, reprocessing of medical equipment, and waste management.
- Workers that manage health plans, billing, and health information and who cannot workremotely.
- Workers performing cybersecurity functions at healthcare and public health facilities and who cannot work remotely.
- Workers performing security, incident management, and emergency operations functions at or on behalf of healthcare entities including healthcare coalitions, who cannot practically workremotely.
- Vendors and suppliers (e.g. imaging, pharmacy, oxygen services, durable medical equipment,etc.).
- Workers at manufacturers (including biotechnology companies and those companies that have shifted production to medical supplies), materials and parts suppliers, technicians, logistics and warehouse operators, printers, packagers, distributors of medical products and equipment (including third party logistics providers, and those who test and repair), personal protective equipment (PPE), isolation barriers, medical gases, pharmaceuticals (including materials used in radioactive drugs), dietary supplements, commercial health products, blood and blood products, vaccines, testing materials, laboratory supplies, cleaning, sanitizing, disinfecting or sterilization supplies (including dispensers), sanitary goods, personal care products, pest control products, and tissue and paper towel products.
- Donors of blood, bone marrow, blood stem cell, or plasma, and the workers of the organizations that operate and manage related activities.
- Pharmacy staff, including workers necessary to maintain uninterrupted prescription, and other workers for pharmacy operations.
- Workers and materials (e.g., laboratory supplies) needed to conduct bloodspot and point of care (i.e., hearing and critical congenital heart disease) newborn screening as well as workers and materials need for confirmatory diagnostic testing and initiation of treatment.
- Home health workers (e.g., nursing, respiratory therapists, health aides) who need to go into the homes of individuals with chronic, complex conditions and/or disabilities to deliver nursing and/or daily living care.
- Workers in retail facilities specializing in medical good and supplies.
- Public health and environmental health workers, such as:
  - oWorkers specializing in environmental health that focus on implementing environmental controls, sanitary and infection control interventions, healthcare facility safety and emergency preparedness planning, engineered work practices, and developing guidance and protocols for appropriate PPE to prevent COVID-19 disease transmission.
  - oPublic health/community health workers (including call center workers) who conduct community-based public health functions, conducting epidemiologic surveillance and compiling, analyzing, and communicating public health information, who cannot work remotely.
- Human services providers, especially for at risk populations such as:
  - oHome delivered meal providers for older adults, people with disabilities, and others withchronic health conditions.
  - oHome-maker services for frail, homebound, older adults.
  - oPersonal assistance services providers to support activities of daily living for older adults, people with disabilities, and others with chronic health conditions who live independently in the community with supports and services.
  - oHome health providers who deliver health care services for older adults, people with disabilities, and others with chronic health conditions who live independently in the community with supports and services.
  - oWorkers who provide human services, including but not limited to social workers, nutritionists, case managers or case workers, crisis counselors, foster care case managers, adult protective services personnel, child protective personnel, domestic violence counselors, human trafficking prevention and recovery personnel, behavior specialists, substance abuse-related counselors, and peer support counselors.

- Government entities, and contractors that work in support of local, state, federal, tribal, andterritorial public health and medical mission sets, including but not limited to supporting access to healthcare and associated payment functions, conducting public health functions, providing medical care, supporting emergency management, or other services necessary for supporting the COVID-19 response.
- Workers for providers and services supporting effective telehealth.
- Mortuary service providers, such as:
  - oWorkers performing mortuary funeral, cremation, burial, cemetery, and related services, including funeral homes, crematoriums, cemetery workers, and coffinmakers.
  - oWorkers who coordinate with other organizations to ensure the proper recovery, handling, identification, transportation, tracking, storage, and disposal of human remains andpersonal effects; certify cause of death; and facilitate access to mental and behavioral health services to the family members, responders, and survivors of an incident.

LAW ENFORCEMENT, PUBLIC SAFETY, AND OTHER FIRST RESPONDERS

- Public, private, and voluntary personnel (front-line and management, civilian and sworn) in emergency management, law enforcement, fire and rescue services, emergency medical services (EMS), and security, public and private hazardous material responders, air medical service providers (pilots and supporting technicians), corrections, and search and rescue personnel.
- Personnel involved in provisioning of access to emergency services, including the provisioning of real-time text, text-to-911, and dialing 911 via relay.
- Personnel that are involved in the emergency alert system (EAS) (broadcasters, satellite radio and television, cable, and wireline video) and wireless emergency alerts(WEA).
- Workers at Independent System Operators and Regional Transmission Organizations, and Network Operations staff, engineers and technicians to manage the network or operatefacilities.
- Workers at emergency communication center, public safety answering points, public safety communications centers, emergency operation centers, and 911 call centers.
- Fusion Center workers.
- Workers, including contracted vendors, who maintain, manufacture, or supply equipment and services supporting law enforcement, fire, EMS, and response operations (to include electronic security and life safety security personnel).
- Workers and contracted vendors who maintain and provide services and supplies to public safety facilities, including emergency communication center, public safety answering points, public safety communications centers, emergency operation centers, fire and emergency medical services stations, police and law enforcement stations and facilities.
- Workers supporting the manufacturing, distribution, and maintenance of necessary safety equipmentand uniforms for law enforcement and all public safety personnel.
- Workers supporting the operation of firearm, or ammunition product manufacturers, retailers, importers, distributors, and shooting ranges.
- Public agency workers responding to abuse and neglect of children, spouses, elders, and dependent adults.
- Workers who support weather disaster and natural hazard mitigation and preventionactivities.
- Security staff to maintain building access control and physical securitymeasures.
- Workers who support child care and protective service programs such as child protective service.

EDUCATION

- Workers who support the education of pre-school, K-12, college, university, career and technical education, and adult education students, including professors, teachers, teacher aides, special education and special needs teachers, ESOL teachers, para-educators, apprenticeship supervisors, and specialists.
- Workers who provide services necessary to support educators and students, including but not limited to, administrators, administrative staff, IT specialists, media specialists, librarians, guidance counselors, school psychologists and other mental health professions, school nurses and other health professionals, and school safety personnel.
- Workers who support the transportation and operational needs of schools, including bus drivers, crossing guards, cafeteria workers, cleaning and maintenance workers, bus depot andmaintenance workers, and those that deliver food and supplies to school facilities.
- Workers who support the administration of school systems including, school superintendents and their management and operational staff.
- Educators and operational staff facilitating and supporting distance learning.

FOOD AND AGRICULTURE

- Workers enabling the sale of human food, animal food (includes pet food, animal feed, and raw materials and ingredients), pet supply, and beverage products at groceries, pharmacies, convenience stores, and other retail (including unattended and vending), including staff in retail customer support and information technology support necessary for on-line orders, pickup, and delivery.
- Restaurant and quick serve food operations, including dark kitchen and food prep centers, carry-out, and delivery food workers.
- Food manufacturer workers and their supplier workers including those employed at food ingredient production and processing facilities; aquaculture and seafood harvesting facilities; slaughter and processing facilities for livestock, poultry, and seafood; animal food manufacturing and processing facilities; human food facilities producing by-products for animal food; industrial facilities producing co-products for animal food; beverage production facilities; and the production of foodpackaging.
    - oFarmers, farm and ranch workers, and agribusiness support services, including workers involved in auction and sales; in food operations, including animal food, grain and oilseed storage, handling, processing, and distribution; in ingredient production, packaging, and distribution; in manufacturing, packaging, and distribution of veterinary drugs and biologics (e.g., vaccines); and in distribution and transport.
- Farmers, farm and ranch workers, and support service and supplier workers producing food supplies and other agricultural inputs for domestic consumption and export, to include those engaged in raising, cultivating, phytosanitation, harvesting, packing, storing, or distributing to storage or to market or to a transportation mode to market any agricultural or horticultural commodity for human or animal consumption.
- Workers at fuel ethanol facilities, biodiesel and renewable diesel facilities, and storagefacilities.
- Workers and firms supporting the distribution of all human and animal food and beverage and ingredients used in these products, including warehouse workers, vendor-managed inventory controllers, and blockchain managers.
- Workers supporting the sanitation and pest control of all human and animal food manufacturing processes and operations from wholesale to retail.
- Workers supporting greenhouses as well as the growth and distribution of plants and associated products for home gardens.
- Workers in cafeterias used to feed workers, particularly worker populations sheltered against COVID-19

and those designated as essential critical infrastructure workers.

- Workers in animal diagnostic and food testing laboratories.
- Government, private, and non-governmental organizations' workers essential for food assistance programs (including school lunch programs) and government payments.
- Workers of companies engaged in the production, storage, transport, and distribution of chemicals, drugs, biologics (e.g. vaccines), and other substances used by the human and agricultural food and agriculture industry, including seeds, pesticides, herbicides, fertilizers, minerals, enrichments, equipment, and other agricultural production aids.
- Animal agriculture workers to include those employed in veterinary health (including those involved in supporting emergency veterinary or livestock services); raising, caring for and management of animals for food, as well as pets; animal production operations; livestock markets; slaughter and packing plants, manufacturers, renderers, and associated regulatory and government workforce.
- Transportation workers supporting animal agricultural industries, including movement of animal medical and reproductive supplies and materials, animal biologics (e.g., vaccines), animal drugs, animal food ingredients, animal food and bedding, live animals, and deceased animals for disposal.
- Workers who support sawmills and the manufacture and distribution of fiber and forestry products, including, but not limited to timber, paper, and other wood and fiber products, as well as manufacture and distribution of products using agricultural commodities.
- Workers engaged in the manufacture and maintenance of equipment and other infrastructure necessary for agricultural production and distribution.

ENERGY

- Workers supporting the energy sector, regardless of the energy source (including, but not limited to, nuclear, fossil, hydroelectric, or renewable), segment of the system, or infrastructure the worker is involved in, who are needed to construct, manufacture, repair, transport, permit, monitor, operate engineer, and maintain the reliability, safety, security, environmental health, and physical and cyber security of the energy system, including those who support construction, manufacturing, transportation, permitting, and logistics.
    - Workers and contractors supporting energy facilities that provide steam, hot water or chilled water from central power plants to connected customers.
    - Workers conducting energy/commodity trading/scheduling/marketing functions who can't perform their duties remotely.
    - Workers supporting the energy sector through renewable energy infrastructure (including, but not limited to, wind, solar, biomass, hydrogen, ocean, geothermal, and hydroelectric) and microgrids, including those supporting construction, manufacturing, transportation, permitting, operation and maintenance, monitoring, and logistics.
    - Workers and security staff involved in nuclear re-fueling operations.
    - Workers providing services related to energy sector fuels including, but not limited to, petroleum (crude oil), natural gas, propane, liquefied natural gas (LNG), compressed natural gas (CNG), natural gas liquids (NGL), other liquid fuels, nuclear, and coal) and supporting the mining, processing, manufacturing, construction, logistics, transportation, permitting, operation, maintenance, security, waste disposal, storage, and monitoring of support for resources.
    - Workers providing environmental remediation and monitoring, limited to immediate critical needs technicians.
    - Workers involved in the manufacturing and distribution of equipment, supplies, and parts necessary to maintain production, maintenance, restoration, and service at energy sector facilities across all energy sector segments.

Electricity Industry

- Workers who maintain, ensure, restore, or who are involved in the development, transportation, fuel procurement, expansion, or operation of, the generation, transmission, and distribution of electric power, including call centers, utility workers, engineers, retail electricity, construction, maintenance, utility telecommunications, relaying, and fleet maintenance technicians who cannot perform their duties remotely.
- Workers at coal mines, production facilities, and those involved in manufacturing, transportation, permitting, operation, maintenance, and monitoring at coal sites.
- Workers who produce, process, ship, and handle coal used for power generation and manufacturing.
- Workers in the electricity industry including but not limited to those supporting safety, construction, manufacturing, transportation, permitting, operation/maintenance, engineering, physical and cyber security, monitoring, and logistics
- Workers needed for safe and secure operations at nuclear generation including, but not limited to, those critical to the broader nuclear supply chain, the manufacture and delivery of parts needed to maintain nuclear equipment, the operations of fuel manufacturers, and the production and processing of fuel components used in the manufacturing of fuel.

- Workers at fossil fuel (including but not limited to natural gas, refined, distillate, and/or coal), nuclear, and renewable energy infrastructure (including, but not limited to wind, solar, biomass, hydrogen, geothermal, and hydroelectric), and microgrids, including those supporting safety, construction, manufacturing, transportation, permitting, operation, maintenance, monitoring, and logistics.
- Workers at generation, transmission, and electric black start facilities.
- Workers at Reliability Coordinator, Balancing Authority, local distribution control centers, and primary and backup Control Centers, including, but not limited to, independent system operators, regional transmission organizations, and local distribution control centers.
- Workers that are mutual assistance/aid personnel, which may include workers from outside of the state or local jurisdiction.
- Vegetation management and traffic control for supporting those crews.
- Instrumentation, protection, and control technicians.
- Essential support personnel for electricity operations.
- Generator set support workers, such as diesel engineers used in power generation, including those providing fuel.

Petroleum Industry

- Workers who support onshore and offshore petroleum drilling operations; platform and drilling construction and maintenance; transportation (including helicopter operations), maritime transportation, supply, and dredging operations; maritime navigation; well stimulation, intervention, monitoring, automation and control, extraction, production; processing; waste disposal, and maintenance, construction, and operations.
- Workers in the petroleum industry including but not limited to those supporting safety, construction, manufacturing, transportation, permitting, operation/maintenance, engineering, physical and cyber security, monitoring, and logistics.
- Workers for crude oil, petroleum, and petroleum product storage and transportation, including pipeline, marine transport, terminals, rail transport, storage facilities, racks, and road transport for use as end-use fuels such as gasoline, diesel fuel, jet fuel, and heating fuels or feedstocks for chemical manufacturing.
- Petroleum and petroleum product security operations center workers and workers whosupport maintenance and emergency response services.
- Petroleum and petroleum product operations control rooms, centers, and refinery facilities.
- Retail fuel centers such as gas stations and truck stops, and the distribution systems that support them.
- Supporting new and existing construction projects, including, but not limited to, pipeline construction.
- Manufacturing and distribution of equipment, supplies, and parts necessary for production, maintenance, restoration, and service of petroleum and petroleum product operations and use, including end-users.
- Transmission and distribution pipeline workers, including but not limited to pump stations and anyother required, operations maintenance, construction, and support for petroleum products.

Natural Gas, Natural Gas Liquids (NGL), Propane, and Other Liquid Fuels

- Workers who support onshore and offshore drilling operations, platform and drilling constructionand maintenance; transportation (including helicopter operations); maritime transportation, supply, and dredging operations; maritime navigation; natural gas and natural gas liquid production, processing, extraction, storage and transportation; well intervention, monitoring, automation and control; waste disposal, and maintenance, construction, and operations.
- Workers in the natural gas, NGL, propane, and other liquid fuels industries including but not limited to those supporting safety, construction, manufacturing, transportation, permitting,operation/maintenance, engineering, physical and cyber security, monitoring, and logistics.
- Transmission and distribution pipeline workers, including compressor stations and any other required operations maintenance, construction, and support for natural gas, natural gas liquid, propane, and other liquid fuels.
- Workers at Liquefied Natural Gas (LNG) and Compressed Natural Gas (CNG) facilities.
- Workers at natural gas, propane, natural gas liquids, liquified natural gas, liquid fuel storage facilities, underground facilities, and processing plants and other related facilities, including construction, maintenance, and support operations personnel.
- Natural gas processing plants workers and those who deal with natural gas liquids.
- Workers who staff natural gas, propane, natural gas liquids, and other liquid fuel security operations centers, operations dispatch and control rooms and centers, and emergency response and customer emergencies (including leak calls) operations.
- Workers supporting drilling, production, processing, refining, and transporting natural gas,propane, natural gas liquids, and other liquid fuels for use as end-use fuels, feedstocks for chemical manufacturing, or use in electricity generation.
- Workers supporting propane gas service maintenance and restoration, including call centers.
- Workers supporting propane, natural gas liquids, and other liquid fuel distribution centers.
- Workers supporting propane gas storage, transmission, and distribution centers.
- Workers supporting new and existing construction projects, including, but not limitedto, pipeline construction.
- Workers supporting ethanol and biofuel production, refining, and distribution.
- Workers in fuel sectors (including, but not limited to nuclear, coal, and gas types and liquid fuels) supporting the mining, manufacturing, logistics, transportation, permitting, operation,maintenance, and monitoring of support for resources.
- Workers ensuring, monitoring, and engaging in the physical security of assets and locations associated with natural gas, propane, natural gas liquids, and other liquid fuels.
- Workers involved in the manufacturing and distribution of equipment, supplies, and parts necessary to maintain production, maintenance, restoration, and service of natural gas, propane, natural gas liquids, and other liquid fuels operations and use, including end-users.

WATER AND WASTEWATER

Workers needed to operate and maintain drinking water and wastewater and drainage infrastructure, including:

•Operational staff at water authorities.

•Operational staff at community water systems.

•Operational staff at wastewater treatment facilities.

•Workers repairing water and wastewater conveyances and performing required sampling ormonitoring, including field staff.

•Operational staff for water distribution and testing.

•Operational staff at wastewater collection facilities.

•Operational staff and technical support for SCADA Control systems.

•Laboratory staff performing water sampling and analysis.

•Suppliers and manufacturers of chemicals, equipment, personal protection equipment, and goods and services for water and wastewater systems.

•Workers who maintain digital systems infrastructure supporting water and wastewateroperations.

TRANSPORTATION AND LOGISTICS

- Workers supporting or enabling transportation and logistics functions, including truck drivers, bus drivers, dispatchers, maintenance and repair technicians, warehouse workers, third party logisticians, truck stop and rest area workers, driver training and education centers, Department of Motor Vehicle (DMV) workers, enrollment agents for federal transportation worker vetting programs, towing and recovery services, roadside assistance workers, intermodal transportation personnel, and workers that construct, maintain, rehabilitate, and inspect infrastructure, including those that require cross-jurisdiction travel.
- Workers supporting the distribution of food, fuels, pharmaceuticals and medical material (including materials used in radioactive drugs), and chemicals needed for water or water treatment and energy maintenance.
- Workers supporting operation of essential highway infrastructure, including roads, bridges, and tunnels (e.g., traffic operations centers and moveable bridge operators).
- Workers of firms providing services, supplies, and equipment that enable warehouse and operations, including cooling, storing, packaging, and distributing products for wholesale or retail sale or use, including cold-and frozen-chain logistics for food and critical biologicproducts.
- Mass transit workers providing critical transit services and performing critical or routine maintenance to mass transit infrastructure or equipment.
- Workers supporting personal and commercial transportation services including taxis, delivery services, vehicle rental services, bicycle maintenance and car-sharing services, and transportation network providers.
- Workers, including police, responsible for operating and dispatching passenger, commuter, and freight trains and maintaining rail infrastructure and equipment.
- Maritime transportation workers, including port authority and commercial facility personnel, dredgers, port workers, security personnel, mariners, ship crewmembers, ship pilots, tugboat operators, equipment operators (to include maintenance and repair, and maritime-specific medical providers), ship supply workers, chandlers, repair company workers, and maritime and mariner training and education centers. Refer to the United States Coast Guard's Marine Safety Information Bulletin "Maintaining Maritime Commerce and Identification of Essential Maritime Critical Infrastructure Workers" for more information.

- Maritime transportation workers, including port authority and commercial facility personnel, dredgers, port workers, security personnel, mariners, ship crewmembers, ship pilots, tugboat operators, equipment operators (to include maintenance and repair, and maritime-specific medical providers), ship supply workers, chandlers, repair company workers, and maritime and mariner training and education centers. Refer to the United States Coast Guard's Marine Safety Information Bulletin "Maintaining Maritime Commerce and Identification of Essential Maritime Critical Infrastructure Workers" for more information.
- Workers, including truck drivers, railroad employees, maintenance crews, and cleaners, supporting transportation of chemicals, hazardous, medical, and waste materials that support critical infrastructure, capabilities, functions, and services, including specialized carriers, crane and rigging industryworkers.
- Bus drivers and workers who provide or support intercity, commuter, and charter bus service in support of other essential services or functions, including school bus drivers.
- Vehicle repair, maintenance, and transportation equipment manufacturing and distribution facilities.
- Workers who support the construction and maintenance of electric vehicle chargingstations.
- Transportation safety inspectors, including hazardous material inspectors and accident investigator inspectors.
- Manufacturers and distributors (to include service centers and related operations) of lighting and communication systems, specialized signage and structural systems, emergency response equipment and support materials, printers, printed materials, packaging materials, pallets, crates, containers,and other supplies needed to support manufacturing, packaging staging and distribution operations, and other critical infrastructure needs.
- Postal Service, parcel, courier, last-mile delivery, and shipping and related workers, to include private companies, who accept, process, transport, and deliver information andgoods.
- Workers who supply equipment and materials for maintenance of transportation equipment.
- Workers who repair and maintain vehicles, aircraft, rail equipment, marine vessels, bicycles, and the equipment and infrastructure that enables operations that encompass movement of cargo and passengers.
- Workers who support air transportation for cargo and passengers, including operation distribution, maintenance, and sanitation. This includes air traffic controllers, flight dispatchers, maintenance personnel, ramp workers, fueling agents, flight crews, airport safety inspectors and engineers, airport operations personnel, aviation and aerospace safety workers, security, commercial space personnel, operations personnel, accident investigators, flight instructors, and other on-and off-airport facilities workers.
- Workers supporting transportation via inland waterways, such as barge crew, dredging crew, and river port workers for essential goods.
- Workers critical to the manufacturing, distribution, sales, rental, leasing, repair, and maintenance of vehicles and other equipment (including electric vehicle charging stations) and the supply chains that enable these operations to facilitate continuity of travel-related operations for essentialworkers.
- Warehouse operators, including vendors and support personnel critical for business continuity (including heating, ventilation, and air conditioning (HVAC) and electrical engineers, security personnel, and janitorial staff), e-commerce or online commerce, and customer service for essentialfunctions.

PUBLIC WORKS AND INFRASTRUCTURE SUPPORT SERVICES

- Workers who support the construction, maintenance, or rehabilitation of criticalinfrastructure.
- Workers supporting construction materials production, testing laboratories, material delivery services, and construction inspection.
- Workers who support the operation, inspection, and maintenance of essential public works facilities and operations, including bridges, water and sewer main breaks, fleet maintenance personnel, construction of critical or strategic infrastructure, traffic signal maintenance, emergency location services for buried utilities, maintenance of digital systems infrastructure supporting public works operations, and other emergent issues.
- Workers such as plumbers, electricians, exterminators, builders (including building and insulation), contractors, HVAC Technicians, technicians for elevators, escalators and moving walkways, landscapers, and other service providers who provide services, including temporary construction, that are necessary to maintaining the safety, sanitation, and essential operation of residences, businesses and buildings, such as hospitals and senior living facilities.
- Workers personnel, who support operations that ensure, the availability of and access to needed facilities, transportation, energy, and communications through activities such as road and line clearing.
- Workers who support the effective removal, storage, and disposal of residential, industrial, and commercial solid waste and hazardous waste, including at landfill operations.
- Workers who support the operation, inspection, and maintenance of essential dams, locks, and levees.
- Workers who support the inspection and maintenance of aids to navigation and othergovernment-provided services that ensure continued maritime commerce.
- Workers who support the operations and maintenance of parks and outdoor recreational facilities.

COMMUNICATIONS AND INFORMATION TECHNOLOGY

Communications

- Maintenance of communications infrastructure, --including privately owned and maintained communication systems, --supported by technicians, operators, call centers, wireline and wireless providers, cable service providers, satellite operations, Internet Exchange Points, Points of Presence, Network Access Points, back haul and front haul facilities, and manufacturers and distributors of communications equipment.
- Government and private sector workers, including government contractors, with work related to undersea cable infrastructure and support facilities, including cable landing sites, beach manhole vaults and covers, submarine cable depots, and submarine cable ship facilities.
- Government and private sector workers, including government contractors, supporting Departmentof Defense internet and communications facilities.
- Network Operations staff, engineers, and technicians to include IT managers and staff, HVAC and electrical engineers, security personnel, software and hardware engineers, and database administrators that manage the network or operate facilities.
- Workers responsible for infrastructure construction and restoration, including but not limited to engineers, technicians, and contractors for construction and engineering of fiber optic cables, buried conduit, small cells, other wireless facilities, and other communications sector-related infrastructure. This includes permitting, construction of new facilities, and deployment of new technology as required to address congestion or customer usage due to unprecedented use of remote services.
- Installation, maintenance, and repair technicians that establish, support, or repair service as needed.

- Central office personnel to maintain and operate central office, data centers, and other networkoffice facilities, including critical support personnel assisting front line workers.
- Customer service and support staff, including managed and professional services, as well as remote providers of support to transitioning workers to set up and maintain home offices, who interface with customers to manage or support service environments and security issues including payroll, billing,fraud, logistics, and troubleshooting.
- Workers providing electronic security, fire, monitoring, and life safety services, and who ensure physical security, cleanliness, and the safety of facilities and personnel, including those who provide temporary licensing waivers for security personnel to work in other States or Municipalities.
- Dispatchers involved with service repair and restoration.
- Retail customer service personnel at critical service center locations to address customer needs, including new customer processing, distributing and repairing equipment, and addressing customer issues, in order to support individuals' remote emergency communications needs.
- Supply chain and logistics personnel to ensure goods and products are available to provision these front-line workers.
- External Affairs personnel to assist in coordinating with local, state, and federal officials to address communications needs supporting COVID-19 response, public safety, and national security.
- Workers responsible for ensuring that persons with disabilities have access to and the benefits of various communications platforms, including those involved in the provision of telecommunication relay services, closed captioning of broadcast television for the deaf, video relay services for deaf citizens who prefer communication via American Sign Language over text, and audio-description for television programming.

Information Technology

- Workers who support command centers, including, but not limited to, Network OperationsCommand Centers, Broadcast Operations Control Centers, and Security Operations CommandCenters.
- Data center operators, including system administrators, HVAC and electrical engineers, security personnel, IT managers and purchasers, data transfer solutions engineers, software andhardware engineers, and database administrators for all industries, including financialservices.
- Workers who support client service centers, field engineers, and other technicians and workers supporting critical infrastructure, as well as manufacturers and supply chain vendors that provide hardware and software, support services, research and development, information technology equipment (to include microelectronics and semiconductors), HVAC and electrical equipment for critical infrastructure, and test labs and certification agencies that qualify such equipment (to include microelectronics, optoelectronics, and semiconductors) for critical infrastructure, including data centers.
- Workers needed to preempt and respond to cyber incidents involving critical infrastructure, including medical facilities; state, local, tribal, and territorial (SLTT) governments and federal facilities; energy and utilities; banks and financial institutions; securities and other exchanges; other entities that support the functioning of capital markets, public works, critical manufacturing, food, and agricultural production; transportation; and other critical infrastructure categories and personnel, in addition to all cyber defense workers who can't perform their duties remotely.
- Suppliers, designers, transporters, and other workers supporting the manufacture, distribution,provision, and construction of essential global, national, and local infrastructure for computing services (including cloud computing services and telework capabilities), business infrastructure, financial transactions and services, web-based services, and critical manufacturing.

- Workers supporting communications systems, information technology, and work from home solutions used by law enforcement, public safety, medical, energy, public works, critical manufacturing, food and agricultural production, financial services, in person and remote education, and other critical industries and businesses.
- Workers required in person to support Software as a Service businesses that enable remote working, and education performance of business operations, distance learning, media services, and digital health offerings, or required for technical support crucial for business continuity and connectivity.

OTHER COMMUNITY-OR GOVERNMENT-BASED OPERATIONS AND ESSENTIAL FUNCTIONS

- Workers to ensure continuity of building functions, including but not limited to security and environmental controls (e.g., HVAC), building transportation equipment, the manufacturing and distribution of the products required for these functions, and the permits and inspections for construction supporting essential infrastructure.
- Elections personnel to include both public and private sector electionssupport.
- Workers supporting the operations of the judicial system, including judges, lawyers, and others providing legal assistance.
- Workers who support administration and delivery of unemployment insurance programs, income maintenance, employment services, vocational rehabilitation programs and services, disaster assistance, workers' compensation insurance and benefits programs, and pandemic assistance.
- Federal, State, and Local, Tribal, and Territorial government workers who support Mission Essential Functions and communications networks.
- Trade Officials (FTA negotiators; international data flow administrators).
- Workers who support radio, print, internet and television news and media services, including, but not limited to front line news reporters, studio, and technicians for newsgathering, reporting, and publishing news.
- Workers supporting Census 2020.
- Weather forecasters.
- Clergy and other essential support for houses of worship.
- Workers who maintain digital systems infrastructure supporting other critical governmentoperations.
- Workers who support necessary permitting, credentialing, vetting, certifying, and licensing for essential critical infrastructure workers and their operations.
- Customs and immigration workers who are critical to facilitating trade in support of the national emergency response supply chain.
- Workers at testing and education centers for emergency medical services and other healthcareworkers.
- Staff at government offices who perform title search, notary, and recording services in support of mortgage and real estate services and transactions.
- Residential and commercial real estate services, including settlement services.

- Workers supporting essential maintenance, manufacturing, design, operation, inspection, security, and construction for essential products, services, supply chain, and COVID-19 relief efforts.
- Workers performing services to animals in human care, including zoos and aquariums.
- Engineers performing or supporting safety inspections.
- Veterinary nurses, technicians, veterinarians, and other services supporting individuals and organizations with service animals, search and rescue dogs, and support animals.
- Workers providing dependent care services, whether working in homes, or other private or institutional settings, including childcare, eldercare, house cleaning, and other service providers necessary to maintain a comprehensive, supportive environment for individuals and caregivers needing these services.

CRITICAL MANUFACTURING

- Workers necessary for the manufacturing of metals (including steel and aluminum), industrialminerals, semiconductors, materials and products needed for medical supply chains and for supply chains associated with transportation, building transportation equipment, aerospace, energy, communications, information technology, food and agriculture, chemical manufacturing, nuclear facilities, wood products, commodities used as fuel for power generation facilities, the operation of dams, water and wastewater treatment, processing and reprocessing of solid waste, emergency services, and the defense industrial base. Additionally, workers needed to maintain the continuity of these manufacturing functions and associated supply chains, and workers necessary to maintain a manufacturing operation in warm standby.
- Workers necessary for the manufacturing of materials and products needed to manufacturemedical equipment, PPE, and sanctioned substitutes for PPE.
- Workers necessary for mining and production of critical minerals, materials and associated essential supply chains, and workers engaged in the manufacture and maintenance of equipment and other infrastructure necessary for mining production and distribution.
- Workers who produce or manufacture parts or equipment that supports continued operations for any essential services and increase in remote workforce, including computing and communication devices, semiconductors, and equipment such as security tools for Security Operations Centers (SOCs) or data centers.
- Workers manufacturing or providing parts and equipment that enable the maintenance andcontinued operation of essential businesses and facilities.

HAZARDOUS MATERIALS

- Workers who manage hazardous materials associated with any other essential activity, including but not limited to healthcare waste (medical, pharmaceuticals, medical material production, and testing operations from laboratories processing and testing kits) and energy (including nuclear facilities).
- Workers who support hazardous materials response and cleanup.
- Workers who maintain digital systems infrastructure supporting hazardous materialsmanagement operations.

FINANCIAL SERVICES

- Workers who are needed to provide, process, and maintain systems for processing, verification, and recording of financial transactions and services, including payment, clearing, and settlement; wholesale funding; insurance services; consumer and commercial lending; public accounting; and capital markets activities.
- Workers who are needed to maintain orderly market operations to ensure the continuity of financial transactions and services.
- Workers who are needed to provide business, commercial, and consumer access to bank andnon-bank financial services and lending services, including ATMs, lending and money transmission, lockbox banking, and to move currency, checks, securities, and payments (e.g., armored cash carriers).
- Workers who support financial operations and those staffing call centers, such as those staffing data and security operations centers, managing physical security, or providing accountingservices.
- Workers supporting production and distribution of debit and credit cards.
- Workers providing electronic point of sale support personnel for essential businesses and workers.
- Workers who support law enforcement requests and support regulatory compliance efforts critical to national security, such as meeting anti-money laundering and countering terrorist financing and sanctions screening requirements.

CHEMICAL

- Workers supporting the chemical and industrial gas supply chains, including workers at chemical manufacturing plants, laboratories, distribution facilities, and workers who transport basic raw chemical materials to the producers of industrial and consumer goods, including hand sanitizers, food and food additives, pharmaceuticals, paintings and coatings, textiles, building materials, plumbing, electrical, and paper products.
- Workers supporting the safe transportation of chemicals, including those supporting tank truck cleaning facilities and workers who manufacture packaging items.
- Workers supporting the production of protective cleaning and medical solutions, PPE, chemical consumer and institutional products, disinfectants, fragrances, and packaging that prevents the contamination of food, water, medicine, among others essential products.
- Workers supporting the operation and maintenance of facilities (particularly those with high-risk chemicals and sites that cannot be shut down) whose work cannot be done remotely and requires the presence of highly trained personnel to ensure safe operations, including plant contract workers who provide inspections.
- Workers (including those in glass container manufacturing) who support the production and transportation of chlorine and alkali manufacturing, single-use plastics, and packaging that prevents the contamination or supports the continued manufacture of food, water, medicine, and other essential products.

DEFENSE INDUSTRIAL BASE

- Workers who support the essential services required to meet national security commitments to the federal government and U.S. Military, including, but are not limited to, space and aerospace workers, nuclear matters workers, mechanical and software engineers (various disciplines), manufacturingand production workers, transportation logistics and cargo handling workers, IT support, security staff, security personnel, intelligence support, aircraft and weapon system mechanics and maintainers, and sanitary workers who maintain the hygienic viability of necessary facilities.
- Personnel working for companies, and their subcontractors, who perform under contract or sub-contract to the Department of Defense (DoD),the Department of Energy (DoE) (on nuclear matters), and Department of Transportation (DOT) as well as personnel at government owned/government operated and government-owned/contractor operated facilities and vessels, and who provide materials and services to DoE (on nuclear matters) and the DoD, including support for weapon systems, software systems and cybersecurity, defense and intelligence communications, surveillance, sale of U.S. defense articles and services for export to foreign allies and partners (as authorized by the U.S. government), transportation and logistics, and space systems and other activities in support of our military, intelligence, and space forces.

COMMERCIAL FACILITIES

- Workers who support the supply chain of building materials from production through application and installation, including cabinetry, fixtures, doors, cement, hardware, plumbing (including parts and services), electrical, heating and cooling, refrigeration, appliances, paint and coatings, and workers who provide services that enable repair materials and equipment for essential functions.
- Workers supporting ecommerce of essential goods through distribution, warehouse, call center facilities, and other essential operational support functions, that accept, store, and process goods, and that facilitate their transportation and delivery.
- Workers in retail and non-retail businesses – and necessary merchant wholesalers and distributors - necessary to provide access to hardware and building materials, consumer electronics, technology products, appliances, emergency preparedness supplies, home exercise and fitness supplies, and home school instructional supplies.
- Workers distributing, servicing, repairing, installing residential and commercial HVAC systems, building transportation equipment, boilers, furnaces and other heating, cooling, refrigeration,and ventilation equipment.
- Workers supporting the operations of commercial buildings that are critical to safety, security, and the continuance of essential activities, such as on-site property managers, building engineers, security staff, fire safety directors, janitorial personnel, and service technicians (e.g., mechanical, HVAC, plumbers, electricians, and elevator).
- Management and staff at hotels and other temporary lodging facilities that provide for COVID-19 mitigation, containment, and treatment measures or provide accommodations for essential workers.

RESIDENTIAL/SHELTER FACILITIES, HOUSING AND REAL ESTATE, AND RELATED SERVICES

- Workers who support food, shelter, and social services, and other necessities of life for needy groups and individuals, including in-need populations and COVID-19 responders, including traveling medicalstaff.
- Workers in animal shelters.
- Workers responsible for the leasing of residential properties to provide individuals and families with ready access to available housing.
- Workers responsible for handling property management, maintenance, and related service calls who can coordinate the response to emergency “at-home” situations requiring immediate attention, as well as facilitate the reception of deliveries, mail, and other necessaryservices.
- Workers performing housing and commercial construction related activities, including those supporting the sale, transportation, and installation of manufactured homes.
- Workers supporting government functions related to the building and development process, such as inspections, permitting, and plan review services that can be modified to protect the public health, but fundamentally should continue and enable the continuity of the construction industry (e.g., allow qualified private third-party inspections in case of federal government shutdown).
- Workers performing services in support of the elderly and disabled populations who coordinate a variety
- of
  services, including health care appointments and activities of dailyliving.
  Workers responsible for the movement and provisioning of household goods.

HYGIENE PRODUCTS AND SERVICES

- Workers who produce hygiene products.
- Workers in laundromats, laundry services, and dry cleaners.
- Workers providing personal and household goods, repair, and maintenance, including workers such as house cleaners, plumbers, appliance repair persons, and electricians, among others.
- Workers providing disinfection services for all essential facilities and modes of transportation and who support the sanitation of all food manufacturing processes and operations from wholesale toretail.
- Workers necessary for the installation, maintenance, distribution, and manufacturing of waterand space heating equipment and its components.
- Support required for continuity of services, including commercial disinfectant services, janitorial and cleaning personnel, and support personnel functions that need freedom of movement to access facilities in support of front-line workers.
- Workers supporting the production of home cleaning, pest control, and other essential products necessary to clean, disinfect, sanitize, and ensure the cleanliness of residential homes, shelters, and commercial facilities.
- Workers supporting agriculture irrigation infrastructure.
- Workers supporting the production of home cleaning and pest control products.

CRANE: DAILY INSPECTION

Scope and Application

This policy applies to everyone in the organization.

Implementation

Implementation of this program is the responsibility of the manager/supervisor.

Procedure

1.0 Develop a custom checklist based on Owner's Manual of specific crane, hoist, rigging, and other system components.

A. At the beginning of each shift, the following safety check is to be done:

1. Know location of main power disconnect.
2. Check load hooks for deformity or cracks.

a) Hooks having more than 15 degrees in excess of normal throat opening, or 10 degrees twist from the plane of the unbent hook, shall be removed from service immediately and discarded.

3. Check the hoist and load attaching chains, including the end connections, for wear, twist, distortion (elongation, deformation), or interference with proper function.

a) Chain slings are to have an ID tag attached indicating serial #, load limit, manufacturer, size, grade, and reach.
b) Assure tag is in place and legible.
c) Assure that they are properly lubricated.
d) Any sling exposed to temperatures exceeding 600 degrees F is to be removed from service.

4. Check the hoist rope and synthetic web slings, including the end connections, for excessive wear, broken wires, stretch, kinking, or twisting.

a) Manufacturer's tags and labels should be intact and legible.

5. Hoist pendants directional controls should be clearly labeled and legible.
6. Synthetic web slings are to have an ID tag attached indicating load limit for each type of hitch.

a) Remove from service any slings showing signs of exposure to degrading chemicals or heat; snags, punctures, tears, cuts, broken or worn stitches; or distorted fittings.
b) Any synthetic sling exposed to temperatures exceeding 180 degrees F is to be removed from service.

7. Operate the hoist, bridge and trolley to make sure travel is as marked on push button controls.

a) Make sure wire rope is properly reeved on hoist drum.

8. Check hoist and crane operations for proper function, noting and reporting any deformed components or noises.
9. Operate the hoist at a slow (cautious) speed to the upper limit to make sure that the limit switch stops the hoist before hitting any fixed structure (such as the trolley).

CRANE: DAILY INSPECTION

10. After proper function is observed as noted above, increase speed GRADUALLY until top speed is achieved SAFELY. Verify proper function.

B. DO NOT USE EQUIPMENT THAT HAS ANY NOTED PROBLEMS. TAKE IT OUT OF SERVICE (RED TAG IT), AND GET IT REPLACED OR FIXED BEFORE USE.

2.0 Monthly Preventive Maintenance Inspection Items

A. In addition to the above daily inspection items, the following items must be inspected monthly.

1. Records of the inspections are to be kept including date and signature of inspector, serial number of component checked.

2. Lock-out procedures are to be followed during maintenance work by employees and outside personnel.

3. Cranes or components that are idle and then put back in service are to be inspected as noted.

B. Inspect the following monthly:

1. Load hooks for deformity or cracks.

a) Hooks having more than 15 degrees in excess of normal throat opening, or 10 degrees twist from the plane of the unbent hook, or any cracks shall be removed from service immediately and discarded.

2. Check the hoist and load attaching chains and synthetic slings (as noted above), including the end connections, for wear, twist, distortion (elongation compared to reach indicated on manufacturer tag; deformation), or interference with proper function.

a) Chain slings are to have an ID tag attached indicating serial #, load capacity, manufacturer, size, grade, and reach.

b) Assure tag is in place and legible.

c) Crane components are to have a thorough inspection at least annually.

• Assure that they are properly lubricated.

d) Any sling exposed to temperatures exceeding 600 (180 for synthetic) degrees F, are to be removed from service.

3. Any loose bolts or rivets.

4. Cracked or worn sheaves and drums.

5. Worn, cracked, or distorted parts such as pins, shafts, gears, rollers, locking and clamping devices.

6. Excessive wear on brake system components, linings, pawls, and ratchets.

7. Load indicators over their full range for inaccuracies.

8. Improper performance of component or controls or non-compliance with manufacturer's specifications or safety requirements.

9. Excessive wear of chain drive sprockets and excessive chain stretch (see manufacturer's guidelines for acceptable chain stretch).

10. Electrical apparatus for any signs of pitting or deterioration of controller contractors, limit switches, and controls.

11. Hoisting and lowering, trolley and bridge travel, limit switches, locking, and safety devices.

CRANE: DAILY INSPECTION

12. All ropes for signs of deterioration, such as, reduction in rope diameter, broken wires, worn wires, damaged or broken end connectors, kinking, crushing, cutting, or un-stranding.

CRANE USE

Scope and Applicability

This procedure applies to projects/activities involving the use of cranes. The purpose of this procedure is to establish safe practices for the operation and maintenance of cranes in order to minimize the potential for personal injury and property damage.

Implementation

Shop Activities: Implementation of this procedure is the responsibility of the Shop Manager/Foreman.

Field Activities: Implementation of this procedure is the responsibility of the Project Manager/Superintendent.

Procedure

1.0 General

A. Allow only qualified, licensed operators to operate cranes.
B. Obtain annual inspection certification prior to use of any crane.
C. Designate a Competent Person to perform a Pre-Acceptance Inspection prior to accepting a crane from a vendor or owner. See Appendices B, C, and D.
D. Keep manufacturer's Operator's Manual in the cab of the crane.
E. Comply with manufacturer's specifications and limitations for the operation of all cranes.
F. Never modify a crane without the manufacturer's written approval.
G. Repair booms in accordance with manufacturer's specifications only.
H. Provide an easily accessible fire extinguisher with a minimum rating of 5 B:C in the cab of each crane.
I. Provide safety latches for all load hooks.
J. Require that rated load capacities, recommended operating speeds, and special hazard warnings are posted on the crane in a place visible to the operator while at the controls.
K. Down-rate load ratings by 2% for each degree of temperature below zero degrees Fahrenheit (-18 degrees C) until minus 30 degrees (-34 degrees C) is attained.
L. Do not make lifts when the temperature is minus 30 degrees (-34 degrees C) or below.
M. Determine the weight of the lift to within 5% prior to making the lift. When determining the weight, consider all handling devices, i.e. rigging, load block, and load line from the tip of the boom to the load, as part of the load.
N. Test the crane's brakes by raising the load a few inches (5 cm) and applying the brakes each time a load approaches the crane's rated capacity.
O. Consider wind loads when making lifts (see Appendix A).
P. Always barricade the swing radius of the superstructure.

CRANE USE

Q. Perform and record results of air monitoring for toxic gases and oxygen deficiency when using equipment in, or equipment exhausts into, enclosed spaces.

R. Restrict side loading to freely suspended loads.

S. Use taglines at all times unless impractical.

T. Require that all jibs are equipped with positive stops to prevent their movement of more than 5% above the straight line of the jib and boom.

U. Designate a competent person to provide hand signals to the operator, and post a hand signals chart at the jobsite.

1. The crane operator must take signals only from the designated signalman.

V. Never allow personnel under the load or swing a load over personnel.

W. Sound the horn when swinging loads.

X. Prohibit all personnel from riding the hook, ball, load block, or load.

Y. Require that the house swing is locked when leaving the crane unattended, even if for only short periods of time.

Z. Tie the main hook off to a secure anchor at the end of each shift.

AA. Boom cranes should be down and resting on a suitable support when high winds are likely overnight.

BB. Ground personnel observe clearances when the operator's visibility is obscured or when traveling the crane.

CC. Deenergize electrical power lines, as feasible, or provide insulating barriers when working proximate to power lines.

DD. When working in proximity to energized power lines which have not been provided with insulating barriers, be sure to designate a person to observe clearance between equipment and power lines.

EE. Require that transmission towers are de-energized, or crane and load are properly grounded when working near transmitters where an electrical charge can be induced.

2.0 Truck Cranes

A. Never lift a load beyond the tipping point, which is the moment the wheels opposite the load leave their initial, unloaded position.

B. Require that the crane is level to within 1/8 inch (3 mm) in 24 inches (61 cm).

C. Fully extend all outriggers and lift carrier wheels until they just clear the ground.

D. Use timbers that are larger than the dimensions of the outrigger pads under the outrigger pads when ground conditions are less than ideal.

E. Never use the front bumper counterweight to increase lifting capacity unless it is indicated in the load capacity chart.

F. Do not lift a load over the front of a truck crane unless the crane's manufacturer approves such a lift.

G. Use nylon slings when handling tubular chord boom sections to avoid damage to the chords and lattice.

H. Assemble and disassemble pin-connected booms carefully, never working underneath the boom.

CRANE USE

3.0 Crawler Cranes

A. Never lift a load beyond the tipping point, which is the moment the track rollers leave the roller path opposite the load.

B. Require that the crane is level to within 1/8 inch in 24 inches.

C. Make turns on hard, level ground only.

D. Use special care and a suitable safety holdback device when traveling up or down steep slopes.

E. Require that drive chains are always to the rear of the crane when traveling or lifting.

F. Use blocks against the sprocket or idler when lifting a load over the front or rear of the crane.

G. Use timber mats when ground conditions are less than ideal. Position mats crosswise to the tracks.

H. Install traction bars when the work area is covered with ice or snow.

I. Reduce rated loads by 20% when traveling with load over side of crawler or when traveling and swinging simultaneously.

J. Use nylon slings when handling tubular chord boom sections to avoid damage to the chords or lattice.

4.0 Hydraulic Cranes

A. Never lift a load over the side unless all outriggers have been set.

B. Never lift a load over the front unless all outriggers have been set.

C. Engage the mechanical swing lock and reduce travel speed to creep speed when traveling with loads that approach the crane's capacity (on rubber rating).

D. Tie all loads being carried to the front of the crane.

E. Extend all power telescoping boom sections equally.

F. Always use an anti two-blocking device.

G. Provide back-up alarms.

H. Inflate tires to recommended pressure before lifting on rubber.

I. Do not permit "on rubber" lifting with the boom extended.

5.0 Critical Lift Permits

A. Require a completed Critical Lift Permit (Appendix I) prior to all lifts that meet any of the following conditions:

1. Lifts over live process lines, critical equipment, high voltage power lines, or other lifts that may jeopardize personnel and/or plant operations.
2. Lifts of 25,000 pounds or greater.
3. Multi-crane lifts.
4. Single crane lifts exceeding 75% of the crane's rated capacity, regardless of weight.
5. Man basket lifts

CRANE USE

6.0 Inspections

A. Designate a Competent Person to inspect all cranes in accordance with the following Appendices:

1. Crawler Crane Pre-Acceptance Inspection (Appendix B).
2. Truck Crane Pre-acceptance Inspection (Appendix C).
3. Hydraulic Crane Pre-Acceptance Inspection (Appendix D).
4. Daily Equipment Checklist - All Cranes (Appendix E).
5. Monthly Crawler Crane Inspection (Appendix F).
6. Monthly Hydraulic Crane Inspection (Appendix G).
7. Wire Rope Inspection (Appendix H).
8. Annual Inspection/Certification (3rd Party)

7.0 Documentation Summary

A. File these documents in the Project/Shop Safety and Health File:

1. Operator's qualifications and licenses.
2. Copies of all inspections required by Subsection E, "Inspections".
3. Air monitoring results, as applicable.
4. Critical Lift Permits.

Hazard Checklist

Electrical Hazard Checklist	Y/N
Are employees trained in lockout / tagout procedures if needed?	
Are live parts of electrical circuits that an employee may be exposed to de-energized and locked out before an employee works on or near them?	
Have employees been trained in the electrical hazards they work around?	
Is there 36 inches of clearance to access electrical panels?	
Are employees prohibited from bringing any vehicle, crane, person, or material within 10 feet of lines?	
Are you aware of the financial liabilities of violating the State High Voltage Overhead Line Safety Acts?	
Has the power company been notified if work is to be done near overhead lines?	
Are all temporary lights guarded?	
Is temporary lighting supported by non-conductive materials or nailed up through insulated hangers?	
Are all plug connections used with the voltage they were designed for?	
Are all exposed energized parts in the temporary power supply protected from possible contact?	
Are all circuit disconnects for temporary or regular power supply properly labeled?	
Is splicing and external cord repair prohibited?	
Are all junction boxes waterproof and outlets covered if used in a wet environment?	
Have steps been taken to ensure that flexible cords are not immersed in water or exposed to damage from vehicles or equipment?	
Are ground fault circuit interrupters being used and have you established an assured equipment grounding program?	

Hazard Checklist

This form documents that the training specified above was presented to the listed participants. By signing below, each participant acknowledges receiving this training.

Organization: Date:

Trainer: Trainer's Signature:

Class Participants:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

ELECTRICAL SAFETY - CHECKLIST

QUESTIONS	Yes	No	Corrective Action
Do you specify compliance with OSHA for all contract 1. electrical work?			
Are all employees required to report any obvious hazard to life or property observed in connection with electrical 2. equipment or lines?			
Are employees instructed to make preliminary inspections and/or appropriate tests to determine what conditions exist before starting work on electrical equipment or 3. lines?			
When electrical equipment or lines are to be serviced, maintained, or adjusted, are necessary switches opened, 4. locked-out and tagged whenever possible?			
Are portable electrical tools and equipment grounded or 5. of the double insulated type?			
Are electrical appliances such as vacuum cleaners, 6. polishers, and vending machines grounded?			
7. Do extension cords have a grounding conductor?			
8. Are multiple plug adapters prohibited?			
Are ground-fault circuit interrupters installed on each temporary 15 or 20 ampere, 120 volt AC circuit at locations where construction, demolition, modifications, 9. alterations, or excavations are being performed?			
Are all temporary circuits protected by suitable disconnecting switches or plug connectors at the junction 10. with permanent wiring?			
Do you have electrical installations in hazardous dust or vapor areas? If so, do they meet the National Electrical 11. Code (NEC) for hazardous locations?			
Is exposed wiring and cords with frayed or deteriorated 12. insulation repaired or replaced promptly?			
13. Are flexible cords and cables free of splices or taps?			
Are clamps or other securing means provided on flexible cords or cables at plugs, receptacles, tools, equipment, etc., and is the cord jacket securely held in place? Are all 14. cord, cable and raceway connections intact and secure?			
In wet or damp locations, are electrical tools and equipment appropriate for the use or location or 15. otherwise protected (e.g., through GFCI)?			

ELECTRICAL SAFETY - CHECKLIST

	Yes	No	Corrective Action
Is the location of electrical power lines and cables (overhead, underground, under floor, other side of walls) determined before digging, elevated, drilling or similar 16. work is begun?			
Are metal measuring tapes, ropes, hand lines or similar devices with metallic thread woven into the fabric prohibited where they could come in contact with 17. energized parts of equipment or circuit conductors?			
Is the use of metal ladders prohibited in areas where the ladder or the person using the ladder could come in contact with energized parts of equipment, fixtures, or 18. circuit conductors?			
Are all disconnecting switches and circuit breakers labeled 19. to indicate their use or equipment served?			
Are disconnecting means always opened before fuses are 20. replaced?			
Do all interior wiring systems include provisions for grounding metal parts of electrical raceways, equipment 21. and enclosures?			
Are all electrical raceways and enclosures securely 22. fastened in place?			
Are all energized parts of electrical circuits and equipment guarded against accidental contact by approved cabinets 23. or enclosures?			
Is sufficient access and working space provided and maintained about all electrical equipment to permit ready 24. and safe operations and maintenance?			
Are all unused openings (including conduit knockouts) in electrical enclosures and fittings closed with appropriate 25. covers, plugs or plates?			
Are electrical enclosures such as switches, receptacles, and junction boxes, provided with tight fitting covers or 26. plates?			
For electrical motors in excess of two horsepower, are disconnecting switches capable of opening the circuit when the motor is in a stalled condition, without exploding? (Switches must be horsepower rated equal to 27. or in excess of the motor hp rating.)			

ELECTRICAL SAFETY - CHECKLIST

	Yes	No	Corrective Action
Is low voltage protection provided in the control device of motors driving machines or equipment which could cause 28. probable injury from inadvertent starting?			
Is each motor disconnecting switch or circuit breaker 29. located within sight of the motor control device?			
Is each motor located within sight of its controller or the controller disconnecting means capable of being locked in the open position or is a separate disconnecting means 30. installed in the circuit within sight of the motor?			
Is the controller for each motor in excess of two horsepower, rated in horsepower equal to or in excess of 31. the rating of the motor it serves?			
Are employees who regularly work on or around energized electrical equipment or lines instructed in the 32.. Cardiopulmonary Resuscitation (CPR) methods?			
Are employees prohibited from working alone on 33. energized lines or equipment over 600 volts?			

Completed by:
Signature:_____ Date:_____

Hazard Zone Checklist

Instructions: Use this checklist to determine if any typical job activities of **caution zone jobs** may put employees at risk of hazardous levels of ergonomic stress. Use a separate checklist for each job position. These are movements or postures that are regularly required to complete a job and are **performed more than once per week for more than one week per year.**

Job Position evaluated: _____ No. of employees: _____ Date: _____

Awkward Postures

		Check if applicable	Comments
	The job requires hands held overhead or elbows held above shoulders. **4+ hours/day**	☐	
	The job requires employees to repeatedly raise hands overhead or elbows above shoulders more than once per minute. **4+ hours/day**	☐	
	The job requires the employee's neck to be bent more than 45° without support or the ability to change position. **4+ hours/day**	☐	
	The job requires the employee's back to be bent forward more than 30° without support or the ability to change position. **4+ hours/day**	☐	
	The job requires the employee's back to be bent forward more than 45° without support or the ability to change position. **4+ hours/day**	☐	
	The job requires employees to kneel or squat. **4+ hours/day**	☐	

Pinching

		Check if applicable	Comments
	The job requires employees to pinch either: • An unsupported object weighing 2+ lbs per hand. • An object with a force of 4+ lbs per hand. **2+ hours/day**	☐	

Hazard Zone Checklist

Job Position evaluated: _____ No. of employees: _____Date: _____

Pinching

Check if applicable	(continued) Comments
 The job requires employees to hold objects in a pinch grip for use in highly repetitive motions. **3+ hours/day**	☐
 The job requires employees to hold objects in a pinch grip at awkward wrist angles (fig.1 page 3). **4+ hours/day**	☐
 The job requires the employee to maintain a pinch grip with no other risk facors. **4+ hours/day**	☐

Gripping

Check if applicable	Comments
 The job requires employees to pinch either: • An unsupported object weighing 10+ lbs per hand. • An object with a force of 10+ lbs per hand. **2+ hours/day**	☐
 The job requires employees to hold objects in a grip for use in highly repetitive motions. **3+ hours/day**	☐
 The job requires employees to hold objects in a grip at awkward wrist angles (fig.1 page 3). **4+ hours/day**	☐
 The job requires employees to maintain a grip with no other risk factors. **4+ hours/day**	☐

Hazard Zone Checklist

Job Position evaluated: _____ No. of employees: _____Date: _____

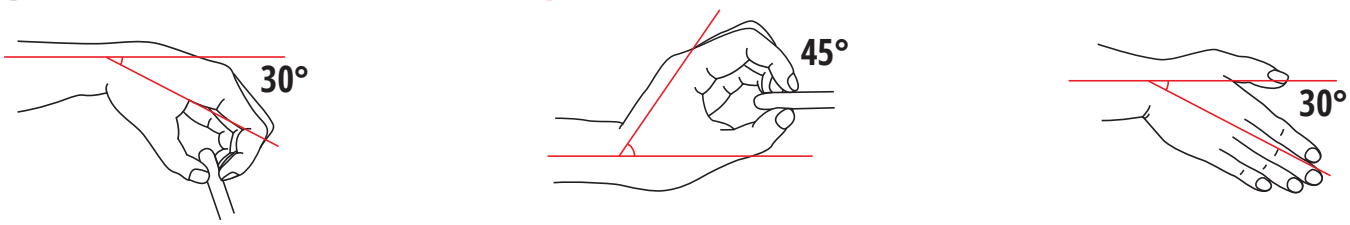
Highly Repetitive Motion

	Check if applicable	Comments
 The job requires repetitive motions of the neck, shoulders, elbows, wrists, or hands that occur every few seconds. (fig.1 below) **2+ hours/day**	☐	
 The job requires employees to perform repetitive motions with no other risk factors. **3+ hours/day**	☐	
 The job requires intensive keying at awkward wrist angles (fig. 1 below). **4+ hours/day**	☐	
 The job requires intensive keying with no other risk factors. **7+ hours/day**	☐	

Repeated Impact

	Check if applicable	Comments
 The job requires employees to pinch either: • An unsupported object weighing 10+ lbs per hand. • An object with a force of 10+ lbs per hand. **2+ hours/day**	☐	
 The job requires employees to hold objects in a grip for use in highly repetitive motions. **3+ hours/day**	☐	

Figure 1 - Awkward Wrist Angles



Hazard Zone Checklist

Job Position evaluated: _____ No. of employees: _____ Date: _____

Hand-Arm Vibration Calculator

Check if applicable

Comments

Follow these steps to calculate the effects of hand-arm vibrations based on the tools in use and total time spent using them. **See chart for time limits**

☐

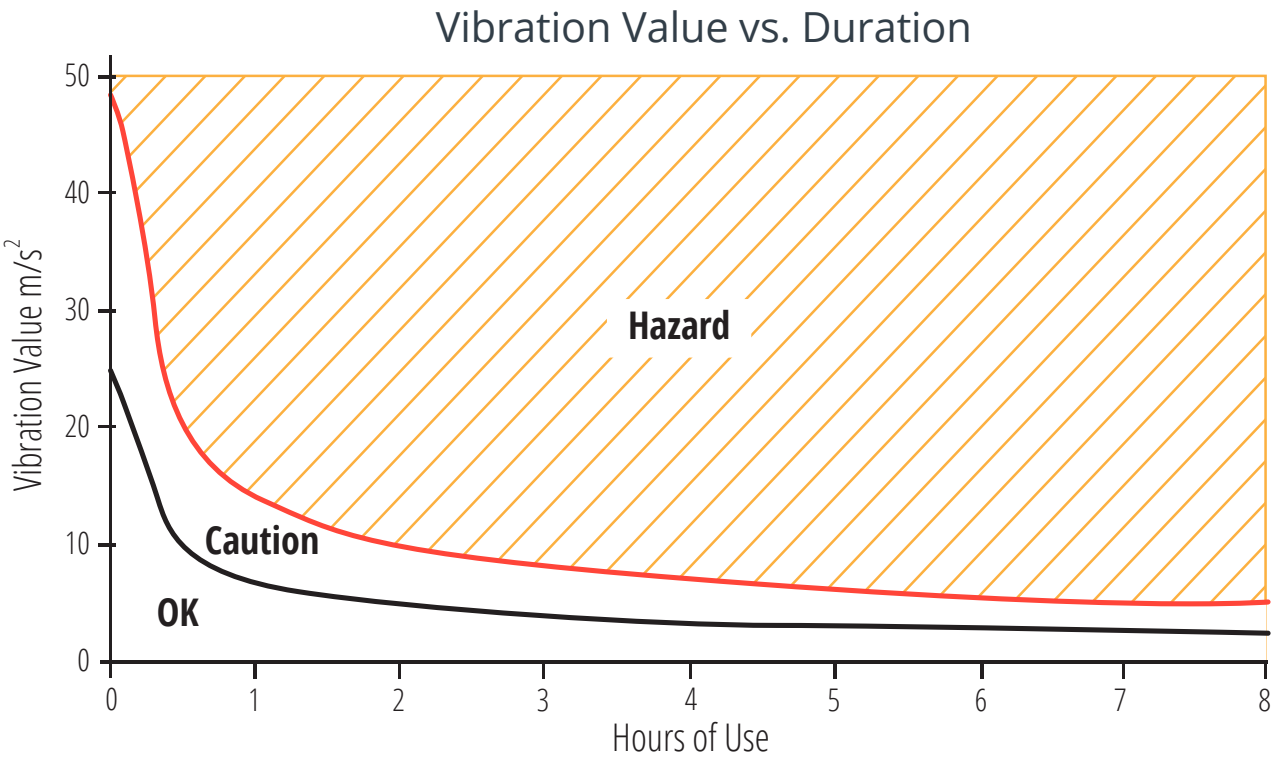
1. Find the tool's vibration value in m/s2 (available from the manufacturer or by using a vibration meter). **Vibration Value:** _____ m/s2

2. Enter the total time per day the tool is used by employees.**Duration:** _____ hours/day

3. On the chart below, plot the intersection of the vibration value and the total hours spent using the tool.

If the point of intersection falls in:

- **The "OK" range:** No further actions are required.
- **The "Caution" range:** The job remains subject to restrictions indicated on the **Caution Zone Checklist.**
- **The "Hazard" range:** Take actions to reduce the vibration hazard below this range or to the degree most technologically and economically feasible.



The **caution curve** is based on an 8-hour energy-equivalent frequency-weighted value of 2.5 m/s2.
The **hazard curve** is based on an 8-hour energy-equivalent frequency-weighted value of 5 m/s2.

FALL PROTECTION

Scope and Application

The purpose of this procedure is to provide criteria for the recognition and control of fall hazards. This procedure applies to all facilities and field operations where personnel could be exposed to fall hazards of 4 feet or greater.

Implementation

Implementation of this procedure is the responsibility of the On-Site Manager.

Procedure

1.0 Training

A. Designate a competent person to provide training in fall hazard recognition to each employee and their supervisor who may be exposed to falls.

1. The competent person must be qualified in the following areas:

a) The nature of fall hazards in the work area

b) The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used

c) The use and operation of guardrail, personal fall arrest, safety net, warning line, and safety monitoring systems, controlled access zones, and other protection systems to be used

d) The role of each employee in the safety monitoring system, when used

e) The limitations on the use of mechanical equipment during the performance of roofing work on low-sloped roofs or falls from heights less than 10 feet

f) The correct procedures for the handling and storage of equipment and materials and the erection of overhead protection

g) The role of employees in fall protection plans

h) Use of fall protection equipment, manufacturer limitations, and fall protection standards

B. Prepare a written certification record which includes the name of the employees trained, the date(s) of training, and the signature of the person who conducted the training.

C. Provide retraining when one of the following situations occur:

1. Changes in the workplace render previous training obsolete.

2. Changes in the types of fall protection systems or equipment to be used render previous training obsolete.

3. Inadequacies in affected employee's knowledge or use of fall protection systems or equipment indicate that the employee has not retained the requisite understanding or skill.

FALL PROTECTION

2.0 Fall Protection – General

A. Require that one or more of the fall protection/prevention systems outlined in this procedure is provided at **all** locations where fall hazards of 4 feet or greater exist.

1. These locations include, but are not limited to:

a) Excavations

b) Unprotected elevation

c) Ladders

d) Scaffolds

e) Floor holes

f) Wall openings

g) Formwork

h) Rebar tying

i) All other locations and operations where potential fall hazards exist

3.0 Guardrail Systems

A. Provide guardrail systems, when feasible, at all locations where a fall hazard of 4 feet or greater exists.

1. Where guardrail systems are impractical, an alternative form of fall protection as outlined elsewhere in this procedure must be provided.

2. Require that guardrail systems meet the following criteria:

a) Top rails must be installed 42 inches above the walking/working surface and be capable of withstanding, without failure, a minimum force of 200 pounds in any outward or downward direction with no more than 3 inches of deflection.

b) Mid rails must be installed 21 inches above the walking/working surface and be capable of withstanding, without failure, a minimum force of 150 pounds in any outward or downward direction.

c) Posts must be spaced not more than 8 feet apart on centers.

d) There are no openings more than 19 inches wide in any guardrail system.

e) Do not use plastic or steel banding as top rail or.

f) Provide top rails and mid rails of at least one-quarter inch nominal thickness or diameter, and smoothly surfaced to prevent cuts and punctures.

g) Flag the top rail with high-visibility material when using wire rope for top rails.

i) Erect guardrails on all sides when using guardrail systems around holes.

j) When guardrails are used around holes that are used for access, such as ladder ways, provide a gate or offset the guardrail so that a person cannot walk directly into the hole.

k) When guardrails are used at hoisting areas, place a chain, gate, or removable guardrail section across the access point when hoisting operations are not taking place.
l) Provide guardrail systems at **all** locations above dangerous equipment, whether 4 feet or not.
m) Provide guardrails at all wall openings where the outside bottom edge of the opening is 4 feet or more above lower levels and the inside bottom edge of the wall opening is less than 39 inches above the walking/working surface.
n) Erect guardrail systems on all unprotected sides or edges of ramps and runways when such systems are used.

4.0 Personal Fall Arrest Systems

A. Provide and require the proper use of personal fall arrest systems on all unprotected elevations 4 feet or more above a lower level.
1. Where these systems are impractical, an alternative form of fall protection as outlined elsewhere in this procedure must be provided.
2. All aspects of personal fall protections systems must be designed, installed, and used under the supervision of a qualified person.
3. Maintain a safety factor of at least 2 in all components of a personal fall protection system.
B. Safety belts (body belts) are prohibited.
1. Use only full body harnesses, shock-absorbing lanyards, horizontal lifelines, self-retracting lifelines and anchorage points which meet the following criteria:
a) Body harness design and construction must meet the specifications set forth in current ANSI Standards.
b) All snaphooks must be of the double locking type.
c) Ropes and webbing used in lanyards and body harnesses must be made of synthetic fibers.
d) The attachment point (dee-ring) of a body harness must be located in the center of the wearer's back near shoulder level.
e) Horizontal lifelines must be designed, installed, and used under the supervision of a qualified person; be capable of supporting at least 5,000 pounds per employee attached; and maintain a safety factor of at least 2.
f) Lanyards and vertical lifelines must have a minimum breaking strength of 5,000 pounds.
g) Self-retracting lifelines and lanyards which limit free fall to 2 feet or less must be capable of sustaining a minimum tensile load of 3000 pounds in the fully extended position.
h) Self-retracting lifelines and lanyards which do not limit free fall to 2 feet or less, ripstitch, and other shock-absorbing lanyards must be capable of sustaining a minimum tensile load of 5,000 pounds in the fully extended position.

C. Anchorage points for personal fall protection systems must be independent of any anchorage point being used to support or suspend platforms and must be capable of supporting at least 5,000 pounds per employee attached.

D. Inspect all fall protection components for wear, damage, and deterioration prior to each use.

E. Require employees to be familiar with the fitting and donning of body harnesses; proper tie-off techniques, and suitable anchorage points.

1. Instruct employees to rig fall protection such that they can neither free fall more than 4 feet, nor contact any lower level.

2. Never tie off to guardrail systems or hoists.

3. Require employees to remain tied off 100% of the time when at or above 4 feet by means of horizontal lifelines, vertical lifelines, a double lanyard system, or other suitable means.

F. Remove from service any component of a personal fall protection system that has been subjected to impact loading and do not use again until inspected by a competent person and determined to be undamaged and suitable for reuse.

1. Most modern equipment is not intended for reuse following a fall and should be replaced every 5 years after the first use.

G. Make provisions for the prompt rescue of personnel in the event of a fall, or require that employees are capable of self-rescue.

H. Provide separate vertical lifelines for each employee using a vertical lifeline. 5/8-inch nylon rope is recommended for lifeline use.

I. Protect lifelines against cuts and abrasions.

1. Use rope grabs to attach to vertical lifelines

a) Never use knots.

2. Ensure that the rope grab is compatible with the vertical lifeline being used.

5.0 Safety Net Systems

A. Provide safety net systems at locations where a fall hazard of 4 feet or greater exists, and other forms of fall protection are not feasible.

1. Where safety net systems are impractical, an alternative form of fall protection as outlined elsewhere in this procedure must be provided.

2. Require that safety net systems meet the criteria set forth in current OSHA standards.

B. Install safety nets as close as possible under the walking/working surface on which employees are working, but never more than 30 feet below this level.

C. Require that the potential fall area from the walking/working surface to the net is unobstructed.

D. Install safety nets with enough clearance under them to prevent contact with the surface or structures below when subjected to an impact force equal to the drop test specified below.

FALL PROTECTION

1. Extend the outer edge of the net 8 feet from the edge of the working surface when the vertical distance from the working level to the net is 5 feet or less.
2. Extend the outer edge of the net 10 feet from the edge of the working surface when the vertical distance from the working level to the net is 5 feet to 10 feet.
3. Extend the outer edge of the net 13 feet from the edge of the working surface when the vertical distance from the working level to the net is greater than 10 feet.
4. Conduct a drop test of the safety net after installation and before being used as a fall protection system; whenever relocated; after major repair; and at 6-month intervals if left in one place.
5. Conduct the drop test by dropping a 400 pound sandbag, 30 inches in diameter, into the net from at least 42 inches above the highest walking/working level at which employees are exposed to a fall.
6. Inspect safety nets at least once a week, and after any occurrence that could affect the integrity of the system, for wear, damage, and deterioration. Remove defective nets and components from service.

E. Remove all materials, scrap, equipment, and tools which have fallen into the net as soon as possible, but at least before the next work shift.

6.0 Hole Covers

A. Provide covers in roadways and vehicle aisles that are capable of supporting at least twice the maximum axle load of the largest vehicle expected to cross over the cover.

1. Provide walking/working surface hole covers that are capable of supporting at least twice the weight of employees, equipment, and materials that may be imposed on the cover at any one time.

B. Secure covers at the time of installation to prevent displacement by the wind, equipment, or employees.

C. Color code or mark all hole covers with the word "HOLE" or "COVER" to provide warning of the hazard.

D. Safety Monitoring Systems, Warning Line Systems, and Controlled Access Zones

1. Consult the competent person and local OSHA codes prior to performing any roofing, overhand bricklaying, leading edge, or other elevated work which may require the use of one or more of these systems.

7.0 Protection from Falling Objects

A. Install toe boards along the edge of the overhead walking/working surface.

1. Require that toe boards:

a) Are a minimum of nominal height of 3 1/2 inches in height

b) Are capable of withstanding at least 50 pounds of force applied in any downward or outward direction

c) That there is no more than ¼ inch clearance between the toe board and the walking/working surface.

B. Install paneling or screening from the top of the toe board to the top rail or mid rail when tools, equipment, or materials are piled higher than the top of the toe board.

8.0 Documentation Summary

A. Place in the Project Safety Files:

1. Competent Person Qualifications
2. Employee Training Documents

PROTECCIÓN CONTRA CAÍDAS

Alcance y aplicación

El objetivo de este procedimiento es establecer criterios para el reconocimiento y control de los riesgos de caídas. Este procedimiento se aplica a todas las instalaciones y operaciones de campo en las que el personal puede estar expuesto a riesgos de caídas de 4 pies o más.

Implementación

La implementación de este programa es responsabilidad del Gerente de Locación.

Procedimiento

1.0 Capacitación

A. Designar a una persona competente para impartir capacitación en reconocimiento de los riesgos de caída a todos los empleados que puedan estar expuestos a caídas y a su supervisor.

1. La persona competente debe estar calificada en las siguientes áreas:

a) Naturaleza de los riesgos de caídas en el área de trabajo

b) Procedimientos correctos para erigir, mantener, desmontar e inspeccionar los sistemas de protección contra caídas que se utilizarán

c) Uso y funcionamiento de barandillas, detención personal de caídas, red de seguridad, línea de advertencia y sistemas de supervisión de seguridad, zonas de acceso restringido y otros sistemas de protección que se utilizarán

d) El papel de cada empleado en el sistema de supervisión de la seguridad, si corresponde

e) Limitaciones en el uso de equipos mecánicos durante la ejecución de trabajos en techos con pendiente o caídas desde alturas de menos de 10 pies

f) Procedimientos correctos para la manipulación y el almacenamiento de equipos y materiales y la erección de protección de altura

g) El papel de los empleados en los planes de protección contra caídas

h) El uso de equipos de protección contra caídas, limitaciones del fabricante y estándares de protección contra caídas

B. Preparar un registro de certificación por escrito que incluya el nombre de los empleados capacitados, las fechas de capacitación y la firma de la persona que llevó a cabo la capacitación.

C. Proporcionar recapacitación cuando se produce una de las siguientes situaciones:

PROTECCIÓN CONTRA CAÍDAS

1. Cambios en el lugar de trabajo que vuelven obsoleta la capacitación anterior.
2. Cambios en los tipos de equipos o sistemas de protección contra caídas que se utilizarán que vuelven obsoleta la capacitación anterior.
3. Las deficiencias en el conocimiento o el uso de los equipos o sistemas de protección contra caídas del empleado afectado indican que el empleado no contaba con la comprensión o aptitudes necesarias.

2.0 Protección contra caídas - General

A. Requiere que uno o más de los sistemas de protección/prevención contra caídas que se describen en este procedimiento se proporcionen en **todas** las ubicaciones donde haya riesgos de caídas de 4 pies o más.
1. Estas ubicaciones incluyen, entre otras:
a) Excavaciones
b) Elevaciones desprotegidas
c) Escaleras
d) Andamios
e) Agujeros en el piso
f) Aperturas de pared
g) Encofrado
h) Amarres de refuerzo
i) Todos los demás lugares y operaciones donde existan posibles riesgos de caídas

3.0 Sistemas de barandillas

A. Proporcionar sistemas de barandillas, cuando sea posible, en todos los lugares donde exista un riesgo de caída de 4 pies o más.
1. Cuando los sistemas de barandas son impracticables, debe proporcionarse una forma alternativa de protección contra caídas, tal como se describe en otra parte en este procedimiento.
2. Exigir que los sistemas de barandas cumplan los siguientes criterios:
a) Los rieles superiores deben instalarse 42 pulgadas por encima de la superficie para caminar/trabajar y ser capaces de soportar, sin fallas, una fuerza mínima de 200 libras en cualquier dirección hacia afuera o hacia abajo, con no más de 3 centímetros de desviación.
b) Los rieles medios deben instalarse 21 pulgadas por encima de la superficie para caminar/trabajar y ser capaces de soportar, sin fallas, una fuerza mínima de 150 libras en cualquier dirección hacia afuera o hacia abajo.
c) Los postes deben tener una separación de no más de 8 pies entre sí.

d) No hay aberturas de más de 19 pulgadas de ancho en cualquier sistema de barandas.
e) No usar bandas de plástico o acero como riel superior.
f) Proporcionar rieles superiores y medios de al menos un cuarto de pulgada nominal de espesor o diámetro, con superficie suave para evitar cortes y pinchazos.
g) Marcar el riel superior con un material de alta visibilidad al usar cables de acero para los rieles superiores.
i) Erigir barandillas laterales cuando se utilizan sistemas de barandas alrededor de hoyos.
j) Cuando se utilizan barandillas alrededor de hoyos de acceso, como pasos de escaleras, suministrar una puerta o desplazar la barandillas de manera que la persona no pueda caminar directamente al hoyo.
k) Cuando se usan barandas en áreas de elevación, colocar una cadena, puerta o sección de baranda extraíble cruzando el punto de acceso cuando no haya operaciones de elevación en curso.
l) Proporcionar sistemas de barandas en **todas** las ubicaciones por encima de equipos peligrosos, ya sean caídas de 4 pies o no.
m) Proporcionar barandas en aberturas de pared cuando el borde inferior externo de la abertura esté a 4 pies o más por encima de los niveles inferiores y el borde inferior interno de la abertura en la pared esté a menos de 39 pulgadas por encima de la superficie para caminar/trabajar.
n) Erigir sistemas de barandas en todos los lados o bordes desprotegidos de rampas y pistas si se utilizan estos sistemas.

4.0 Sistemas personales de detención de caída

A. Proporcionar y exigir el uso adecuado de los sistemas personales de detención de caída en todas las elevaciones desprotegidas a 4 pies o más por encima de un nivel inferior.
1. Cuando los sistemas de barandas no son prácticos, debe proporcionarse una forma alternativa de protección contra caídas, tal como se describe en otra parte en este procedimiento.
2. Todos los aspectos de los sistemas personales de protección contra caídas deben diseñarse, instalarse y utilizarse bajo la supervisión de una persona calificada.
3. Mantener un factor de seguridad de al menos 2 en todos los componentes de un sistema personal de protección contra caídas.
B. Los cinturones de seguridad (correas) están prohibidos.
1. Utilice únicamente arneses de cuerpo completo, amarres de absorción de impacto, líneas horizontales, líneas auto retráctiles y puntos de anclaje que cumplan los siguientes criterios:

PROTECCIÓN CONTRA CAÍDAS

1. Los equipos más modernos no están pensados para reutilizar después de una caída y deben reemplazarse cada 5 años después del primer uso.

G. Establecer disposiciones para el rápido rescate del personal en caso de una caída, o requerir que los empleados sean capaces de auto rescatarse.

H. Proporcionar líneas vitales verticales separadas para cada empleado mediante una línea vital vertical. Se recomienda usar cuerda de nylon de 5/8 de pulgada para las líneas vitales.

I. Proteger las líneas vitales contra cortes y abrasiones.

1. Usar amarres de cuerda para conectarse a líneas vitales verticales

a) Jamás utilizar nudos.

2. Comprobar que el amarre de cuerda sea compatible con la línea vital vertical utilizada.

5.0 Sistemas de red de seguridad

A. Proporcionar sistemas de red de seguridad en todos los lugares donde exista un riesgo de caída de 4 pies o más y no sean factibles otras formas de protección contra caídas.

1. Cuando los sistemas de red de seguridad no son prácticos, debe proporcionarse una forma alternativa de protección contra caídas, tal como se describe en otra parte en este procedimiento.

2. Exigir que los sistemas de red de seguridad cumplan los criterios establecidos en las normas OSHA vigentes.

B. Instalar redes de seguridad tan cerca como sea posible debajo de la superficie para caminar/trabajar sobre la que trabajan los empleados, pero nunca a más de 30 pies por debajo de este nivel.

C. Exigir que el área potencial de caídas de la superficie para caminar/trabajar de la red esté despejada.

D. Instalar redes de seguridad con suficiente espacio debajo como para evitar el contacto con la superficie o estructuras debajo cuando son sometidas a una fuerza de impacto igual a la prueba de caídas especificada a continuación.

1. Extender el borde exterior de la red 8 pies desde el borde de la superficie de trabajo cuando la distancia vertical desde el nivel de trabajo hasta la red es de 5 pies o menos.

2. Extender el borde exterior de la red 10 pies desde el borde de la superficie de trabajo cuando la distancia vertical desde el nivel de trabajo hasta la red es de 5 a 10 pies.

3. Extender el borde exterior de la red 13 pies desde el borde de la superficie de trabajo cuando la distancia vertical desde el nivel de trabajo hasta la red es de más de 10 pies.

4. Realizar una prueba de caída de la red de seguridad después de la instalación y antes de ser utilizada como sistema de protección contra caídas, cuando se mueve de lugar, después de una

reparación importante y a intervalos de 6 meses si se deja en un lugar.

5. Realizar la prueba de caída arrojando un saco de arena de 400 libras, de 30 pulgadas de diámetro, a la red por lo menos 42 pulgadas por encima del nivel para caminar/trabajar en que los empleados están expuestos a una caída.

6. Inspeccionar las redes de seguridad al menos una vez por semana y después de cualquier suceso que pueda afectar la integridad del sistema, para detectar desgaste, daños y deterioro. Retirar del servicio las redes y componentes defectuosos.

E. Retirar todos los materiales, chatarra, equipos y herramientas que hayan caído en la red lo antes posible, pero como mínimo antes del próximo turno de trabajo.

6.0 Coberturas de agujeros

A. Proporcionar coberturas en carreteras y corredores de vehículos que sean capaces de soportar al menos dos veces la carga máxima por eje del vehículo más grande que pueda pasar por encima de la cobertura.

1. Proporcionar coberturas de agujeros en la superficie para caminar/trabajar capaces de soportar al menos el doble del peso de los empleados, equipos y materiales que puedan encontrarse sobre la cobertura al mismo tiempo.

B. Asegurar las coberturas en el momento de la instalación para evitar que las desplace el viento, los equipos o los empleados.

C. Utilice un código de colores o marque todas las coberturas con la palabra "HOLE" (agujero) o "COVER" (cobertura) para avisar del peligro.

D. Sistemas de control de seguridad, sistemas de líneas de advertencia y zonas de acceso restringido

1. Consulte a la persona competente y los códigos OSHA locales antes de realizar cualquier trabajo de techado, colocación de ladrillos en techo, bordes externos o cualquier trabajo elevado que pueda requerir el uso de uno o más de estos sistemas.

7.0 Protección contra caídas de objetos

A. Instalar tablones para proteger los pies a lo largo de la superficie para caminar/trabajar elevada.

1. Exigir que los tablones para proteger los pies:

a) Tengan una altura nominal mínima de 3 1/2 pulgadas de altura

b) Sean capaces de resistir al menos 50 libras de fuerza aplicada en cualquier dirección hacia abajo o hacia fuera

c) Que no haya más de ¼ de pulgada de espacio entre el tablón y la superficie para caminar/trabajar.

B. Instalar un revestimiento o pantalla desde la parte superior del tablón para proteger los pies hasta el riel superior o el riel medio cuando las

herramientas, equipos o materiales se apilan hasta una altura mayor que la parte superior del tablón.

8.0 Resumen de Documentación

A. Colocar en los archivos de seguridad del proyecto:

1. Calificaciones de la persona competente
2. Documentos de capacitación de empleados

Forklift Operation

Scope and Application

This procedure applies to all operations where forklifts, other Powered Industrial Trucks (PITs), or jacks are used for the purpose of material handling.

During the movement of products and materials there are numerous opportunities for personal injury and property damage if proper procedures and caution are not used. This program applies to all powered industrial trucks, hoists, and lifting gear used in material handling. The information in this program shall be used to train prospective industrial truck operators and provide the basis for initial and refresher training.

Implementation

Implementation of this procedure is the responsibility of the On-Site Manager.

Procedure

1.0 Operator Requirements

A. Ensure that all candidates for powered industrial truck operators meet the following basic requirements:

1. No vision problems that cannot be corrected by glasses or contacts.
2. No hearing loss that cannot be corrected with hearing aids.
3. No physical impairments (including neurological, balance, or consciousness issues) that affect:
   a) Perception
   b) Vision
   c) Physical abilities

2.0 Training

A. Training of operators must be done by an experienced operator that is familiar with the company equipment, applications, and layout.

B. Supervise trainees closely.

1. Never allow trainees to operate independently.
2. Trainees must only operate equipment:
   a) In a safe area, under continual supervision
   b) After they have successfully completed the training program
   c) After they are evaluated on their skills with the equipment
3. They are not to be certified unless they clearly demonstrate the necessary skills and abilities.

C. Only organization certified operators are allowed to operate PITs.

Forklift Operation

3.0 Periodic Evaluation and Refresher Training

A. Sufficient evaluation and refresher training must be conducted to assure all operators truly understand and follow training received and proper procedures to operate the powered industrial truck safely. Job Hazard Analyses and Safety Observations can be used to reinforce proper behaviors.

B. A skills evaluation must be performed of each operator's performance on the type of powered industrial truck they will operate. This is to be completed after training, and at least every three years.

C. It is advisable that Safety Observations be done on an ongoing basis as part of a developed Safety Culture.

D. Refresher training is required if any of the following occur:

1. The operator is involved in an accident or near-miss incident.
2. The operator has been observed operating the vehicle in an unsafe manner.
3. The operator has been determined in an evaluation to need additional training.
4. There are changes in the workplace that could affect safe operation of the truck.
5. The operator is assigned to a different type of truck.

E. It is advisable that refresher training be done throughout the year, and that it is coupled with ongoing Safety Observations. Any individual with poor behaviors should be pulled from the powered industrial truck responsibilities to assure their safety and that of their co-workers.

4.0 PIT Maintenance Requirements

A. Power-operated industrial trucks must be in safe operating condition or will be removed from service.

B. Copies of the vehicle inspections and owner’s manuals must be kept on the respective gear.

C. All repairs shall be made by authorized personnel to manufacturer standards.

D. Pre-shift, each PIT must be inspected to the manufacturer requirements.

E. Repairs to the fuel and ignition systems of industrial trucks must be conducted in locations designated for such repairs with ignition sources eliminated.

F. Repairs to the electrical system shall have the battery disconnected prior to repairs.

G. Industrial trucks are not to be modified to affect the weight limits of the truck or other safety aspects without the re-certification of the manufacturer.

H. Additional counter-weighting or lift gear not original to the PIT shall not be used unless approved by the manufacturer.

I. Any PIT that has noted deficiencies in the pre-shift inspection shall be removed from service.

J. All PITs and related equipment, storage areas, etc, will be kept in a clean condition, free of:

Forklift Operation

1. Debris
2. Dust
3. Oil
4. Grease

K. Cleaning is to be done in well ventilated areas with non-combustible cleaners.

5.0 Safe Operating Procedures and Rules

A. Certification is required before use.
1. Attend refresher training.
2. Any unsafe act results in de-certification and retraining. A new certificate is required.

B. Conduct safety observations.
C. Do not drive sideways on incline.
1. Grades shall be ascended or descended slowly.
2. When ascending or descending grades, loaded trucks shall be driven with the load upgrade.
3. Loads shall be tilted back and raised as necessary to clear the surface.
4. Training and care is to be focused on the transition of the inclines.

D. Keep loads uphill.
E. Keep all clear from fall zone around gear.
F. Ensure trucks, rail cars etc. are checked before entering for load and that gear is secured to prevent it from moving when loading or unloading.
G. Ensure use of stop logs at edges of docks.
H. Maintain designated walkways for pedestrian traffic as well as warning systems and mirrors at blind spots.
I. Assume that pedestrians do not see you.
J. Always keep load upgrade and do not use truck on grades greater than 10%.
K. Keep arms and legs inside operator compartment.
1. Keep all clear from lifting mechanism and loads.

L. Avoid bumps, slippery areas, and rough services.
M. Avoid sudden starts and stops.
N. Ensure clearances for vehicle components, mast, and swing of truck.
O. Handle only stable secured loads.
P. Ensure weight is centered on forks, and that load center and weight are within limits of gear, and that load is against the carriage.
Q. Ensure good visibility at all times.
R. Always look behind and beep before backing.
S. Ensure back-up alarms are functional and that they can be heard above ambient noise levels.
T. Always keep loads in a down position when moving.
U. Do daily inspection and correct deficiencies before use.

Forklift Operation

1. Any safety defects (such as hydraulic fluid leaks; defective brakes, steering, lights, or horn; and/or missing fire extinguisher, lights, seat belt, or back-up alarm) are to be reported for immediate repair
2. Any unsafe gear is to be taken "Out of Service."
3. Ensure that the horn works and can be heard above ambient noise levels.
V. Always put forks down and set brake when forklift is stopped.
W. Use restraint systems provided.
X. Slow at all transition points and beep.
1. Stop at blind spots and beep before proceeding slowly.
Y. Know the weight limits, load centers limits of the equipment and never exceed posted weight limits of:
1. Forklifts
2. Racks
3. Shelves
4. Any other storage areas
Z. Never allow riders.
AA. Ensure vehicle horn is operative.
BB. Lifting personnel:
1. If using the forklift for lifting people, always use an approved work platform provided with guardrails.
2. Make sure it is guarded between the work platform and mast.
3. Attach the work platform to the forks; ensure that fall protection is used in accordance with a Hazard Assessment.
4. Assure that the operator stays with the forklift, and employees are not to travel from point to point in the platform!

6.0 Hazards

A. Being caught by moving part or stored energy: A fracture or crushing hazard
1. Use lockout procedures for any maintenance, service and or dejamming work and eliminate stored energy
2. Block mast and forks in the upright position if working with forks elevated
B. Forklift battery changes: Hazards can include exposure to acid, eye injury, fire hazards
1. Wear full eye protection, face shield, chemical resistant apron and gloves, and safety shoes when handling batteries
2. Ensure ventilation is adequate in area
3. Ensure eye wash is functional
4. Ensure no ignition sources in area
5. Ensure no smoking signs are posted and adhered to
6. Wash hands and any contaminated clothing immediately and when finished handling batteries

Forklift Operation

C. Forklift re-fueling with propane can include diesel or gasoline hazards: flammability, health effects from overexposure including skin drying/ dermatitis, headache, nausea, dizziness, nervous system effects

1. Refer to Safety Data Sheet (SDS). But at a minimum, wear full eye and skin protection.
2. Ensure ventilation is adequate in area.
3. Ensure eye wash is functional.
4. Ensure no ignition sources in area.
5. Ensure no smoking signs are posted and adhered to.
6. Wash hands and any contaminated clothing immediately and when finished handling batteries.
7. Use grounding and bonding procedures for container transfers involving flammables.
8. Use approved cabinets and storage procedures; assure they are locked and secured.
9. Store outside, assuring protected from vehicle traffic, and provided with spill containment.
10. Fuel tanks shall not be filled while the engine is running. Spillage shall be avoided.
11. Spillage of oil or fuel shall be completely cleaned and evaporated, and the fuel tank cap replaced before restarting engine.
12. No truck shall be operated with a leak in the fuel system until the leak has been corrected.
13. Open flames shall not be used for checking electrolyte level in storage batteries or gasoline level in fuel tanks.
14. LPG tanks will be removed in the following order:
    a) Shut off service valve, and let engine run down
    b) Shut off engine
    c) Disconnect tank from hose
    d) Unbuckle and remove tank from bracket
15. LPG tanks will be replaced in to following order:
    a) Place tank in bracket and re-buckle
    b) Reconnect hose to tank and tighten firmly
    c) Open valve slowly and assure proper seal
    d) NOTE: Federal Law Prohibits dispensing an improper fuel type into any Vehicle or into a non-approved fuel container.
16. In case of LPG Leaks or Tank Ruptures
    a) DO NOT start or move the PIT.
    b) If fuel hose is leaking, if safe, close the valve immediately and place PIT
    c) "Out of Service" until repaired.
    d) If tank ruptures, immediately leave the area (at least 50 feet), warn others and~~d, notify ma~~nagement and call 911.

Forklift Operation

e) Do not re-enter the area until cleared by Management.

D. Slips, falls, and tip overs

1. Keep steps and walking surfaces clear of mud and debris
2. Immediately clean up any hydraulic fluid, fuel, or oil, which is on the steps or walking surfaces
3. Maintain three points of contact when entering or exiting a forklift
4. NEVER jump off a forklift, always step off under control
5. Ensure that all powered industrial trucks will be equipped with:
   a) Overhead guard
   b) A fire extinguisher
   c) Rotating beacon
   d) Back-up alarm
   e) Seat belts
6. An overhead guard is intended to offer protection from the impact of small packages, boxes, bagged material, etc., but not to withstand the impact of a falling capacity load or roll-over.

7 Tilt loads back and carry no more than 6-8 inches from the ground.
a) Loads that restrict the operator's vision will be transported backwards.

8. Travel no faster than 2 mph or faster than a normal walk.
9. Hard hats will be worn by PIT Operators in high lift areas.
10. Aisles will be maintained free from obstructions, marked and wide enough (six foot minimum) for vehicle operation.
11. Lift capacity will be marked on all PITs.
    a) Operator will assure load does not exceed rated weight limits, know weight limits and weights being lifted.
12. When un-attended, PITs will be turned off, forks lowered to the ground, key controlled, and parking brake applied.
13. All near misses, incidents and accidents, regardless of fault and severity, are to be immediately reported to Management.
    a) Management will conduct an investigation.
14. When lift trucks or other mechanically powered vehicles are being operated on open decks or docks (e.g., decks of ships or barges, or docks), the edges shall be guarded by railings, dockboards, or other means sufficient to prevent vehicles from going over.
15. Loading trucks and railcars

a) Rail cars and trailers will be parked squarely to the loading area and have wheels chocked in place or axles locked as applicable.
• Keys need to be controlled to prevent movement of vehicles.
b) Ensure that wheels are chocked on the downhill side and dock plates are in place and secure if entering a trailer.
c) The flooring of trucks and trailers shall be checked for breaks and weakness before use.
d) The brakes shall be set and wheel chocks to prevent movement.

Forklift Operation

e) Fixed jacks may be necessary to support a semitrailer and prevent upending during the loading or unloading when the trailer is not coupled to a tractor.
f) When loading rail cars and trailers, dock plates will be used.
• Operators will assure dock plates are in good condition and properly placed.
• Positive protection shall be provided to prevent movement while dockboards or bridge plates are in position.
g) A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock, or platform or freight car.
h) Dockboard or bridgeplates shall be properly secured before they are driven over.
• Dockboard or bridgeplates shall be driven over carefully and slowly and their rated capacity never exceeded.
16. PITs shall not be driven up to anyone standing in front of a fixed object.
a) No person shall be allowed to stand or pass under the elevated portion of any truck, whether loaded or empty, or within the fall zone.
17. PITs shall not be used for opening or closing freight doors.
18. There shall be sufficient headroom under overhead installations, lights, pipes, sprinkler system (18" minimum).
19. A load backrest extension shall be used whenever necessary to minimize the possibility of the load or part of it from falling rearward.
20. PITs shall not be parked so as to block fire aisles, access to stairways, or fire equipment.
a) Parking closer than 8 feet from the center of railroad tracks is prohibited.
21. All traffic regulations shall be observed, including authorized speed limits.
a) PITs shall be operated at a speed that will permit it to be brought to a stop in a safe manner.
b) Internal speed is to be limited to 2 mph.
c) A safe distance shall be maintained approximately three truck lengths from the truck ahead, and the truck shall be kept under control at all times.
d) Other trucks traveling in the same direction at intersections, blind spots, or other dangerous locations shall not be passed.
e) The driver shall be required to slow down; stop at ANY blind spots; and sound the horn at intersections or other areas where vision is obstructed.
• If the load being carried obstructs forward view, the driver shall be required to break the load up or travel with the load trailing (if safe).
f) Railroad tracks shall be crossed diagonally wherever possible.

FORKLIFT OPERATOR CHECKLIST

Forklift Operator's Checklist

(Develop one specific to your gear from your Owner's Manual)

Vehicle #: Date: _____ _____

Operator: _____

Hour Meter Readings: _____

Hours Today: Total Hours: _____ _____

Visual Checks	**OK**	**Needs Repair**
Fluid Levels		
Leaks- Hydraulic, Battery		
Fuel Level		
Damage (Retaining Pins, Guards, Warnings)		
Tire Condition, Pressure		
Lights and Signals		
Hour Meter		
Other Gauges		
Battery Restraint System		
Seat Belt		
Mirrors and Windshields		
Hand Grabs, Foot Rests, Stepping/Walking Platforms		
Other		
Operational Checks		
Horn, Warning Alarms		
Steering		
Service Brakes		
Parking Brake		
Hydraulic Controls		
Manuals, Capacity Plate		
Discharge Indicator		
Battery Load Test		

Comments: _____

Inspected By: _____

Skill Test

Objective: An evaluation of a forklift operator's driving skills and habits

Set up a small course for trainees to go through. Require trainees to perform all functions of forklift operation (e.g., backing, raising and placing the load, moving with a load, moving through a blind spot, handling a pedestrian approaching the vehicle, etc.).

NOTE: Set up the course in a safe area away from others and traffic. Assure that all functions are **supervised by a competent person** who completes and certifies the evaluation.

Employee: _____ Evaluator: _____

Date: _____ Forklift training/quiz review date: _____

Employee written test passed: Yes _____ No _____

EVALUATION ITEM _____ YES/NO_

1. Completes pre-inspection to assure proper operation of equipment _____
2. Drives at acceptable speeds _____
3. Assures good visibility prior to moving through transition points, such as entrances or turns _____
4. Looks behind **before** and **while backing** _____
5. Operates equipment smoothly, without abrupt movement _____
6. Properly secures loads _____
7. Always keeps loads in a down position when moving _____
8. Does not allow riders _____
9. Put forks down and sets brake when forklift is stopped _____
10. Uses a seat belt _____
11. Slows at all transition points and uses the horn _____
12. Stops at blind spots and beeps before proceeding _____
13. Knows and never exceeds posted weight limits of forklifts, racks, shelves, or other storage areas _____

Skill Test

14. Assures that the wheels of all trucks being loaded/unloaded are chocked _____
15. Assures that back-up alarms are operative _____ Drives with load facing uphill
16. _____ Knows that lockout and the elimination of stored energy is required for maintenance, service, or de-jamming work _____
17. When fueling:
18. a. Controls ignition sources (e.g., no smoking, engine turned off, etc.) _____
    b. Properly places propane tanks with pin aligned _____
    c. Keeps lines and connections tight and leak-free _____
    d. Wears skin and eye protection for battery-handling _____
19. Keeps **everyone** out of fall zone and away from suspended loads _____
20. Approaches loads correctly to keep weight close to mast _____
21. Places loads and removes loads from storage areas smoothly _____
22. Takes precautions for entering trailers, and prevents exhaust exposure _____
23. Excellent use of forklift controls _____

Other observations:

_____

_____

_____

_____

_____

Prueba de habilidades

Objetivo: Se trata de una evaluación de las habilidades y hábitos de un operario de montacargas

Prepare un pequeño curso para que las personas en capacitación lo analicen. Exija que todas las personas en capacitación realicen todas las funciones de la operación de un montacargas (es decir, ir en reversa, izar y colocar la carga, trasladarse con una carga, moverse en un punto ciego, sortear la situación de un peatón acercándose al vehículo, etc.).

NOTA: Prepare el curso en un área segura lejos de los demás y el tráfico. Cerciórese de que todas las funciones se **supervisen por una persona competente** que complete y certifique la evaluación.

Empleado: _____ Evaluador: _____

Fecha: _____ Fecha de capacitación del montacargas/revisión del cuestionario: _____

Prueba escrita aprobada por el empleado: Sí _____ No _____

ASPECTO EVALUADO _____ SÍ/NO_

1. Completa la inspección previa para garantizar la operación adecuada del equipo _____
2. Conduce a velocidades aceptables _____
3. Se asegura de tener buena visibilidad antes de avanzar por puntos de transición, como ser entradas o giros _____
4. Mira hacia atrás **antes** y **mientras retrocede** _____
5. Opera el equipo suavemente, sin movimientos abruptos _____
6. Asegura las cargas adecuadamente _____
7. Siempre mantiene las cargas en una posición baja al conducir _____
8. No permite que haya pasajeros _____
9. Baja las horquillas y acciona el freno cuando el montacargas está detenido _____
10. Usa el cinturón de seguridad _____
11. Disminuye la velocidad en todos los puntos de transición y usa el claxon _____
12. Para en los puntos ciegos y suena el claxon antes de continuar _____

Prueba de habilidades

13. Conoce y nunca excede los límites de peso exhibidos para montacargas, exhibidores, estanterías u otras áreas de almacenamiento _____
14. Se asegura de que las ruedas de todos los camiones que están siendo cargados o descargados estén trabadas con una cuña _____
15. Se asegura de que las alarmas de retroceso estén en funcionamiento _____
16. Conduce con la carga mirando cuesta arriba _____
17. Sabe que se exige el bloqueo y la eliminación de la energía almacenada para trabajos de mantenimiento, servicio o para reparar atascos _____
18. Al cargar combustible:
    a. Controla las fuentes de ignición (es decir, no fumar, motor apagado, etc.) _____
    b. Coloca adecuadamente los tanques de propano con el pasador alineado _____
    c. Mantiene las mangueras y conexiones ajustadas y sin fugas _____
    d. Usa protección para la piel y los ojos al manipular la batería _____
19. Mantiene a **todos** fuera de la zona de caída y lejos de las cargas suspendidas _____
20. Aborda correctamente las cargas para mantener el peso cerca del mástil _____
21. Coloca y retira suavemente las cargas de las áreas de almacenamiento _____
22. Toma precauciones para ingresar a los remolques y evita la exposición a los gases de combustión _____
23. Uso sobresaliente de los controles del montacargas _____

Otras observaciones:

_____

_____

_____

HAND TOOL SAFETY

Scope and Application

This procedure applies to operations involving the use of hand tools and/or power equipment, including chain saws, brush cutters, powder-actuated tools, and similar high-hazard implements.

The purpose of this standard is to provide guidelines for the safe use and handling of hand tools and power equipment.

Implementation

Implementation of this procedure is the responsibility of the management.

Procedure

1.0 General

A. Keep hand and power tools in good repair, and use only for the task for which they were designed.
B. Remove damaged or defective tools from service.
C. Keep surfaces and handles clean and free of excess oil to prevent slipping.
D. Do not carry sharp tools in pockets.
E. Clean tools and return to the toolbox or storage area upon completion of a job.
F. Wrenches must have a good bite before pressure is applied.
1. Brace yourself by placing your body in the proper position so that in case the tool slips you will not fall.
2. Make sure hands and fingers have sufficient clearance in the event the tool slips.
3. Always pull on a wrench - never push.
G. When working with tools overhead, place tools in a holding receptacle or secure when not in use.
H. Do not throw tools from place to place, from person to person, or drop from heights.
I. Use non-sparking tools in atmospheres with fire or explosive characteristics.
J. Inspect all tools prior to start-up or use to identify any defects.
K. Powered hand tools should not be capable of being locked in the on position.
L. Require that all power-fastening devices be equipped with a safety interlock capable of activation only when in contact with the work surface.
M. Do not allow loose clothing, long hair, loose jewelry, rings and chains to be worn while working with power tools.
N. Do not use cheater pipes.
O. Make provisions to prevent machines from automatically restarting upon restoration of power.

2.0 Grinding Tools

A. Inspect work rests and tongue guards for grinders.
1. Work rest gaps should not exceed 1/8 inch (3 mm).
2. Tongue guards gap should not exceed 1/4 inch (6 mm).

HAND TOOL SAFETY

B. Do not adjust work or tool rests while the grinding wheel is moving.
C. Inspect the grinding wheel for cracks, chips or defects. Remove from service if any defects are found.
D. Wear goggles when grinding. A clear full-face shield may be worn with the goggles.
E. Do not use the side of a grinding wheel unless the wheel is designed for side grinding.
F. Always stand to the side of the blade, never directly behind it.
G. Use grinding wheels only at their rated speed.
H. Grinding aluminum is prohibited.

3.0 Power Saws

A. Require that circular saws be fitted with blade guards.
B. Remove damaged, bent or cracked saw blades from service immediately.
C. Require that table saws be fitted with blade guards and a splitter to prevent the work from squeezing the blade and kicking back on the operator.
D. Require guards that cover the blade to the depth of the teeth on hand held circular saws.
1. The guard should freely return to the fully closed position when withdrawn from the work surface.

4.0 Wood Working Machinery

A. Do not use compressed air to remove dust, chips and from wood working machinery.
B. Locate the on-off switch to prevent accidental start up. The operator must be able to shut off the machine without leaving the workstation.
C. Guard planers and joiners to prevent contact with the blades.
D. Use a push stick when:
1. The cutting operation requires the hands of the operator to come close to the blade.
2. Small pieces are being machined.
E. Adjust saw blades so they only clear the top of the cut.
F. Automatic feed devices should be used whenever feasible.

5.0 Pneumatic Tools and Equipment

A. Require that pneumatic tools have:
1. Tool retainers to prevent the tool from being ejected from the barrel during use.
2. Safety clip or tie wire to secure connections between tool/hose/compressor if they are of the quick connection (Chicago fittings) type.
B. Do not lay hose in walkways, on ladder or in any manner that presents a tripping hazard.
C. Never use compressed air to blow dirt from hands, face or clothing.
D. Compressed air exhausted through a chip-guarded nozzle shall be reduced to less than 30 psi. Proper respiratory, hand, eye and ear protection must be worn.
E. Never raise or lower a tool by the air hose.

HAND TOOL SAFETY

6.0 Powder Actuated Fastener Tools

A. Use powder-actuated tools that comply with the requirements of the American National Standards Institute (ANSI) Standard A 10.3 - 1970.

B. Use only individuals that have been trained by a manufacturer's representative and possess the proper license to operate, repair, service and handle powder-actuated tools.

C. Never use a powder-actuated tool in a flammable or explosive atmosphere.

D. Require the use of goggles or a full-face shield as well as safety glasses during operation of powder-actuated tools.

E. Powder-actuated tool must not be able to be fired unless the tool is pressed against the work surface.

F. The tool must not be able to fire if the tool is dropped when loaded.

G. Firing the tool should require two separate operations, with the firing movement being separate from the motion of bringing the tool to the firing position.

H. Never fire into soft substrate where there is potential for the fastener to penetrate and pass through, creating a flying projectile hazard.

I. Do not use powder-actuated tools in reinforced concrete if there is the possibility of striking the re-bar.

J. Do not use on cast iron, glazed tile, surface hardened steel, glass block, and live rock or face brick.

K. Never load and leave a powder-actuated tool unattended. It should only be loaded prior to intended firing.

L. Test tools each day prior to loading by testing safety devices according to manufacturer's recommended procedure.

7.0 Chain Saw

A. Inspect the saw prior to each use and periodically during daily use.

B. Operate the chain saw with both hands at all times.

C. Never cut above chest height.

D. Require that the idle be correctly adjusted on the chain saw. The chain should not move when the saw is in the idle mode.

E. Start cutting only after a clear escape path has been made.

F. Shut the saw off when carrying through brush or on slippery surfaces. The saw may be carried no more than 50 feet (15 meters) while idling.

G. Require applicable protective gear. This may include, but is not limited to

1. Hard hat
2. Safety glasses
3. Steel-toed boots
4. Protective leggings
5. Hearing protection

H. Inspect saws to require that they are fitted with an inertia break and hand guard.

I. Never operate a chain saw when fatigued.

J. Do not allow others in the area when chain saws are operated.

K. M~~ake su~~re there are no nails, wire or other imbedded material that can cause flying particles.

HAND TOOL SAFETY

L. Do not operate a chain saw that is damaged, improperly adjusted, or is not completely and securely assembled. Always keep the teeth sharp and the chain tight. Worn chains should immediately be replaced.
M. Keep all parts of your body away from the saw chain when engine is running.

8.0 Hand Operated Pressure Equipment

A. Pressure equipment such as grease guns, paint and garden sprayers shall be directed away from the body and other personnel in the area. The person operating any equipment such as this, which has a potential for eye injury, must wear protective goggles.
B. The noise produced when using certain types of pressure equipment may require the use of hearing protection.
C. Never allow the nozzle of a pressurized tool to come in contact with any body parts while operating. There is potential for injection of a chemical directly into the user's body, resulting in severe injury or death.

9.0 Gasoline Powered Tools

A. Never pour gasoline on hot surfaces.
B. Never fuel around open flame or while smoking.
C. Shut down the engine before fueling.
D. Provide adequate ventilation when using in enclosed spaces.
E. Use only OSHA approved safety cans to transport flammable liquids.

10.0 Inspection

A. Inspect all hand tools on a regular basis. Defective tools shall be immediately removed from service, tagged or destroyed to prevent further use.

11.0 Documentation Requirements

A. File the Training rosters and send copy to Human Resources Safety.
1. Site briefings regarding tool use.
2. Provide records of tools removed from service.
3. Provide copies of powder-actuated tool licenses (as applicable).
4. Provide tool inspection documentation.

HAZARD ASSESSMENT FOR PERSONAL PROTECTIVE EQUIPMENT

Scope and Application

This policy applies to everyone in the organization.

Implementation

Implementation of this program is the responsibility of the manager/supervisor.

Procedure

1.0 Hazard Assessment for Personal Protective Equipment

A. Controlling hazards

1. Personal Protective Equipment (PPE) devices alone should not be relied upon to provide protection against hazards, but should be used in conjunction with guards, engineering controls, and sound manufacturing practices.

B. Assessment and selection

1. It is necessary to consider certain general guidelines for assessing the foot, head, eye and face, and hand hazard situations that exist in an occupational or educational operation or process, and to match the protective devices to the particular hazard.
2. It should be the responsibility of management to exercise common sense and appropriate expertise to accomplish these tasks.

C. Assessment guidelines

1. In order to assess the need for PPE, the following steps should be taken:

a) Survey: conduct a walk-through survey of the areas in question.

- The purpose of the survey is to identify sources of hazards to workers and co-workers.
- Consideration should be given to the basic hazard categories:
  - Impact
  - Penetration
  - Compression (roll-over)
  - Chemical
  - Heat
  - Harmful dust
  - Light (optical) radiation

b) Sources: during the walk-through survey the following items should be observed:

- Sources of motion; i.e. machinery or processes where any movement of tools, machine elements or particles could exist, or movement of personnel that could result in collision with stationary objects
- Sources of high temperatures that could result in burns, eye injury or ignition of protective equipment, etc.
- Types of chemical exposures
- Sources of harmful dust

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• Sources of light radiation, i.e., welding, brazing, cutting, furnaces, heat treating, high intensity lights, etc.
• Sources of falling objects or potential for dropping objects
• Sources of sharp objects which might pierce the feet or cut the hands
• Sources of rolling or pinching objects which could crush the feet
• layout of workplace and location of co-workers
• Any electrical hazards
• In addition, injury/accident data should be reviewed to help identify problem areas.

c) Organize data: Following the walk-through survey, it is necessary to organize the data and information for use in the assessment of hazards.
• The objective is to prepare for an analysis of the hazards in the environment to enable proper selection of protective equipment.

d) Analyze data: Having gathered and organized data on a workplace, an estimate of the potential for injuries should be made.
• Each of the basic hazards (paragraph 3.a.) should be reviewed and a determination made as to the type, level of risk, and seriousness of potential injury from each of the hazards found in the area.
• The possibility of exposure to several hazards simultaneously should be considered.

D. Selection guidelines

1. After completion of the procedures listed previously, the general procedure for selection of protective equipment is to:

a) Become familiar with the potential hazards and type of protective equipment that is available, and what it can do; i.e., splash protection, impact protection, etc.

b) Compare the hazards associated with the environment; i.e., impact velocities, masses, projectile shape, radiation intensities, with the capabilities of the available protective equipment

c) Select the protective equipment which ensures a level of protection greater than the minimum required to protect employees from the hazards

d) Fit the user with the protective device and give instructions on care and use of the PPE.
• It is very important that end users be made aware of all warning labels for and limitations of their PPE.

E. Fitting the device

1. Careful consideration must be given to comfort and fit. PPE that fits poorly will not afford the necessary protection.

a) Continued wearing of the device is more likely if it fits the wearer comfortably.

b) Protective devices are generally available in a variety of sizes.

c) Care should be taken to ensure that the right size is selected.

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F. Devices with adjustable features

1. Adjustments should be made on an individual basis for a comfortable fit that will maintain the protective device in the proper position.

a) Particular care should be taken in fitting devices for eye protection against dust and chemical splash to ensure that the devices are sealed to the face.

b) In addition, proper fitting of helmets is important to ensure that it will not fall off during work operations.

c) In some cases a chin strap may be necessary to keep the helmet on an employee's head (chin straps should break at a reasonably low force, however so as to prevent a strangulation hazard).

d) If manufacturer's instructions are available, they should be followed carefully.

G. Reassessment of hazards

1. It is the responsibility of management to reassess the workplace hazard situation as necessary, by identifying and evaluating new equipment and processes, reviewing accident records, and reevaluating the suitability of previously selected PPE.

H. Selection guidelines for eye and face protection

1. Some occupations (not a complete list) for which eye protection should be routinely considered are:

a) Carpenters
b) Electricians
c) Machinists
d) Mechanics and repairers
e) Millwrights
f) Plumbers and pipe fitters
g) Sheet metal workers and tinsmiths
h) Assemblers
i) Sanders
j) Grinding machine operators
k) Lathe and milling machine operators
l) Sawyers
m) Welders
n) Laborers
o) Chemical process operators and handlers
p) Timber cutting and logging workers

2. Notes in regard to eye and face protection selection:

a) Care should be taken to recognize the possibility of multiple and simultaneous exposure to a variety of hazards. Adequate protection against the highest level of each of the hazards should be provided. Protective devices do not provide unlimited protection.

b) Operations involving heat may also involve light radiation. As required by the standard, protection from both hazards must be provided.

c) Faceshields should only be worn over primary eye protection (spectacles or goggles).

d) Filter lenses must meet the requirements for shade designations. Tinted and shaded lenses are not filter lenses unless they are marked or identified as such.

e) As required by the standard, persons whose vision requires the use of prescription (Rx) lenses or protective devices designed to be worn over regular prescription (Rx) eyewear.

f) Wearers of contact lenses must also wear appropriate eye and face protection devices in a hazardous environment. It should be recognized that dusty and/or chemical environments may represent an additional hazard to contact lens wearers.

g) Caution should be exercised in the use of metal frame protective devices in electrical hazard areas.

h) Atmospheric conditions and the restricted ventilation of the protector can cause lenses to fog. Frequent cleansing may be necessary.

i) Welding helmets or faceshields should be used only over primary eye protection (spectacles or goggles).

j) Non-sideshield spectacles are available for frontal protection only, but are not acceptable eye protection for the sources and operations listed for "impact".

k) Ventilation should be adequate, but well protected from splash entry. Eye and face protection should be designed and used so that it provides both adequate ventilation and protects the wearer from splash entry.

l) Protection from light radiation is directly related to filter lens density. See note (4). Select the darkest shade that allows task performance.

I. Selection guidelines for head protection

1. All head protection (such as a helmet) is designed to provide protection from impact and penetration hazards caused by falling objects.

a) Head protection is also available which provides protection from electric shock and burns.

2. When selecting head protection, knowledge of potential electrical hazards is important.

a) Class A helmets, in addition to impact and penetration resistance, provide electrical protection from low-voltage conductors (they are proof tested to 2,200 volts).

b) Class B helmets, in addition to impact and penetration resistance, provide electrical protection from high-voltage conductors (they are proof tested to 20,000 volts).

c) Class C helmets provide impact and penetration resistance (they are usually made of aluminum which conducts electricity), and should not be used around electrical hazards.

3. Where falling object hazards are present, helmets must be worn. Some examples include:

a) Working below other workers who are using tools and materials which could fall

b) Working around or under conveyor belts which are carrying parts or materials
c) Working below machinery or processes which might cause material or objects to fall
d) Working on exposed energized conductors.
4. Some examples of occupations for which head protection should be routinely considered are:
a) Carpenters
b) Electricians
c) Linemen
d) Mechanics and repairers
e) Plumbers and pipe fitters
f) Assemblers
g) Packers
h) Wrappers
i) Sawyers
j) Welders
k) Laborers
l) Freight handlers
m) Timber cutting and logging
n) Stock handlers
o) Warehouse laborers
J. Selection guidelines for foot protection
1. Safety shoes and boots which meet the current ANSI Z41 Standard provide both impact and compression protection.
2. Where necessary, safety shoes can be obtained which provide puncture protection.
a) In some work situations, metatarsal protection should be provided, and in other special situations electrical conductive or insulating safety shoes would be appropriate.
3. Safety shoes or boots with impact protection would be required for carrying or handling materials such as packages, objects, parts or heavy tools, which could be dropped; and, for other activities where objects might fall onto the feet.
a) Safety shoes or boots with compression protection would be required for work activities involving skid trucks (manual material handling carts) around bulk rolls (such as paper rolls) and around heavy pipes, all of which could potentially roll over an employee's feet.
b) Safety shoes or boots with puncture protection are required where sharp objects such as nails, wire, tacks, screws, large staples, scrap metal, etc. exist that could cause an injury if stepped on.
4. Some occupations (not a complete list) for which foot protection should be routinely considered are:
a) Shipping and receiving clerks
b) Stock clerks
c) Carpenters

d) Electricians
e) Machinists
f) Mechanics and repairers
g) Plumbers and pipe fitters
h) Structural metal workers
i) Assemblers
j) Drywall installers and lathers
k) Packers
l) Wrappers
m) Craters
n) Punch and stamping press operators
o) Sawyers
p) Welders
q) Laborers
r) Freight handlers
s) Gardeners and grounds-keepers
t) Timber cutting and logging workers
u) Stock handlers
v) Warehouse laborers

K. Selection guidelines for hand protection

1. Gloves are often relied upon to prevent cuts, abrasions, burns, and skin contact with chemicals that are capable of causing local or systemic effects following dermal exposure.
2. OSHA is unaware of any gloves that provide protection against all potential hand hazards, and commonly available glove materials provide only limited protection against many chemicals.
   a) It is important to select the most appropriate glove for a particular application and to determine how long it can be worn, and whether it can be reused.
3. It is also important to know the performance characteristics of gloves relative to the specific hazard anticipated; e.g., chemical hazards, cut hazards, flame hazards, etc.
   a) These performance characteristics should be assessed by using standard test procedures.
   b) Before purchasing gloves, the employer should request documentation from the manufacturer that the gloves meet the appropriate test standard(s) for the hazard(s) anticipated.
4. Other factors to be considered for glove selection in general include:
   a) As long as the performance characteristics are acceptable, in certain circumstances, it may be more cost effective to regularly change cheaper gloves than to reuse more expensive types
   b) The work activities of the employee should be studied to determine the degree of dexterity required, the duration, frequency, and degree of exposure of the hazard, and the physical stresses that will be applied.

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c) With respect to selection of gloves for protection against chemical hazards:

• The toxic properties of the chemical(s) must be determined; in particular, the ability of the chemical to cause local effects on the skin and/or to pass through the skin and cause systemic effects

– Generally, any "chemical resistant" glove can be used for dry powders.

• For mixtures and formulated products (unless specific test data are available), a glove should be selected on the basis of the chemical component with the shortest breakthrough time, since it is possible for solvents to carry active ingredients through polymeric materials

• Employees must be able to remove the gloves in such a manner as to prevent skin contamination.

L. Cleaning and maintenance

1. It is important that all PPE be kept clean and properly maintained.

a) Cleaning is particularly important for eye and face protection where dirty or fogged lenses could impair vision.

2. PPE should be inspected, cleaned, and maintained at regular intervals so that the PPE provides the requisite protection.

3. It is also important to ensure that contaminated PPE which cannot be decontaminated is disposed of in a manner that protects employees from exposure to hazards.

HOT WORK

Scope and Application

This procedure applies to any work where "Hot Work" i.e., welding, torch cutting, grinding, brazing, and other spark or heat producing tasks) in an area not designated and designed to prevent fires or other hazards associated with this work.

Purpose and Scope

The purpose of this procedure is to establish safe hot work practices to reduce/eliminate personal injury and potential fire and explosion hazards.

Implementation

Implementation of this program is the responsibility of the On-site Manager.

Procedure

1.0 Requirements

A. Preparation

1. Notify area management and co-workers of the intention to perform hot work activities.
2. Issue Hot Work Permit for all hot work operations. See Appendix A.
3. Perform housekeeping in hot work areas to remove or cover all combustible or flammable materials.
4. Cover all wood planking, scaffolds, wooden forms, and other combustible material that cannot be removed with fire blankets or other suitable non-combustible material to contain slag and sparks.
5. Provide a fire watch when performing hot work in areas where fires might develop.
   a) Continue the watch for 60 minutes after completion of hot work.
6. Require that at least one 10-pound ABC fire extinguisher is available at each hot work location, and area affected.
7. Position welding curtains to protect workers from welding arc rays.
8. Provide metal buckets or containers for disposal of slag, electrode stubs, and other hot work debris.
9. Check for flammable or explosive gases or vapors and, if necessary, purge and or inert the atmosphere before any hot work in or on containers or pipelines.
   a) Refer to your confined space entry policy for ventilation and other requirements for hot work in confined spaces.

B. Personal Protective Equipment (PPE)

1. Require the provision and use of the following personal protective equipment for hot work operations in accordance with the Hazard Assessment completed for the task
   a) Create a Hazard Assessment and JHA as needed:

- Proper eye protection, e.g. welding hood with proper shaded lens
- Cutting or burning goggles for torch cutting
- Full face shields for grinding with safety glasses.
- Consult your Personal Protective Equipment program for proper lens shades.

b) Safety glasses must be worn under hoods and face shields when grinding.
c) Appropriate gloves for task being performed.
d) Fire resistant welding jackets and leathers.
e) High top leather boots, tight to pant leg.
f) Clothing free of oil and grease, and non-synthetic fiber.

C. Torch Cutting Operations

1. Inspect torches and hoses at the beginning of each shift for leaking shutoff valves, damaged hoses and couplings, and tip connections.
a) Tag defective torches and remove from service until properly repaired.
2. Require that oxygen and fuel gas regulators and valves be in proper working order, shut off when done working with them and hose pressure relieved
3. Light torches with strikers or other approved means, never with matches or lighters.
4. Keep oxygen cylinders and fittings free of oil and grease.
5. Require that oxygen and fuel gas hoses are easily distinguishable from each other and are not interchangeable.
a) Do not use a single hose having more than one gas passage.
6. Provide flashback arrestors/check valves on all oxygen and fuel gas torches.
7. Remove hose that shows evidence of flashback or damage from service and repair or discard.
8. Refer to your Confined Space Entry program for ventilation and other requirements for hot work in confined spaces.
9. Do not cover more than 4 inches out of 12 inches (10 cm out of 30 cm) of hose with tape when taping parallel lengths of hose to prevent tangling.
10. Use only hose couplings that cannot be unlocked or disconnected by means of a straight pull.
11. Require that the boxes used to store hose be ventilated.
12. String hoses overhead using non-metallic hangers or otherwise position them to keep clear of walkways, ladders, and stairways; or damage.
13. Provide proper ventilation and respiratory equipment when cutting zinc coated, or other hazardous coating or alloy that could contain such materials as cadmium, chromium, mercury, lead, arsenic or other toxic material (See your Respiratory Protection Program).
a) Do a pre-assessment as needed to determine hazards and a Hazard Assessment to specify needed protective measures and PPE.
14. Shut off cylinder valves and bleed regulators and hoses when done a task and never leave unattended.

D. Cylinder Handling

1. Secure cylinders in an upright position at all times.
2. Assure tags are used indicating, full, in use, or empty.
3. Segregate materials based on hazards (e.g., Fuel Gas and Oxygen cylinders must be separated at least 20 feet or with a fire wall).
a) Refer to the Safety Data Sheet (SDS) for the materials.
4. Replace and secure valve safety caps when cylinders are not in use
5. Close valves, remove regulators, and replace valve safety caps before moving cylinders.
6. Move cylinders by use of a cylinder cart with securing device.
a) Never "hand roll" cylinders; always use a cart that secures the cylinders.
b) Never lay cylinders on their sides and roll them.

7. Do not use magnets, chokers, or slings to hoist cylinders. Use a cradle or bottle rack designed and constructed for hoisting purposes.
8. Use only warm, not boiling, water to thaw cylinders and valves.
9. Provide bottle carts, chains, or other steadying devices to keep cylinders from being knocked over while in use.
10. Assure all cylinders are marked with container labels with either the chemical or trade name, and hazards of the contents, and that a current SDS is on hand, and all staff are trained and current in their Hazard Communication training for the material.
11. Do not attempt to refill or mix gases in a cylinder.
12. Require all cylinders to be equipped with a handle or wrench so that they can be turned off immediately if necessary.
13. Stand to the side of the outlet and open valve slightly and close immediately prior to connecting a regulator to a cylinder.
a) Never crack a valve near ignition sources.
14. Position cylinders where they will not be struck by sparks, slag, or flame, and where they cannot become part of an electrical circuit.
15. Never take gas cylinders into confined spaces.
16. Do not strike an electrode against a cylinder to strike an arc.
17. Do not use hammers or wrenches to open cylinders having fixed hand wheels.
18. Do not use acetylene at a pressure in excess of 15-psi gauge pressure, or 30 psi absolute.
19. Store cylinders in accordance with SDS instructions and local, state and federal requirements.
a) Don't store where they will not be subjected to sources of heat.
20. Separate oxygen cylinders in storage from fuel gas cylinders and combustible materials by at least 20 feet, or by a non-combustible barrier at least 5 feet high having a fire resistance rating of at least one-half hour.
21. Provide proper signs at storage areas, such as "DANGER – FLAMMABLE" or "No Sources of Ignition, Smoking or Open Flames."
22. Keep storage areas free of vegetation, trash, and other combustible materials.
23. Remove regulators and replace valve safety caps when storing cylinders or when cylinders will be left unattended.

E. Welding Operations

1. Use only electrode holders that are specifically designed for arc cutting and welding and are of a sufficient capacity to safely handle the maximum rated current required by the electrodes.
2. Require that electrode holders be properly insulated.
3. Remove electrodes from the holders and placeholders so they cannot make contact with people or conducting objects when leaving holders unattended.
4. Require that the welding machine frame be properly grounded.
5. Welding units store electrical current; follow the Lockout Program and only work on equipment if properly trained, and authorized by the organization.
6. Shut off the welding machine at the end of each shift or when the machine is to be moved.
7. Require that the welding/cutting/ground cables meet the following requirements:

HOT WORK

a) Cables must be completely insulated, flexible, and capable of handling the maximum current requirements of the work in progress.
b) Cables must be free from repair or splices for a minimum distance of 10 feet from the electrode holder, except when standard insulated connectors or splices with insulating value equal to the cable are used.
c) Insulated connectors of a capacity at least equal to that of the cable shall be used for splices. If connecting lugs are used, they must be completely and substantially insulated.
d) A ground cable must have a safe current carrying capacity at least equal to the maximum output capacity of the unit or units that it services.
e) Never attach a ground cable to a pipeline containing gases or flammable liquids.
f) String all cables overhead with non-metallic hangers or otherwise position to keep clear of walkways, ladders, and stairways.
g) Immediately remove all damaged and worn cable from service until properly repaired.

Appendix A: Hot Work Permit

HOT WORK PERMIT

BEFORE INITIATING HOT WORK, CAN THIS JOB BE AVOIDED? IS THERE A SAFER WAY?

This Hot Work Permit is required for any operation involving open flames or heat/spark producing tasks. This includes, but is not limited to: Brazing, Cutting, Grinding, Soldering, Thawing Pipe, Torch Applied Roofing, and Welding.

INSTRUCTIONS REQUIRED PRECAUTIONS CHECKLIST

A. Verify precautions listed at right are taken or do not proceed with the work

B. Complete and retain Permit

C. Issue Permit to person doing job

HOT WORK BEING DONE BY:

EMPLOYEE

CONTRACTOR (Name) _____

_____

DATE:_____ JOB NO.:_____

LOCATION/BUILDING & FLOOR:_____

NAME OF PERSON DOING HOT WORK: _____

NATURE OF JOB: _____

I verify the above location has been examined, the precautions checked on the Required Precautions Checklist have been taken to prevent fire, and permission is authorized for this work.

SIGNED/SITE SAFETY REPRESENTATIVE:

_____

PERMIT EXPIRES [DATE/TIME (AM/PM)]:

_____

Sprinklers, hose streams, extinguishers are in service/operable, and in vicinity

Hot Work equipment in good repair... hoses, fittings, etc.

Requirements within 35 ft. (11 m) of work

Flammable liquids, dust, lint and oily deposits removed

Explosive atmosphere in area eliminated

Floors swept clean

Combustible floors wet down, covered

with damp sand or fire-resistive sheets

Remove other combustibles (paper, wood products, etc.) where possible. Otherwise protect with fire-resistive tarpaulins or metal shields

All wall and floor openings covered

Fire-resistive tarpaulins suspended beneath work

Work on walls or ceilings

Construction is noncombustible and without combustible covering or insulation

Combustibles on other side of walls moved away

Work on enclosed equipment

Enclosed equipment cleaned of all combustibles

Containers purged of flammable liquids/vapors and inerted if needed; Confined Space Permit issued

Fire watch/Hot work area monitoring

Fire watch will be provided during and for 60 minutes after work, including any coffee or lunch breaks

Fire watch is supplied with suitable charged extinguishers

Fire watch is trained in use of this equipment and in sounding alarm

Alarm available

Fire watch required for adjoining areas, above, and below

Monitor Hot Work area periodically for 4 hours after job is completed

Other Precautions to Be Taken

_____

TRABAJO CALIENTE

Alcance y aplicación

Este procedimiento se aplica a cualquier "trabajo caliente" (es decir: soldar, cortar con soplete, moler, soldar fuerte y cualquier otra tarea que produzca chispas o calor) en un área no designada y designada para prevenir incendios u otros peligros asociados con este trabajo.

Propósito y alcance

El propósito de este procedimiento es establecer prácticas seguras de trabajo caliente para reducir o eliminar lesiones personales y posibles peligros de incendio y explosiones.

Implementación

La implementación de este programa es responsabilidad del gerente del sitio.

Procedimiento

1.0 Requisitos

A. Preparación

1. Notificar la intención de realizar trabajo caliente a la gerencia del área y a compañeros de trabajo.
2. Emitir permiso de trabajo caliente para todas las operaciones de dicha actividad. Consultar el Apéndice A.
3. Realizar limpieza en las áreas de trabajo caliente para quitar o cubrir materiales combustibles o inflamables.
4. Cubrir toda plancha de madera, andamios, encofrados de madera y otros materiales combustibles que no puedan quitarse con mantas ignífugas u otro material no combustible adecuado para contener la escoria y las chispas.
5. Programar guardia contra incendios en las áreas que puedan ocurrir incendios cuando se realice trabajo caliente.
   a) Continuar vigilando durante 60 minutos después de terminado el trabajo.
6. Debe haber al menos 1 extintor de incendios ABC de 10 libras en cada lugar de trabajo caliente y áreas afectadas.
7. Colocar cortinas de soldado para proteger a los trabajadores de los arcos de soldadura.
8. Debe haber baldes o contenedores de metal para desechar la escoria, pedazos de electrodos y otros desechos de trabajo caliente.
9. Verificar que no haya gases o vapores inflamables o explosivos y, en caso de ser necesario, purgar o hacer inerte la atmósfera antes de realizar trabajo caliente en contenedores o tuberías.
   a) Consultar su política de entrada a espacios confinados para ver la ventilación y otros requisitos para realizar trabajo caliente en espacios cerrados.

B. Equipo de protección personal (EPP)

1. Se requiere la disponibilidad y el uso del siguiente equipo de protección personal para operaciones de trabajo pesado de acuerdo a la evaluación de peligros completada para la tarea
   a) Crear una evaluación de peligros y un APL según sea necesario:

TRABAJO CALIENTE

• Protección ocular adecuada, como ser máscara para soldar con lente sombreada
• Gafas de corte de protección contra el fuego para cortar con soplete
• Máscaras que protejan toda la cara con anteojos de seguridad para moler.
• Consulte el programa Equipo de protección personal para ver las lentes sombreadas adecuadas.

b) Deben usarse gafas de seguridad bajo las capuchas y máscaras al moler.
c) Guantes apropiados para la tarea realizada.
d) Chaquetas de soldar y cueros ignífugos.
e) Botas de cuero altas ajustadas a la pernera del pantalón.
f) Ropa limpia de aceite y grasa, que no sea de fibra sintética.

C. Operaciones de cortado con soplete

1. Inspeccionar los sopletes y las mangueras al comienzo de cada turno en busca de válvulas de cierre que pierdan, mangueras, acoples y conexiones en punta dañadas.
a) Etiquetar y poner fuera de servicio los sopletes defectuosos hasta que sean reparados.
2. Deben funcionar correctamente los reguladores y válvulas de oxígeno y gas combustible, cerrarse al terminar de trabajar con ellos y debe liberarse la presión de la manguera
3. Encender los sopletes con un encendedor de pedernal u otros medios aprobados, nunca con fósforos u encendedores.
4. Mantener los tubos de oxígeno y sus accesorios limpios de aceite y grasa.
5. Deben distinguirse fácilmente entre sí las mangueras de oxígeno y gas combustible y no deben ser intercambiables.
a) No usar una sola manguera si hay más de una salida de gas.
6. Debe haber disponibles supresores de retorno/válvulas de control en todos los sopletes de oxígeno y gas combustible.
7. Sacar las mangueras que tengan evidencia de retorno o daño por uso y repararlas o desecharlas.
8. Consultar su Programa de entrada a espacios confinados para ver la ventilación y otros requisitos para realizar trabajo caliente en espacios cerrados.
9. No cubrir más de 4 de 12 pulgadas (10 de 30 cm.) de manguera con cinta al encintar mangueras paralelas para evitar que se enreden.
10. Solo usar acoples que no puedan separarse o desconectarse mediante un tirón.
11. Las cajas utilizadas para guardar las mangueras deben estar ventiladas.
12. Atar las mangueras al techo usando suspensores no metálicos o colóquelas de modo que no se dañen ni estorben en pasarelas, escaleras o escalinatas.
13. Debe haber ventilación adecuada y equipos de respiración cuando se corte revestimiento de zinc u otras aleaciones o revestimientos peligrosos que puedan contener cadmio, cromo, mercurio, plomo, arsénico u otro material tóxico (consultar su Programa de Protección Respiratoria).
a) Hacer evaluación previa según sea necesario para determinar peligros y una evaluación de peligros para especificar las medidas de protección y EPP necesarios.
14. Cerrar las válvulas del tubo y los reguladores de purga y las mangueras al terminar una tarea y nunca dejar sin vigilancia.

D. Manipulación de tubos

1. Asegurar los tubos siempre en posición vertical.

TRABAJO CALIENTE

2. Verificar que se usen etiquetas que indiquen "lleno", "en uso" o "vacío".
3. Separar materiales según su peligro (por ejemplo: los tubos de gas combustible y oxígeno deben estar separados al menos 20 pies o por una pared ignífuga).
a) Consultar los materiales en las fichas de seguridad (FDS).
4. Reemplazar y ajustar tapas de seguridad de la válvula cuando no se estén usando los tubos.
5. Cerrar válvulas, quitar reguladores y reemplazar tapas de seguridad de la válvula antes de mover los tubos.
6. Usar un carro de tubos con un dispositivo de sujeción para moverlos.
a) Nunca usar una carretilla para mover los tubos; siempre usar un carro que los sujete.
b) Nunca acostar los tubos y hacerlos rodar.
7. No usar imanes, eslingas o cinchas para levantar los tubos. Usar un bastidor o andamio diseñado y construido para levantarlos.
8. Para descongelar los tubos, use agua tibia, no hirviendo.
9. Debe haber disponibles carros de tubos, cadenas u otros dispositivos de sujeción para evitar que se caigan los tubos mientras se los usa.
10. Todos los tubos deben tener una etiqueta con el nombre del químico o el nombre comercial y los peligros del contenido. La FDS actualizada debe estar a mano y todo el personal debe estar capacitado y al día con la capacitación de comunicación de peligros de ese material.
11. No intentar rellenar o mezclar gases en un tubo.
12. Todos los tubos deben estar equipados con una palanca o llave para que puedan cerrarse de inmediato en caso de necesidad.
13. Pararse al costado de una salida y abrir ligeramente la válvula y cerrarle de inmediato antes de conectar un regulador al tubo.
a) Nunca romper una válvula cerca de una fuente de ignición.
14. Colocar los tubos en un lugar donde no alcancen las chispas, escoria o el fuego; y en donde no forme parte de un circuito eléctrico.
15. Nunca llevar tubos de gas a espacios confinados.
16. No golpear un electrodo contra un tubo para crear un arco voltaico.
17. No usar martillos o llaves para abrir tubos que tengan ruedas manuales fijas.
18. No usar acetileno a una presión manométrica superior a 15 libras por pulgada cuadrada, o 30 libras por pulgada cuadrada absoluta.
19. Almacenar los tubos de acuerdo a las instrucciones de FDS y de los requerimientos locales estatales y federales.
a) No almacenar en donde no estén sometidos a fuentes de calor.
20. Separar al menos 20 pies los tubos de oxigeno de los tubos de gas y materiales combustibles al almacenar; o mediante una barrera ignífuga de al menos 5 pies de alto con una resistencia al fuego de al menos una media hora.
21. Debe haber carteles adecuados en las áreas de almacenamiento, tales como "PELIGRO: INFLAMABLE" o "Prohibido fuentes de ignición, fumar o llamas expuestas".
22. Mantener las áreas de almacenamiento libre de vegetación, basura y otros materiales combustibles.
23. Quitar los reguladores y reemplazar tapas de seguridad de la válvula al almacenar los tubos o cuando no se les preste atención.

TRABAJO CALIENTE

E. Operaciones de soldado

1. Usar receptáculos de electrodos diseñados específicamente para corte y soldadura por arco y que tengan la suficiente capacidad para manejar de manera segura la corriente nominal máxima necesaria para los electrodos.
2. Los receptáculos de electrodos deben estar correctamente aislados.
3. Quitar los electrodos de los receptáculos y de los marcadores para que no puedan entrar en contacto con personas u objetos conductores cuando no se les preste atención.
4. El bastidor de la máquina de soldar debe tener una salida a tierra adecuada.
5. Las unidades de soldado almacenan corriente eléctrica; siga el programa de cierre y solo se debe trabajar con equipos para los que se encuentre capacitado y autorizado por la organización.
6. Apagar la máquina de soldar al final de cada turno o cuando haya que mover la máquina.
7. Los cables para soldar/cortar/de tierra deben cumplir con los siguientes requisitos:

a) Los cables deben estar completamente aislados, ser flexibles y capaces de soportar los máximos requisitos de corriente del trabajo en progreso.

b) Los cables no deben tener ninguna reparación o empalme en una distancia mínima de 10 pies del receptáculo del electrodo, excepto por conectores aislados estándar o empalmes con un valor de aislamiento igual al cable utilizado.

c) Para hacer empalmes deben usarse conectores aislados de capacidad por lo menos igual al cable. Si se usan terminales de conexión, deben estar completa y sustancialmente aisladas.

d) Un cable a tierra debe tener una capacidad de corriente segura que sea por lo menos igual a la máxima capacidad de salida de la unidad o unidades a las que sirve.

e) Nunca pegar un cable a tierra con una cañería que contenga gases o líquidos inflamables.

f) Atar todos los cables al techo con suspensores no metálicos o colóquelas de modo que no estorben en pasarelas, escaleras o escalinatas.

g) Retirar inmediatamente de servicio todo cable dañado o gastado hasta que sea reparado apropiadamente.

TRABAJO CALIENTE

PERMISO PARA TRABAJO CALIENTE

ANTES DE INICIAR UN TRABAJO CALIENTE, ¿PUEDE DICHO TRABAJO EVITARSE? ¿EXISTE UNA ALTERNATIVA MÁS SEGURA?

El permiso para trabajo peligroso es necesario para cualquier operación que involucre tareas que ocasionen llamas abiertas, calor o chispas. Esto incluye, entre otros: Soldar fuerte, cortar, moler, soldar blando, descongelar caños, techado con soplete y soldar.

INSTRUCCIONES

A. Verificar que se estén tomando las precauciones enumeradas a la derecha o no proceder con el trabajo.

B. Completar y conservar el permiso.

C. Emitir el permiso a la persona que realiza el trabajo.

TRABAJO CALIENTE EN PROGRESO EN MANOS DE:

EMPLEADO

CONTRATISTA (Nombre)_____

_____

FECHA:_____**N.° DE TRABAJO:**_____

LOCACIÓN/EDIFICIO Y PISO:_____

_____

NATURALEZA DEL TRABAJO: _____

_____

NOMBRE DE LA PERSONA QUE REALIZA EL TRABAJO CALIENTE:

_____

Yo verifico que la locación antedicha ha sido examinada, se han corroborado las precauciones con la Lista de precauciones obligatorias para evitar incendios y el permiso está autorizado para este trabajo.

FIRMADO/REPRESENTANTE DE SEGURIDAD DEL SITIO:

_____

EL PERMISO VENCE EL [DATE/TIME (AM/PM)]:

_____

LISTA DE PRECAUCIONES OBLIGATORIAS

Rociadores, chorros de manguera, extintores en servicio/operables y el equipo de.
Trabajo caliente alrededor está en buenas condiciones... mangueras, accesorios, etc.

Requisitos dentro de los 35 pies (11 mts) de trabajo

Se quitaron líquidos inflamables, polvo, pelusa y depósitos oleosos.
Se eliminó la atmósfera explosiva en el área.
Se barrieron los pisos.
Se humedecieron los pisos combustibles, se cubrieron con arena húmeda o láminas ignífugas.
Remover otros materiales combustibles en donde sea posible (papel, elementos de madera, etc.). De lo contrario, proteger con lonas ignífugas o tapas metálicas.
Se cubrieron todas las aberturas de piso y paredes.
Se suspendieron lonas ignífugas debajo del área de trabajo.

Trabajo en paredes y techos

La construcción ignífuga y no tiene cobertura o aislamiento combustible.
Se retiraron los combustibles al otro lado de la pared.

Trabajo en equipamientos cerrados

Habrá una guardia contra incendios durante el trabajo y después de 60 minutos de terminado, incluyendo recesos cortos y largos.
La guardia contra incendios está equipada con extintores adecuados y cargados.
La guardia contra incendios está capacitada en el uso de este equipamiento y para hacer sonar la alarma.
Hay alarma disponible.
La guardia contra incendios es necesaria en las áreas colindantes, arriba y abajo.
Monitorear el área de trabajo caliente periódicamente por 4 horas después de terminado el trabajo.

Otras precauciones que deben tomarse

_____

HOUSEKEEPING

Scope and Applicability

This procedure applies to all operations.

Proper housekeeping in office locations, on construction sites, and fixed work facilities is essential to prevent fires as well as injuries resulting from slips, trips and falls.

Implementation

Implementation of this procedure is the responsibility of the management.

Procedure

1.0 Maintain the cleanliness of the site

A. Require tools and equipment to be stowed at the end of the day
B. Store supplies in locations away from walkways and in a manner that will not trip workers
C. Keep weeds and vegetation away from stockpiled materials and walkways
D. Maintain flooring and walkways in a clean, dry, smooth condition
E. Dispose of construction debris in a timely manner
F. Regularly inspect the work area for slip and trip hazards
G. Office/shop locations inspect work areas at least semi-annually
1. Utilize the check-sheet provided as Appendix A
H. Construction sites inspect sites at least monthly
1. Utilize the check sheet provided as Appendix A
I. Thoroughly investigate all injuries resulting from slips, trips and falls on site. Correct conditions contributing to injuries.

2.0. Documentation Summary

A. File completed Housekeeping Inspection Sheets (Appendix A), and send copy to human resources/ safety.

HOUSEKEEPING

Appendix A: Health & Safety Program

HOUSEKEEPING INSPECTION SHEET

Building or Location:

Date: Inspection Conducted by:

	Yes	No	N/A

If an answer is "No," the item must be corrected.

General Site Housekeeping

1. No blocking of exits or emergency equipment
2. Equipment or materials are not left lying on the ground
3. Storage areas are free from the accumulation of materials that constitute trip hazards
4. Work area is kept free of scrap material and other debris
5. Combustible scrap and debris is removed by safe means at regular intervals
6. Oily rags are stored in metal cans with tight fitting lids. Oily rags are removed at the end of the day

Visibility

7. Halls, stairways and walkways are well lit
8. Well-designed light switches are present in areas where walkways are not always lighted
9. Dust, smoke or steam does not create poor visibility
10. Glare from floodlights or windows do not create poor visibility in work areas

Stairs

11. Handrails are tight and at the proper level
12. Handrails extend past the top and bottom step
13. White or yellow strips are painted on the first and last step for better visibility (Not an OSHA requirement - recommendation only)
14. Steps are not rough or defective
15. Stair treads are wide enough and risers consistently spaced
16. Stairs are free of obstructions

Floor Conditions

17. Floors of every workroom are clean, and so far as possible, in a dry condition

HOUSEKEEPING

Appendix A: Health & Safety Program (continued)

Floor Conditions	Yes	No	N/A
18. Where wet floors or processes are present, proper drainage is provided and false floors, mats, or other dry standing places are provided			
19. Floor surfaces are finished with non-slip coatings where spills are likely			
20. Floors and passageways are free from protruding nails, splinters, holes, or loose boards			
21. Floors are free of holes and depressions			
22. Aisles or pathways are wide enough for easy passage and for carrying objects (48 inches is recommended)			
23. Ramps are covered with non-slip surfaces or matting			
24. Carpets or rugs do not have loose or frayed edges that may catch boots or shoes			
25. Walkways are free from extension cords, air hoses and cables			
26. Boxes, containers, machine parts or other tripping hazards do not lie in pathways			
Ground Conditions			
27. Trip hazards are not present			
28. Fall hazards are not present			
29. Holes or changes in ground elevation are either filled or guarded			
30. Muddy walkways are filled with gravel to reduce slipping			
31. All employees who work in wet or greasy conditions wear slip resistant footwear			
Equipment			
32. Vehicle steps are of adequate size, surface placement for safe dismounting			
33. Handgrips or ladders are adequate for getting in and out of equipment			
34. Ladders have been checked for damage and removed from service if found unsafe			

I certify that the above inspection was performed to the best of my knowledge and ability, based on the conditions present on _____ .

Signature_____

JOB SITE SAFETY AND QUALITY PERFORMANCE AUDIT

Evaluation Done By: _____ Date: _____

Job Site: _____ Super/ Lead: _____

SCORE: _____ (add "OK's" and multiply times [2.04]; 100% Possible)

Program Element OK Needs Focus

1. All specified Personal Protective Equipment worn by crews ___ ___
2. Pre-job Tasks:
    - Contractor/ sub-contractor meetings established and held weekly ___ ___
    - COI's received and pre-qualifications accepted ___ ___
    - Job PPE established ___ ___
    - Communication established for safety related issues on jobsite ___ ___
    - JSAs and respective evaluations done pre-job ___ ___
    - Crew PRE-TRAINED in JSAs and safety programs ___ ___
3. Safety Pre-planning done for all upcoming tasks/ needed equipment to perform task safely on-hand when needed ___ ___
4. Competent persons established and onsite when needed ___ ___
5. Traffic control plan established and updated continually ___ ___
6. Overall Jobsite appearance, and security ___ ___
7. All P/Ms on gear current:
    - Forklifts ___ ___
    - Slings, winches, ropes, rigging components ___ ___
    - Cranes ___ ___
    - Aerial Lifts ___ ___
    - Diving gear ___ ___
    - Trucks ___ ___
    - Boats, barges, and gear ___ ___
    - Heavy Equipment ___ ___
    - Ladders ___ ___
    - Scaffolds ___ ___
    - Hand Tools and electrical components ___ ___
8. Crews highly visible ___ ___
9. There is nothing (tools; training, equipment; safety gear, etc) that is

JOB SITE SAFETY AND QUALITY PERFORMANCE AUDIT

hindering satisfactory performance, or progress of the project. ___ ___

10. Adequate lighting (all hours) ___ ___
11. Workers staying off equipment; no riders; people out of blind spots and from under loads ___ ___
12. Fall protection plan in place for job, updated continually ___ ___
13. Water safety plan in place and followed ___ ___
14. Scaffold/ ladder safety procedures followed; coordinated with fall plan ___ ___
15. Equipment operated safely (Heavy equipment, aerial lifts, cranes, etc.)___ ___
16. Confined Space Procedures followed ___ ___
17. Hot work procedures followed ___ ___
18. Crane safety program followed ___ ___
19. Trenching/ Shoring Program followed ___ ___
20. Lockout procedures followed ___ ___
21. Diving program followed ___ ___
22. Restraints used on equipment ___ ___
23. ONLY trained, certified, authorized staff using equipment ___ ___
24. Equipment and tools maintained, well cared for and not abused ___ ___
25. Equipment pre-checked prior to use for safety and proper function ___ ___
26. Emergency gear in vehicles, and on jobsite (Fire ext., First Aid) ___ ___
27. Back-up alarms good ___ ___
28. Safety programs, SDSs, JSAs available to all ___ ___
29. Site organized, walkways and restricted access areas established ___ ___
30. First Aid Staff onsite; local EMS and clinic established for use; 801's, Incident Investigation, & RTW forms ready for use ___ ___
31. Weekly Safety walkthroughs and meetings with documentation ___ ___
32. Labor/OSHA and other posters up ___ ___
33. Weekly safety-Sub/Prime Safety meetings held ___ ___
34. JSA Evaluations done and employees held accountable to job Requirements ___ ___

PORTABLE LADDERS

Scope and Application

The purpose of this procedure is to require the safe use and proper construction, inspection, and maintenance of ladders at worksite locations. This procedure applies to all operations.

Implementation

Implementation of this procedure is the responsibility of management.

Procedure

1.0 General

A. Provide ladders for safe access to all elevations where permanent or temporary stairways or suitable ramps or runways are not provided.

1. Never use ladders with broken or missing rungs or steps, broken or split side rails, or other faulty or defective construction.

a) When ladders with such defects are discovered, they shall immediately be removed from service.

2. Place ladder feet on a substantial base and keep the area around the top and bottom of the ladder clear.

3. Do not place ladders in passageways, doorways, driveways, or any location where they may be displaced by activities being conducted in any other work, unless protected by barricades, guards, or a spotter is used.

4. Tie, block, or otherwise secure ladders while in use to prevent their being displaced.

5. Never use metal ladders for electrical work or where they or the user may contact electrical conductors.

6. Require that ladders are equipped with non-skid safety feet that are in good condition.

7. Use only Type I Industrial wooden, fiberglass, or metal ladders that are adequately rated for the intended loads.

2.0 Straight and Extension Ladders

A. Position straight and extension ladders at such a pitch that the horizontal distance from the top support to the foot of the ladder is about one-quarter of the working length of the ladder (one foot out for every four feet up).

1. Do not use ladders in a horizontal position as platforms, runways, or scaffolds.

2. Extend the side rails at least 36 inches above the landing. When this is not practical, install grab rails which provide a secure grip. Secure the top of the ladder to keep it from shifting.

PORTABLE LADDERS

3. When using two section extension ladders, the two sections must have a minimum overlap of 3 feet for working lengths up to 33 feet, and 4 feet for working lengths up to 44 feet.
a) Extension ladders must not exceed 44 feet in length when extended in accordance with this lap schedule.
4. Do not permit anyone to stand on the top three rungs of a straight or extension ladder.

3.0 Stepladders

A. Always fully open and lock side braces when using stepladders.
1. Use straight or extension ladders for access.
a) Stepladders are to be used as temporary elevated working platforms only.
2. Do not place planks on the top steps of stepladders.
3. Never stand on the top two steps of a stepladder.
4. Require that all four feet of the ladder have an even, solid footing.

4.0 Fixed Ladders

A. Assure that all fixed ladders are locked to prevent access to unauthorized people.
1. Assure that fixed ladders have adequate clearance from the wall and other structures to allow unobstructed climbing.
2. Assure that fixed ladders:
a) Are provided with cages or wells, and safety devices or fall prevention devices
b) Are provided with rest platforms
c) Extend at least 42 " above the surface served

5.0 Training

A. Train each employee in the safe, proper use of ladders, including the following:
1. Do not carry materials up or down - use a hand line.
2. Face the ladder when ascending or descending.
3. Position the ladder at the proper pitch.
4. Secure the top and bottom of the ladder to prevent displacement.
5. Require proper extension above landing.
6. Never overreach:
a) work only within an arm's length of the ladder.
b) Keep your belt buckle between the side rails of the ladder at all times.
7. Maintain 3-points of contact at all times when climbing or descending a ladder.
8. Allow only one person on a ladder at a time.

PORTABLE LADDERS

6.0 Inspections

A. Conduct thorough periodic inspections of all ladders to identify cracks, broken rungs, and deterioration.

1. Ladders found to be in an unsafe condition must be removed from the workplace immediately.

a) When immediate removal is not possible, the ladder shall be conspicuously tagged "DANGER - DO NOT USE" until such time as removal and proper disposal is possible.

2. Inspect each ladder for unsafe conditions before each use and remove it from service if it fails to pass inspection.

7.0 Documentation Summary

A. Document ladder training and file the training rosters and send copy to Human Resources/ Safety.

1. Reference safety briefings or posters regarding proper ladder use and inspection.

2. Keep record of periodic ladder inspections and any ladders taken out of service and/or removed from site.

LEAD IN CONSTRUCTION

Scope and Application

This procedure applies to projects where lead-containing materials are disturbed and occupational exposures may occur.
The purpose of this program is to protect personnel from occupational exposures to lead.

Implementation

Field Activities: Implementation of this procedure is the responsibility of the project manager/superintendent.

Procedures

1.0 Prior to Conducting the Initial Exposure Assessment:

A. Determine whether any surface to be disturbed or altered contains lead or has a surface coating that contains lead.

B. All employees potentially exposed to lead must:

1. Be in the Medical Surveillance Program for lead.
2. Have received training as outlined in Attachment A.

C. Interim Protection Measures:

1. Until the initial exposure assessment can be conducted the following protective measures must be implemented:

a) Provide respiratory protection as outlined in Attachment B.
b) Provide coveralls or other similar full body covering.
c) Provide gloves, hats, shoes or disposable shoe coverings.
d) Provide face shields, goggles or other appropriate protective equipment.
e) Provide change areas and hand washing facilities.

2.0 Initial Exposure Assessment

A. Contact the Safety Manager to determine whether historical air monitoring data is available that accurately represents exposure conditions for the Initial Determination for the project.

B. In the absence of representative historical data, conduct air monitoring to assess personnel exposure to lead.

C. Negative Initial Determination

1. Exposures to lead below an 8-hour time-weighted average of 30 µg/m3 require a written record which includes:

a) Date of determination.
b) Location within the worksite.
c) Name of each employee monitored.
d) Monitoring results.
e) Type of activity conducting during monitoring.

f) No further action regarding lead required.

D. Exposures to lead above an 8-hour time-weighted average of 30 µg/m3 and below 50 µg/m3

1. All employees potentially exposed to lead must:

a) Be in the Medical Surveillance Program for lead.

b) Have received training as outlined in Attachment A.

c) Utilize appropriate PPE and personal hygiene procedures as outlined in the project-specific safety plan.

E. Exposures above the 8-hour time-weighted average Permissible Exposure Limit of 50 µg/m3

1. Develop a Lead Compliance Plan:

a) The compliance plan must include the following topics:

• Description of work activities that expose personnel to lead.

• Equipment to be used and procedures to be followed during lead exposure activities.

• Employee job responsibility and crew size during lead exposure activities.

• Maintenance practices to be followed for servicing and cleaning equipment and disposing of waste.

• Specific instructions on how to set up engineering controls (ventilation; containment; etc.).

• Air monitoring data from initial assessment.

• A detailed work schedule for implementation.

• A description of arrangements made among contractors on multi-contractor sites with respect to informing affected employees of potential exposure to lead.

• The name of the competent person for the site.

1. Appoint a competent person who will be responsible for performing regular inspections of the job site, materials, and equipment during the job.

a) Order the PPE specified in the Lead Compliance Plan.

b) Provide for the cleaning, laundering, and disposal of protective clothing and equipment.

3.0 Other requirements prior to starting the project

A. Require that Engineering Controls are on site and installed correctly before work begins. Implement the engineering controls specified in the Lead Compliance Plan for the site.

B. Provide hygiene facilities which include:

1. A clean change room equipped with separate lockers for the storage of street clothes and work clothes

2. A shower and hand washing facilities

3. A lunch area free from lead contamination

C. Establish rules that will maintain proper housekeeping in the lead abatement area, specifically:

1. Prohibit contaminated clothing and equipment outside of lead work area.
2. Require lead workers to shower at the end of the shift and wash up before eating and drinking outside the lead area.
3. Segregate dirty or contaminated equipment from clean work areas.
4. HEPA vacuum all lead-contaminated surfaces.

D. Label lead hazardous areas and equipment.

1. Mark lead hazardous areas with boundary tape and signs stating:
   a) WARNING
   b) LEAD WORK AREA
   c) POISON
   d) NO SMOKING OR EATING
2. Mark lead-contaminated equipment and debris with labels warning of the lead hazard.

E. Notify contractors and subcontractors before work begins.

1. Require contractors to know the location of lead in the job site. Even if contract workers are not directly exposed they may need to still perform training required under the hazard communication standard.

F. Maintain requirements of the Lead Compliance Plan throughout the job.

1. Direct the appointed competent person to inspect the job site at least daily for those days when lead operations are performed.

4.0 Documentation Summary

A. File these records in the Project Safety file:

a) Physician's medical clearance for lead workers.
b) Proof of blood lead testing for personnel.
c) Pre-Job Lead Hazard Initial Assessment.
d) Air monitoring results.
e) Completed Lead Job Inspection forms.
f) Lead Compliance Plan for the job (as necessary).

LEAD IN CONSTRUCTION

Appendix A: Training Requirements

1.0 Training Requirements for Lead Workers

A. Assure each employee is trained in the following:

1. The content of lead in construction standard, (29 CFR 1926.62 for U.S. operations)
2. The specific nature of the operations that could result in exposure to lead above the action level
3. The purpose, proper selection, fitting, use, and limitations of respirators
4. The purpose and description of the medical surveillance program and the medical removal protection program including information concerning the adverse health effects associated with excessive exposure to lead
5. The engineering controls and work practices associated with the employee's job assignment including training of employees to follow relevant good work practices
6. The content of any lead compliance plan and the location of regulated areas in effect
7. Instructions to employees that chelating agents should not be routinely used
8. The employee's right of access to records

LEAD IN CONSTRUCTION

Appendix B: Health and Safety Program

1.0 Interim respiratory protection measures

A. During the interim work period while air monitoring is being performed and exposure levels are being determined, the following guidelines must be followed regarding respiratory protection for employees:

1. Provide half face respirators with HEPA cartridges where lead coatings or paint is present and any of the following activities will occur:
   a) Manual demolition of structures
   b) Manual scraping
   c) Manual sanding
   d) Heat gun applications
   e) Power tool cleaning with dust collection applications
   f) Spray painting with lead paint
2. Provide loose fitting hood or helmet powered air purifying respirator with high efficiency filters, or hood or helmet supplied air respirator operated in a continuous-flow mode when performing tasks involving:
   a) Lead containing mortar
   b) Lead burning
   c) Rivet busting
   d) Power tool cleaning without dust collection systems
   e) Cleanup activities where dry expendable abrasives are used
   f) Abrasive blasting enclosure movement and removal
3. Provide full face piece supplied air respirator operated in pressure demand or other positive-pressure when performing tasks involving:
   a) Abrasive blasting
   b) Welding
   c) Cutting
   d) Torch burning

EL PLOMO EN LA CONSTRUCCIÓN

Alcance y aplicación

Este procedimiento se aplica a los proyectos donde se alteran materiales que contienen plomo y pueden producirse exposiciones ocupacionales.
El objetivo de este programa consiste en proteger al personal de las exposiciones ocupacionales al plomo.

Implementación

Actividades de campo: La implementación de este procedimiento es responsabilidad del gerente/encargado del proyecto.

Procedimientos

1.0 Antes de realizar la Evaluación de exposición inicial:

A. Determinar si cualquier superficie que se perturbará o alterará contiene plomo o tiene un recubrimiento que contiene plomo.
B. Todos los empleados potencialmente expuestos al plomo deben:
1. Estar en el programa de supervisión médica por plomo.
2. Haber recibido capacitación, tal como se describe en el Adjunto A.
C. Medidas de protección provisionales:
1. Hasta que pueda llevarse a cabo la evaluación de exposición inicial, deben aplicarse las siguientes medidas de protección:
a) Proporcionar protección respiratoria como se indica en el Adjunto B.
b) Proporcionar overoles u otra cobertura similar de cuerpo completo.
c) Proporcionar guantes, sombreros, zapatos o cubre zapatos desechables.
d) Proporcionar máscaras de rostro, antiparras u otros equipos de protección adecuados.
e) Proporcionar áreas para cambiarse e instalaciones de lavado de manos.

2.0 Evaluación de exposición inicial

A. Póngase en contacto con el Gerente de Seguridad para determinar si hay datos de monitoreo de aire históricos que representen con precisión las condiciones de exposición para la determinación inicial para el proyecto.
B. En ausencia de datos históricos representativos, realice un monitoreo del aire para evaluar la exposición del personal al plomo.
C. Determinación inicial negativa
1. Las exposiciones al plomo por debajo de un promedio ponderado en 8 horas de 30 µg/m3 requieren un registro escrito que incluye:
a) Fecha de determinación.
b) Ubicación dentro de la obra.
c) Nombre de cada empleado monitoreado.

d) Resultados del monitoreo.

e) Tipo de actividad realizada durante el monitoreo.

f) No se requiere ninguna otra acción con respecto al plomo.

D. Las exposiciones al plomo por encima de un promedio ponderado en 8 horas de 30 µg/m3 y por debajo de 50 µg/m3

1. Todos los empleados potencialmente expuestos al plomo deben:

a) Estar en el programa de supervisión médica por plomo.

b) Haber recibido capacitación, tal como se describe en el Adjunto A.

c) Utilizar EPP adecuado y procedimientos de higiene personal, como se describe en el plan de seguridad específico del proyecto.

E. Exposiciones por encima del promedio ponderado en 8 horas al límite de exposición admisible de 50 µg/m3

1. Desarrollar un Plan de cumplimiento de plomo:

a) El plan de cumplimiento debe incluir los siguientes temas:

• Descripción de las actividades laborales que exponen al personal al plomo.

• Equipos para utilizar y procedimientos para seguir durante las actividades de exposición al plomo.

• Responsabilidad del empleado y tamaño del grupo durante las actividades de exposición al plomo.

• Prácticas de mantenimiento que deben seguirse para los equipos de mantenimiento y limpieza y la eliminación de residuos.

• Instrucciones específicas sobre cómo configurar los controles técnicos (ventilación, contención; etc.).

• Datos de monitoreo de aire de la evaluación inicial.

• Un programa de trabajo detallado para implementar.

• Una descripción de los acuerdos realizados entre los proveedores en sitios con múltiples proveedores con respecto a notificar a los empleados afectados sobre la posible exposición al plomo.

• El nombre de la persona responsable del sitio.

1. Designar a una persona competente que se encargará de realizar inspecciones periódicas del sitio de trabajo, materiales y equipos durante el trabajo.

a) Pedir el EPP especificado en el Plan de cumplimiento de plomo.

b) Organizar la limpieza, lavado y eliminación de ropa y equipos de protección.

3.0 Otros requisitos antes de iniciar el proyecto

A. Exigir que los controles técnicos estén en el sitio e instalados correctamente antes de comenzar el trabajo. Implementar los controles técnicos especificados en el Plan de cumplimiento de plomo para el sitio.

B. Proporcionar instalaciones higiénicas que incluyan:

1. Una habitación limpia para cambiarse, con casilleros separados para guardar la ropa de calle y la ropa de trabajo

2. Duchas e instalaciones para el lavado de manos
3. Un área de almuerzo libre de contaminación de plomo

C. Establecer reglas que mantendrán una limpieza adecuada en el área de reducción de las emisiones de plomo, concretamente:
1. Prohibir la presencia de ropa y equipos contaminados fuera del área de trabajo con plomo.
2. Exigir que los trabajadores con plomo se duchen al final del turno y se laven antes de comer y beber fuera de la zona de plomo.
3. Segregar material sucio o contaminado de las áreas de trabajo limpias.
4. Usar aspiradora HEPA en todas las superficies contaminadas con plomo.
D. Etiquetar las zonas y equipos con peligro de plomo.
1. Marcar las zonas con peligro de plomo con cinta señalizadora y carteles que indiquen:
a) WARNING (ADVERTENCIA)
b) LEAD WORK AREA (ZONA DE TRABAJO CON PLOMO)
c) POISON (VENENO)
d) NO SMOKING OR EATING (NO FUMAR NI COMER)
2. Marcar el equipo y los desechos contaminados con plomo con etiquetas de advertencia del peligro de plomo.
E. Notificar a proveedores y subcontratistas antes de comenzar el trabajo.
1. Exigir que los proveedores conozcan la ubicación del plomo en la obra. Incluso si los trabajadores contratados no están directamente expuestos, es posible que de todas maneras deban realizar la capacitación requerida según la norma de notificación de riesgos.
F. Mantener los requisitos del Plan de cumplimiento de plomo durante todo el trabajo.
1. Enviar a la persona designada como persona competente a inspeccionar la obra al menos una vez al día en los días en que se realizan operaciones con plomo.

4.0 Resumen de Documentación

A. Archivar estos registros en el archivo de Seguridad del Proyecto:
1. Autorización del médico para los trabajadores con plomo.
2. Comprobante de análisis de plomo en sangre del personal.
3. Evaluación inicial de peligro por plomo antes del trabajo.
4. Resultados del monitoreo de aire.
5. Formularios de inspección de tarea con plomo completada.
2.0 Plan de cumplimiento de plomo para el trabajo (según sea necesario).

EL PLOMO EN LA CONSTRUCCIÓN

Apéndice A: Requisitos de capacitación

1.0 Requisitos de capacitación para los trabajadores con plomo

A. Asegurar que cada empleado esté capacitado en lo siguiente:

1. El contenido de plomo en la norma de construcción, (29 CFR 1926.62 para operaciones en EE.UU.)
2. La naturaleza específica de las operaciones que pudieran resultar en la exposición al plomo por encima del nivel de acción
3. El propósito, selección adecuada, ajuste, uso y limitaciones de los respiradores
4. El propósito y la descripción del programa de supervisión médica y del programa de protección de remoción médica, incluyendo información sobre los efectos adversos para la salud asociados con la exposición excesiva al plomo
5. Los controles técnicos y prácticas de trabajo asociadas con la asignación de tareas del empleado, incluyendo la capacitación de los empleados para seguir buenas prácticas de trabajo
6. El contenido de cualquier plan de cumplimiento de plomo y la ubicación de las áreas reglamentadas vigentes
7. Instrucciones a los empleados sobre el uso de agentes quelantes, que no deben emplearse de manera habitual
8. Derecho de acceso a los registros del empleado

EL PLOMO EN LA CONSTRUCCIÓN

Apéndice B: Programa de seguridad y salud

1.0 Medidas de protección respiratoria provisionales

A. Durante el período de trabajo provisional mientras se está realizando el monitoreo de aire y se están determinando los niveles de exposición, deben seguirse las pautas que se enumeran a continuación con respecto a la protección respiratoria para empleados:

1. Proporcionar respiradores de medio rostro con cartuchos HEPA en los lugares con presencia de recubrimiento o pintura con plomo y donde se vayan a realizar las siguientes actividades:

a) Demolición manual de estructuras

b) Raspado manual

c) Lijado manual

d) Aplicaciones de pistola de calor

e) Herramienta eléctrica de limpieza con aplicaciones de recolección de polvo

f) Pintura en spray con pintura de plomo

2. Proporcionar respiradores con purificación de aire de capucha o casco sueltos con filtros de alta eficiencia, o respirador de capucha o casco operado en modo de flujo continuo durante la realización de tareas que incluyan:

a) Mortero que contenga plomo

b) Quema de plomo

c) Remoción de remaches

d) Herramienta eléctrica de limpieza sin sistemas de recolección de polvo

e) Actividades de limpieza donde se utilizan abrasivos fungibles secos

f) Movimiento y remoción de gabinetes de limpieza con abrasivos

3. Proporcionar respirador de aire con máscara de rostro completo operado por demanda de presión u otra presión positivo al realizar tareas que incluyan:

a) Limpieza con abrasivos

b) Soldadura

c) Corte

d) Antorcha encendida

Lockout/Tagout Procedures

Objective: To prevent the unexpected startup or release of hazardous energy from machines and equipment during servicing or maintenance

Introduction

This procedure applies to facilities and projects where employees are engaged in the cleaning, repairing, servicing, setting-up, or adjusting of machinery, equipment, or processes that could start up unexpectedly or release stored energy.

UCP Staffing understands that employees face severe injuries, such as amputations, fractures, or even death, if this energy and start-up are not controlled.

UCP Staffing is committed to taking every precaution to protect employees, including establishing procedures for removing the energy supply from machines and equipment, for applying the appropriate lockout or tagout devices on the energy-isolating devices, for addressing stored or potentially accumulated energy, and for training and program review.

UCP Staffing complies with local, state, and federal regulations and follows best practices.

Terms:

- **Energy-isolating device:** A mechanical device that physically prevents the transmission or release of energy
- **Hardware:** A device that connects directly to the energy-isolating device
- **Zero energy state:** The point at which all sources of energy are removed
- **Authorized employees**: Employees who lockout or tagout machines or equipment in order to perform servicing or maintenance
- **Affected employees**: Employees whose jobs require them to operate or use machines or equipment that need servicing or maintenance and are in the lockout/tagout program
- **Qualified person** means person who is familiar with the construction and operation of the equipment and the hazards involved

Lockout/Tagout Procedures

Topic outline:

Responsibilities

Management:

Management is responsible to support the lockout/tagout plan.

Plan administrator:

On-site Manager shall administrate the Lockout/Tagout Plan for **the current Jobsite**. The plan administrator has the following responsibilities:

• Assure that a specific procedure for controlling the energy and locking out each machine and piece of equipment exists

• Assuring that authorized and affected employees complete the correct training

• Assuring that qualified persons are assigned to supervise lockout/tagout procedures

• Coordinating the continuation of lock/tagout protection through shift or personnel changes

• Requiring that all locks are keyed differently and that only one key exists for each lock and remains in the possession of the authorized employee to whom it has been assigned

• Coordinating all lockout and energy control activities with client, owner, contractor, and subcontractor practices and programs

• Assuring that both the organization's energy control plan and the control plan of a contractor or subcontractor are understood and followed by employees

• Assuring that locks and tags are in good condition and are replaced if needed

• Maintaining appropriate documentation

Lockout/Tagout Procedures

Supervisors of lockout/tagout:

Qualified persons shall act as front-line supervisors of lockout/tagout procedures. They have the following responsibilities:

- Observe de-energizing and the entire lockout/tagout process
- Enforcing appropriate procedures
- Verifying that the equipment cannot be restarted after being locked out
- Conducting tests and visual inspections prior to re-energizing to assure safety
- If applicable, overseeing group lockout

Authorized employees are responsible for:

- Completing the appropriate level of training on lockout/tagout
- Following all procedures when locking and tagging out machines

Affected employees are responsible for:

- Completing the appropriate level of training on lockout/tagout
- Never working on a machine that is locked out and never tampering with a lock or tag

Contractors or outside servicing personal are responsible for:

- Following the lockout/tagout standard and complying with **UCP's** program
- Exchanging information with the employer about their energy control program

Hazard Assessment

On-site managers and employees shall conduct the hazard assessment to determine all the sources of hazardous energy to be controlled. This will facilitate creating specific procedures of energy control.

- Hazardous energy types include the following: electrical, mechanical, chemical, hydraulic, and pneumatic

Lockout/Tagout Procedures

- In addition, the assessment will consider the following: stored or potential energy, thermal sources, and human factors

Training

On the jobsite Manager shall administrate the training program for on-site employees and keep training records. Written certification will be required to assure employees have been trained.

For affected employees:

- Purpose and use of energy control procedures
- How to recognize when a procedure is being used
- Who is authorized to perform work
- That restarting locked or tagged-out equipment is prohibited

For authorized employees:

In addition to the awareness-level training, authorized employees must know:

- Policies and procedures of the energy control program
- Type and magnitude of hazardous energy sources
- The methods and means necessary for energy isolation and control

Employees will be retrained in lockout procedures:

- When there is a change in their job assignment
- When changes in machines, equipment or processes that present a new hazard
- Where there is a change in the actual energy control (lockout) procedures
- At least on an annual basis to assure that all are aware of the procedures.

Lockout/Tagout Procedures

Lock and Tag Requirements

- **All devices** must be:
  – Durable.
  – Standard in color, shape, and appearance.
  – Substantial enough to prevent accidental removal. (Tags must have a minimum unlocking strength of 50 lbs.)
  – Labeled with the authorized employee's name.
- **Tags** must contain instructions not to operate or energize equipment and the names of employees working on the equipment. The tags must also be:
  – Readable and understandable by all employees.
  – Single-use.
  – Self-locking.
  – Non-releasable.
  – Applied by hand.

Energy Control Procedures

Employees shall not work on or in equipment, vessels, etc., which are **not** in a zero energy state. Only authorized employees may perform lockout/tagout.

Preparing for shutdown:

• Identify and locate all sources of energy that could affect individuals involved.

• Notify affected employees of activities.
– This can be done verbally, visually, or by hanging a warning tag on the control panel.
• Identify shutdown procedures.

• Identify energy isolation devices needed.

• Determine quantity and type of lockout/tagout devices required.

Shutdown:

Lockout/Tagout Procedures

• Shut equipment down by its normal start/stop method.

Isolating energy sources:

• Use energy-isolating devices appropriate for the energy source, such as:
– Manually-operated circuit breakers or electrical disconnects for electrical energy.
– Valves for pneumatic energy.
– Blocking or bars for mechanical energy.

• All devices must be equipped with a place to attach a hasp or a lock or have a built-in locking mechanism.

Applying locks and tags:

• Locks are attached so that the device cannot be operated until locks are removed.

• Devices must be in the off position.

• Tags indicate that the device and equipment may not be operated and include the name of employees working on the equipment.

• Locks, tags, signs, and seals must be securely attached.

• The name of the authorized employee must be included.

Control residual energy:

• Release, restrain, or dissipate energy.

• Prevent the re-accumulation of energy.

• Isolate the space:
– Blind the lines.
– Disconnect and misalign the lines.
– Double block the valves and bleed the residual materials.

Verify energy control methods:

• Assure that switches, valves and other mechanisms cannot be turned on.

• Activate equipment control switches and levers, and depress start buttons to assure the power is isolated.

Lockout/Tagout Procedures

•Return switches, levers, and buttons to the off position.

Use a meter to assure that electrical energy is not present.

Appropriate start-up procedures:

• Inspect area and remove all tools, rags, and other materials.

• Assure that equipment is operationally intact.

• All guards and other safety devices are replaced, if applicable.

• Notify affected employees that equipment will be restarting.

• Check work area to assure all employees are safely positioned.

• Verify all controls are in the neutral or off position.

• Remove lockout/tagout devices.

• Notify affected employees that lockout/tagout devices have been removed and the equipment or machinery is ready for use.

Group lockout:

• When a crew or other group performs service or maintenance on equipment, a single authorized employee must assume the overall responsibility for the control of hazardous energy for all members of the group while the servicing or maintenance work is in progress, and implement the group lockout energy control procedure.

• Each person who enters the danger zone will be required to verify that the hazardous energy sources have been locked out and the keys to these locks have been secured in a group lockout box.

• Then they will affix their personal devices to the group lockout box or equivalent.

• For example, multiple valves and breakers require lockout by three people who will be working on the same piece of equipment. A lock and tag is placed on each lockout location and the keys are stored in a group lockout box. Each employee then places their personal locks on the group lockout box.

• Group lockout procedure must provide all employees **with the same level of protection** provided by an individual lockout or tagout device.

Lockout/Tagout Procedures

Lockout/tagout occuring over multiple shifts:

• Protection must extend between shifts.

• If work extends through the initial shift:

– The incoming staff that will be working on the process or equipment must add their own lockout controls in accordance with standard lockout procedures.

– The outgoing shift staff must review all work done and the status of lockouts, and transfer the responsibility of lockout to the incoming shift.

Temporary operation of locked out source:

Temporary operation may be required for certain tasks, such as tests. These steps must done by authorized employees only.

• Make sure everyone is clear of the system.

• Make sure tools are clear.

• Remove locks and tags.

• Energize the system and conduct the test if applicable.

• Immediately de-energize the system and replace locks.

When employee is not available:

Unauthorized removal of lock and tag is prohibited. Use the following procedure for a **qualified person** to remove locks and tags.

• Verify that the authorized employee is not on site and available to remove the lock and tag.

Attempt to contact the authorized employee. If they could not be contacted, continue.

• Verify equipment is safe to operate, tools have been removed, and guards have been replaced.

• Notify affected employees that equipment will be restarting, and check work area to assure all employees are safely positioned.

Lockout/Tagout Procedures

- Verify all controls are in the neutral or off position.
- Remove lock/tag and energize equipment.
- Notify affected employees that lockout/tagout devices have been removed and the equipment or machinery is ready for use.
- Before the authorized employee who could not be contacted earlier resumes work, he or she **must be informed** that the lockout device has been removed.

Audit

The purpose of the audit is to make continuous improvements and needed corrections.

• The audit is conducted:
– At least annually.
– If a weakness or issue is noted.

• Audits are performed by authorized employees.

• Audits review the following:
– Adherence to energy isolation procedures
– Effectiveness of lockout/tagout procedures
– Employee training
– Assigned roles and responsibilities
– The authorized person's responsibilities

Audit process:

An authorized employee who is not involved in the the lockout procedure for the equipment being inspected will conduct the review and inspection.

• Review equipment to assure that lockout is effective and safe.

• Authorized employees will be subject to an oral review of machine-specific lockout procedures for equipment that they are authorized to service. This review will address that employee's responsibilities under the lockout procedure for each piece of machinery that he/she is authorized to work on.

• Authorized employees will also be subject to an observed evaluation of their proficiency in controlling hazardous energy on selected equipment that they are authorized to service.

• Any deficiencies must be corrected.

Lockout/Tagout Procedures

Documentation:

Audits must be documented and the records maintained.

Each audit needs to be certified by the employer. The certificate must include the following information: the equipment being controlled, the date of review, the names of employees involved, and the name of the auditor.

Records should also include information about the pieces of equipment, problems observed, and recommendations to correct those problems.

Violations

The consequences of violating this policy can be severe in terms of human suffering and loss. Violations of this policy will be handled aggressively, with a goal of determining how to improve the employee behaviors and procedures so that no similar violation will occur.

Lockout/Tagout Procedures

Appendix A: Lockout/Tagout Program Audit Report

	OK	Improvement Needed
1. The written program is developed and accessible.	☐	☐
2. Awareness-level training is provided to affected employees.	☐	☐
3. Full lockout/tagout training with lockout procedures for specific machinery and equipment is provided to authorized employees.	☐	☐
4. Skills evaluations are done as part of training.	☐	☐
5. Lockout/tagout supplies are readily available and good quality.	☐	☐
6. Locks are individually keyed.	☐	☐
7. Tags are readable and understandable, identify who is performing lockout, and contain instructions not to operate or energize equipment.	☐	☐
8. Lockout/tagout is performed for de-jamming activities.	☐	☐
9. Lockout/tagout is effective in that no employee can reach in or come into contact with areas where injury could occur.	☐	☐
10. The program addresses all applicable stored energies.	☐	☐
11. Specific lockout/tagout procedures are developed for each piece of machinery and posted on each piece of machinery.	☐	☐
12. Lockout/tagout procedures are included for vehicles and mobile equipment.	☐	☐
13. Front-line supervisory staff observe employee behavior and enforce the lockout/tagout procedures.	☐	☐
14. Audits take place annually or more frequently.	☐	☐
Date Audit by	☐	☐
	☐	☐

Lockout/Tagout Procedures

Corrective Actions Needed

Actions and Responsible Persons

Appendix B: Lockout/Tagout Information Placard

This equipment must be serviced by Authorized Personnel ONLY!

Equipment/Machine:	**Name**	**ID Number**
Authorized Personnel:	**Name/Phone**	
Location of Lockout Device:	**Detailed Info**	

Electrical Energy Sources:

Primary Electrical Source:	**Panel #**	**Breaker #**
Additional Electrical Source:	**Panel #**	**Breaker #**
Additional Electrical Source:	**Panel #**	**Breaker #**
Additional Electrical Source:	**Panel #**	**Breaker #**

Other Hazardous Energy Sources (Active or Stored Energy):

Common Types: Chemical, Hydraulic\, Mechanical , Pneumatic , Potential, Other

Type/Description	**Location**
Type/Description	**Location**
Type/Description	**Location**
Type/Description	**Location**
Type/Description	**Location**

Notes/Diagram:

Lockout/Tagout Procedures

DO NOT REMOVE THIS TAG FROM ANY MACHINE!

NOISE AND HEARING CONSERVATION

Scope and Applicability

This procedure applies to facilities and field operations where personnel may encounter noise exposures that may exceed 85 dBA.

The purpose of this procedure is to protect employees from hazardous noise exposures and to prevent hearing loss.

Implementation

Implementation of this program is the responsibility of the Safety and Health Manager.

Procedure

1.0 Requirements

A. General

1. Require the use of hearing protectors in any location where powered or motorized equipment or any other noise source could reasonably be expected to exceed 85 dBA.
2. Use of hearing protectors may only be discontinued when noise levels are verified to be less than 85 dBA through a properly conducted noise survey.

B. Hearing protectors

1. Require that at least three (3) types of hearing protectors are available to employees, preferably a plug and muff type.
2. Minimum Noise Reduction Ratings(NRR)

a) Hearing protectors issued to or used by personnel must have the following minimum NRR:

- Ear plugs: 29dB
- Muffs: 27dB

3. Require that hearing protectors are used properly and thus effectively protect hearing.
4. Hearing protection attenuation will be calculated using the OSHA Hearing Conservation procedures.

a) Actual NRR = [Rated NRR- 7 dBA / 2] = _____ dBA

C. Noise surveys

1. Noise surveys must be conducted in a manner that reasonably reflects the exposure of the affected employees. Surveys must be conducted under supervision of the Safety Manager.
2. Sound level meters and audio dosimeters used to determine employee exposure to noise sources must be Type II (accurate to within +/- 2dB), operated in "slow" response, on the "A" scale, and be calibrated to factory guidelines (including periodic factory re-calibration).
3. Samples must be taken with adequate duration to be representative of employee's' exposures. Monitoring is to be done whenever new equipment or processes are introduced to the work area.

NOISE AND HEARING CONSERVATION

D. Engineering and administrative controls

1. Eliminate noise sources to the extent possible through engineering or administrative controls. Examples of controls that must be considered follow:

a) Rotation of people to lower exposed positions

b) Addition or replacement of mufflers on motorized equipment

c) Addition of mufflers to air exhausts on pneumatic equipment

d) Following equipment maintenance procedures to lubricate dry bearings

e) Isolation of loud equipment such as machinery, compressors and generators from employee work areas

f) Replacement of older noisy equipment with newer and quieter models

E. Audiometric exams

1. Verify that permanent employees have an audiometric baseline test within 180 days of being assigned to a high noise area.

2. Verify that permanent employees and project employees who are required to wear hearing protection for at least six months have had audiometric tests (annually).

F. Training

1. Verify that each employee who must work in a noisy environment is current on the required Hearing Conservation training.

2. Training must include the following topics:

a) The effects of noise on hearing

b) The purpose of hearing protectors

c) The advantages and disadvantages of various types of hearing protectors

d) The attenuation of various types of hearing protection

e) The selection, fitting, care and use of hearing protectors

f) The purpose of audiometric testing

g) An explanation of the audiometric testing procedure

G. Audit

1. Annually, a program audit is to be performed for each site/ project to assure all of the above procedures are in place and effectively management.

2. Reports are to be in writing and documented along with corrective actions.

2.0 Documentation Summary

A. File these records in the Safety Filing System as a permanent record:

1. Types of hearing protectors and associated NRRs

2. Noise surveys, when applicable

3. Hearing Conservation Program Medical Clearances

4. Training records

5. Audit reports and corrective action completion

NORMA DE GESTIÓN DE SEGURIDAD: RUIDO Y CONSERVACIÓN DE LA AUDICIÓN

Alcance y aplicabilidad

Este procedimiento se aplica a instalaciones y operaciones de campo donde el personal pueda encontrar exposiciones a ruido que superen los 85 dBA.
El propósito de este procedimiento es proteger a los empleados de las exposiciones a ruidos peligrosos y evitar la pérdida de la audición.

Implementación

La implementación de este programa es responsabilidad del gerente/supervisor de seguridad.

Procedimiento

1.0 Requisitos

A. General

1. Exigir el uso de protectores auditivos en cualquier ubicación donde se prevea razonablemente que los equipos eléctricos o motorizados o cualquier otra fuente de ruido pueden superar los 85 dBA.
2. El uso de los protectores auditivos solo podrá suspenderse cuando se verifica que los niveles de ruido son inferiores a 85 dBA a través de un relevamiento de ruido correctamente realizado.

B. Protectores auditivos

1. Exigir que haya al menos tres (3) tipos de protectores auditivos disponibles para los empleados, preferiblemente tipo tapón y auricular.
2. Calificaciones de reducción de ruido (NRR) mínima

a) Los protectores auditivos suministrados o usados por el personal deben tener la siguiente NRR mínima:

- Tapones de oídos: 29dB
- Auriculares: 27dB

3. Exigir que los protectores auditivos se utilicen correctamente, para que protejan eficazmente la audición.
4. La atenuación de la protección de audición se calculará utilizando los procedimientos de Conservación de la audición de OSHA.

a) NRR real = [NRR prevista - 7 dBA / 2] = _____ dBA

C. Relevamientos de ruido

1. Los relevamientos de ruido deben llevarse a cabo de una manera que refleje razonablemente la exposición de los empleados afectados. Los relevamientos deben realizarse bajo la supervisión del Gerente de Seguridad.
2. Los medidores de nivel de ruido y los dosímetros acústicos utilizados para determinar la exposición a fuentes de ruido deben ser de Tipo II (precisión

de +/-2dB), operados en respuesta "lenta", en la escala "A", y calibrados según las pautas de fábrica (incluyendo recalibrado periódico de fábrica).
3. Las muestras deben tomarse con la duración adecuada para ser representativas de la exposición de los empleados. Debe realizarse un monitoreo siempre que se introduzcan nuevos equipos o procesos en el área de trabajo.

D. Controles administrativos y técnicos

1. Eliminar fuentes de ruido en la medida de lo posible a través de controles técnicos o administrativos. A continuación se mencionan ejemplos de controles que deben considerarse:
a) Rotación de personas para reducir los puestos de exposición
b) Adición o sustitución de silenciadores en equipos motorizados
c) Adición de silenciadores a escapes de aire de equipos neumáticos
d) Seguir los procedimientos de mantenimiento de los equipos para lubricar los rodamientos secos
e) Aislamiento de los equipos ruidosos, como máquinas, compresores y generadores, de las áreas de trabajo de los empleados
f) Reemplazar equipos antiguos y ruidosos con modelos más nuevos y silenciosos

E. Exámenes audiométricos

1. Verificar que los empleados permanentes se hagan un examen audiométrico de referencia a los 180 días de haber sido asignados a un área de alto nivel de ruido.
2. Verificar que los empleados permanentes y los empleados de proyecto que deben usar protección auditiva durante al menos seis meses se hayan realizado exámenes audiométricos (anualmente).

F. Capacitación

1. Verificar que los empleados que deben trabajar en un entorno ruidoso estén al tanto de la capacitación requerida sobre Conservación de la audición.
2. La capacitación debe incluir los siguientes temas:
a) Los efectos del ruido en la audición
b) El propósito de los protectores auditivos
c) Las ventajas y desventajas de distintos tipos de protectores auditivos
d) La atenuación de los diversos tipos de protección auditiva
e) La selección, ajuste, cuidado y uso de protectores auditivos
f) El propósito de los ensayos audiométricos
g) Una explicación del procedimiento de los ensayos audiométricos

G. Auditoría

1. Anualmente, debe realizarse una auditoría del programa para cada sitio/proyecto para garantizar que todos los procedimientos anteriores estén implementados y gestionados de manera eficaz.
2. Los informes deben ser por escrito y documentarse junto con las medidas correctivas.

NORMA DE GESTIÓN DE SEGURIDAD: RUIDO Y CONSERVACIÓN DE LA AUDICIÓN

2.0 Resumen de Documentación

A. Archivar estos registros en el Sistema de Archivos de Seguridad como registros permanentes:

1. Tipos de protectores auditivos y NRR asociadas
2. Estudios de ruido, si corresponde
3. Autorizaciones médicas del Programa de conservación de la audición
4. Registros de capacitación
5. Informes de auditoría y realización de medidas correctivas

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Scope and Application

This policy outlines the required personal protective equipment (PPE) that must be worn at all facilities. It applies to all locations and all jobs requiring PPE. This policy also provides procedures for determining the correct PPE and training employees, visitors, and contractors on the required PPE and its proper use. PPE is selected based on a hazard assessment conducted by management.

The following job titles are covered under this policy:

Insert applicable job titles.

Implementation

1.0 Management: Direct On-site Manager

A. Management implements this program.

B. Management assures that a hazard assessment is conducted for all job tasks.

C. Management assures that PPE is selected for each job as outlined in the hazard assessment.

D. Management assigns someone to oversee training. Training will be provided by Direct On-site Manager.

E. Management assures that PPE is provided for each job task to visitors, contractors, and employees.

F. Management makes sure that worn or disposable PPE is replaced as soon as possible.

G. Management assures that PPE is used properly.

2.0 Location Safety Representative: Direct On-site Manager

A. The representative is responsible for conducting the hazard assessments to determine exposure controls and PPE selection.

B. For certain chemical hazards, the representative will be assisted by a safety professional with hazard assessments and exposure measurements.

C. The representative trains and retrains employees on PPE requirements and proper use.

D. The representative trains contractors and visitors on PPE requirements and proper use while in the facility.

E. The representative performs other duties as assigned by management.

3.0 Supervisors

A. Supervisors are responsible for training employees on hazards and the proper use of each piece of PPE.

B. Supervisors update employees if hazards change or additional PPE is required.

C. They inspect PPE prior to each use for tears, holes, any other signs of wear, and quality of fit.

D. They enforce proper PPE use and retrain employees as necessary.

E. They replace PPE when it is worn, tears, cracks, or is at the end of its life.

F. They perform other duties to assure proper PPE use.

4.0 Employees

A. Employees must wear PPE:

1. As outlined in the hazard assessment.
2. In all required areas.

3. As instructed in training.
4. According to the manufacturer's instructions.

B. Employees must inspect PPE on a regular basis for wear, tear, holes or other issues that may impact effectiveness.

C. Employees clean and dispose of PPE following the manufacturer's instructions.

D. They report any issues with PPE directly to their supervisor.

5.0 Contractors and Visitors

A. Contractors and visitors will be trained on PPE requirements and proper use prior to entering the facility.

B. They must wear PPE as required by the PPE policy.

C. They will be provided PPE at no cost to themselves.

D. If contractors and visitors provide their own PPE, it must be inspected by the employer to assure that it is appropriate for the hazards and that the contractor understands the limitations of the equipment.

Procedure

1.0 Hazard Assessments

A. Hazard assessments are conducted by the location safety representative your Direct On-site Manager

B. They are conducted for each job task.

C. The hazard assessment is based on the PPE Hazard Assessment document and potential hazards in the workplace.

D. The written record is maintained in On-site until job is closed. Then it will be stored at the corporate office.

E. Safe and appropriate PPE is selected for each job task, based on the hazards discovered in the assessment.

F. Hazard assessments for each job task will be conducted annually thereafter, and employees will be notified of any changes in PPE selection.

2.0 Training

A. Training will include the following topics:
1. What PPE is required
2. When to wear the PPE
3. Proper donning and doffing of the required PPE
4. PPE limitations
5. How to inspect PPE
6. How to clean PPE
7. When and how to dispose of PPE
8. Any additional information on PPE requirements and use

B. Training will be conducted by Direct On-site Manager.

C. Re-training will occur in the following circumstances:
1. When the required PPE changes
2. If the hazards change
3. If PPE is not being worn properly

3.0 The Provision of PPE

PERSONAL PROTECTIVE EQUIPMENT (PPE)

A. The following items will be provided by the employer at no cost to the employee:

1. Body protection, not including general work attire
2. Respiratory protection
3. Hearing protection
4. Hand protection, including selected gloves
5. Eye and face protection
6. Fall protection

B. The following items will be the responsibility of the employee:

1. Proper footwear, such as non-slip soles, closed-toe shoes, and steel toe shoes
2. General work attire, such as long sleeve shirts and long pants
3. Weather-related clothing such as jackets, gloves, and water-resistant clothing

C. All PPE must be inspected and approved by the employer and supervisor prior to use, including hearing protection or respiratory protection that is provided and worn voluntarily by the employee.

4.0 Specific PPE Considerations

A. Body protection

1. All required body protection must be worn during hazardous activities.
2. Body protection includes aprons, lab coats, full body suits, and front- or rear-closing gowns.
3. Clothing alone is not a substitute for protective body attire.

B. Foot protection

1. Footwear must protect against falling objects, electrical hazards, and hazardous liquid spills.
2. Where required by hazard assessments, the footwear must have metatarsal support.
3. Footwear must have puncture- and slip-resistant soles.
4. Steel toe shoes must be worn where indicated by the hazard assessment.

C. Respiratory protection

1. If exposure measurements determine that respiratory protection is required, a separate respiratory program must be developed.
2. Employees voluntarily using respirators must:

a) Have the respirator inspected by a supervisor prior to use.
b) Understand the limitations of the respirator.
c) Only use respirators that are NIOSH-approved for the work being conducted.
d) Only wear respirators in approved environments.
e) Maintain and label their individual respirator.

D. Hearing protection

1. If exposure measurements determine that hearing protection is required, a separate program will be developed.
2. Employees voluntarily using hearing protection must:

a) Have the hearing protection device inspected by a supervisor prior to use.
b) Understand the limitations of the hearing protection devices.

c) Only use approved hearing protection devices.

E. Hand protection and glove selection

1. Hand protection, including glove type, is determined based on the hazard assessment.
2. Disposable gloves are discarded if there are any tears or holes or if liquid penetrates the glove.
3. Any gloves brought into the workplace by employees must be inspected by a supervisor prior to use.
4. Gloves must be inspected regularly by employees and supervisors for holes, tears, and additional signs of wear.
5. Gloves must be replaced when worn or no longer protective.
6. Disposable gloves may not be reused.
7. Employees must wash their hands after removing gloves.

F. Eye and face protection

1. Eye protection must meet the consensus standard or demonstrate that it meets the same requirements.
2. The manufacturer name must be visible on the eye protection.
3. Safety glasses or goggles must accommodate prescription lenses without interfering with the lenses or with the protective glasses.
4. Safety glasses or goggles must be worn with face shields.
5. Goggles must be worn if there is a potential for a splash hazard.

G. Head protection

1. Head protection is provided by the employer based on the hazard assessment.
2. Hard hats must be selected based on the potential for falling objects as well as exposure to electricity.
3. Hard hats must be stored in a clean location, away from sunlight and temperature extremes.
4. Hard hats will be replaced if an object strikes the hat, even if there are no visible signs of damage.

H. Fall protection

1. If exposure measurements determine that fall protection is required, a separate program will be developed.
2. Harnesses used for fall protection must meet all the requirements for a personal fall arrest system (PFAS).
3. Harnesses must be made from synthetic material.
4. Harnesses must be inspected prior to each use.
5. Harnesses showing any fraying or other wear must be replaced.
6. Harnesses must be full body harnesses; body belts are not approved for fall protection.

5.0 Care and Maintenance

A. All disposable PPE must be disposed of after each use.

B. Reusable PPE must be cleaned with soap and water or with a cleaning solution suggested by the manufacturer.

C. Store PPE in a clean area, away from heat and sunlight.

D. PPE that is worn, torn, or otherwise damaged must be replaced.

Personal Protective Equipment—Inspection Form

Observations (Yes = Y or NI = Needs Improvement) Y NI

Are employers assessing the workplace to determine if hazards that require the use of personal protective equipment (i.e., head, eye, face, hand, or foot protection) are present or are likely to be present?

If hazards or the likelihood of hazards are found, are employers selecting and having affected employees use properly fitted personal protective equipment suitable for protection from these hazards?

Has the employee been trained on PPE (what job task they need the PPE for, when they need it, how to properly adjust it, and maintain it.)?

Are protective goggles or face shields provided and worn where there is any danger of flying particles or corrosive materials?

Are approved safety glasses required to be worn at all times in areas where there is a risk of eye injuries such as punctures, abrasions, contusions or burns?

Are hard hats provided and worn where danger of falling objects exists?

Is appropriate foot protection required where there is the risk of foot injuries from slips-falls, hot, corrosive, or poisonous substances, falling objects, crushing or penetrating actions?

Are approved respirators provided for routine or emergency use where needed?

Where special equipment is needed for electrical workers, is it available?

Is protection against the effects of occupational noise exposure provided when sound levels exceed those of the OSHA noise standard?

Are protective gloves, aprons, shields, or other means provided and required where employees could be cut or where there is reasonably anticipated exposure to corrosive liquids, chemicals, blood, or other potentially infectious materials? See 29 CFR 1910.1030(b) for the definition of "other potentially infectious materials."

Are adequate work procedures, protective clothing and equipment provided and used when cleaning up spilled toxic or otherwise hazardous materials or liquids?

Is all protective equipment maintained in a sanitary condition and ready for use?

Is assigned PPE inspected regularly for damage and signs of wear?

Do you have eye wash materials or facilities and/or a quick drench shower within the work area where employees are exposed to potentially injurious materials and/or airborne particulate?

Where food or beverages are consumed on the premises, are they consumed in areas where there is no exposure to toxic material, blood, or other potentially infectious materials?

Are there appropriate procedures in place for disposing of or decontaminating personal protective equipment contaminated with, or reasonably anticipated to be contaminated with, blood or other potentially toxic or infectious material?

Comments:_____

_____

_____

Observation By: _____

RESPIRATORY PROTECTION PROGRAM

Applicability

This program defines responsibilities and procedures and is applicable to operations that may require the use of respiratory protection including routine, Immediately Dangerous to Life and Health (IDLH) and emergency conditions. This program also addresses the voluntary use of respirators.

Purpose and Scope

The purpose of this procedure is to protect those employees performing operations for which exposures can not be controlled by use of conventional engineering or administrative controls and prior to establishing a negative air exposure assessment, and to require that respiratory protective equipment is selected, used, maintained, and stored in accordance with acceptable practices.

Implementation

Implementation of this program is the responsibility of the Area Manager. The Health and Safety Manager will have the responsibility of Program Administrator and is responsible to ensure that the program is reviewed annually.

1.0 Requirements

A. Determine if respirators are needed or are going to be used for hazardous jobs before assigning that job to an employee.

1. Refer to appendix A regarding activities requiring the use of respiratory protection.
2. Assign respirators accordingly.
3. Follow all the requirements of this procedure for employees who wish to voluntarily use tight-fitting, e.g., air purifying, respirators.

B. Require employees who will use respirators to be medically qualified prior to assigning them a respirator and fit testing.

C. Require respirator users to receive appropriate training.

1. All respirator users must be trained:
   a) Before they are assigned a respirator
   b) Annually thereafter
   c) Whenever a new hazard or job is introduced
   d) Whenever employees fail to demonstrate proper use or knowledge
2. Training must address, at a minimum, the following:
   a) Why the respirator is necessary, and what conditions can make the respirator ineffective
   b) What the limitations and capabilities of the respirators are
   c) How to use respirators effectively in emergency situations
   d) How to inspect, put on and remove, and check the seals of the respirator

e) What the respirator maintenance and storage procedures are

f) How to recognize medical signs and symptoms that may limit or prevent effective use of the respirator

D. Require respirator users to be fit tested.

1. Any employee who has been assigned a reusable respirator must be fit tested either on an annual basis (no more than one year may elapse between fit tests), or when an employee is assigned a respirator of a different make, type or size from that previously tested.
2. Fit testing can be performed by contract or in house personnel.
3. Obtain a signed written copy of the fit test results. They should include:

a) Employee's name and social security number

b) Respirator brand, model and size fitted for

c) Date fit tested

d) Method of fit testing used

e) Name and signature of fit tester

f) Statement that fit test protocol met the applicable requirements

g) Manufacturer and serial number of fit testing apparatus (for quantitative fit test)

• Use appendix D to document fit test results.

E. Provide qualified employees with respirator(s) and adequate amounts of parts and cartridges.

1. Assign employees whose duties require respirators their own respirator for which they have been fit tested.
2. Provide special eyeglass inserts designed for the respirator if an employee must wear eyeglasses with a full facepiece respirator. Contact lenses may be worn when wearing a full face respirator.

F. Require respirators to be used properly.

1. Prohibit facial hair where the respirator-sealing surface meets the wearer's face.
2. Require employees to thoroughly inspect the respirator prior to each use.
3. Employees are to perform a positive and negative fit check every time the respirator is put on.
4. Employees will leave the area where respirators are being used:

a) Before removing the face piece for any reason

b) To change cartridges

c) If any of the following is detected:

• Vapor or gas breakthrough

• Leakage around the face piece

• Changes in breathing resistance

5. Use cartridges with End of Service Life Indicators or determine the respirator cartridge change-out schedule. See appendix C for guidance.

G. Require respirators to be cleaned and stored properly.

1. Clean and disinfect respirators after each use.
2. Store respirators in a plastic bag or case and in a clean location.

3. Inspect respirators before use and after each cleaning.

H. Address issues associated with special use respirators (self-contained breathing apparatus; air supply respirators; emergency use respirators).

1. Self Contained Breathing Apparatus

a) Inspect self-contained breathing apparatus and other emergency use respirators monthly and after each use in accordance with manufacturer's instructions.

2. Air Supplied Respirators

a) Air used for atmosphere-supplying respirators must meet or exceed the requirements for Type 1 - Grade D breathing air.

b) Never use pure oxygen.

• A certificate of analysis must accompany bottled air.

• Compressors used to supply breathing air must:

– Prevent entry of contaminated air into the air supply

– Minimize moisture content

– Have suitable in-line sorbent beds and filter to provide appropriate air quality

– Have a high carbon monoxide alarm that sounds at 10 ppm

c) Couplings on air hose lines must be incompatible with other air and gas systems.

I. Require follow up training and medical surveillance to be provided as directed.

1. Provide follow-up physicals as directed by the Occupational Health Physician.

2. Provide annual refresher training.

3. Provide annual fit testing.

2.0 Documentation Summary

A. File these records in the Safety Filing System:

1. Employee Medical Clearances for Respirator Use

2. Employee Fit Test Records

3. Employee Respirator Training Records

4. Completed "Voluntary Use of Respirators" form – appendix B

RESPIRATORY PROTECTION PROGRAM

B. The Risk Management Center is to be used to document all information including the following:

Documents	**Risk Management Center Location**
Written Respiratory Protection Program	My ContentTM
Training Documentation including: - Classroom training and training course completed - Sign-in sheets - Quizzes - Skills evaluations - Operator Certificates	Training TrackTM application
Pre-shift Inspection Checklists	My ContentTM
Safety Observations	Job Hazard Analysis/ Safety Observation ToolTM
Near misses	Incident TrackTM
Accidents and claims	Incident TrackTM
Supplier and manufacturer Certificates of Insurance	COI TrackTM
Safety Data Sheets	SDS TrackTM

RESPIRATORY PROTECTION PROGRAM

Appendix A: Tasks for Which Respiratory Protection is Required

DRAFT- MUST BE REVIEWED FOR TASKS PERFORMED

The following table designates the requirements for the use of respiratory protection.

Tasks	Type of Respirator Required
Abrasive Blasting	
• Outdoors - Full face air purifying respirator with HEPA cartridges • Indoors - Supplied air with abrasive blasting hood • Confined spaces - Supplied air respirator with pressure demand full face piece and adequate escape air supply as needed	
Acids (Liquid or powder acids used in a situation where acid vapors, mists or dust may be breathed.)	
• Outdoors	- Full face air purifying respirator with combination acid gas/HEPA cartridges - Supplied air with pressure demand full face piece - Supplied air respirator with pressure demand full face piece and adequate escape air supply as needed
• Indoors	- Half face air purifying respirator with combination Organic Vapor/HEPA cartridges - Supplied air respirator with pressure demand full face piece and adequate escape air supply as needed
• Confined spaces	- Half face air purifying respirators with HEPA cartridge - Half face air purifying respirator with organic vapor cartridge - Half face air purifying respirator with organic vapor cartridges - Supplied air respirator with pressure demand full face piece and adequate escape air supply
Adhesives	
• Aerosol-propelled adhesives used outdoors	
• Two-part or any use of adhesives in confined spaces	
Alkalis/Bases/Caustics	
• Powdered alkalis used in a situation where an airborne dust may be breathed	
Cleaning Compounds	
• Organic degreasers or carbon removers used in areas where local exhaust ventilation is not provided • Aerosol propelled cleaning compounds will be used in areas where there is no local exhaust ventilation • Degreasers or carbon removers will be used in voids, tanks, or other confined spaces	

RESPIRATORY PROTECTION PROGRAM

Appendix A: Tasks for Which Respiratory Protection is Required (continued)

Tasks and Types of Respirator Required	
Chlorine	
• Work in Paper Mills or other facilities where chlorine releases are possible and unless client has a more stringent emergency protection is required requirement	- Bite type chlorine escape respirators
Fuels (including regular or unleaded gasoline, kerosene, diesel fuel, JP-5)	- Supplied air respirator with pressure
• Employees inside unventilated fuel cells or other confined spaces containing fuels	demand full face piece and adequate escape air supply
Grinding, Cutting, Sanding	
• Cutting, grinding or sanding surfaces that have coatings containing lead, cadmium, chromium, zinc or beryllium	- Requires initial exposure assessment (see SMS for Lead in Construction). Full face air purifying respirator with HEPA cartridges required until air monitoring deems otherwise.
• Cutting, grinding or sanding surfaces that are concrete or glass without use of ventilation or water	- Full face air purifying respirator with HEPA cartridges
Paint Materials (including paints, primers, thinners, enamels, lacquers, strippers, coatings and varnishes)	
• Paint materials spray applied outside of spray finishing booth	- Half face air purifying respirator with combination organic vapor/HEPA cartridges
• Two part (mix Part A with Part B; let set; then apply) polyurethane or epoxy polyamide paints will be brush or spray applied	- Full face supplied air respirator
• Paints containing lead, chromium, cadmium, beryllium, and zinc (refer to the SDS)	- Requires initial exposure assessment (see SMS for Lead in Construction). - Full face supplied air respirator with
• Paint materials will be applied in confined spaces	adequate escape air supply
Solvents - See Fuels above	

RESPIRATORY PROTECTION PROGRAM

Appendix A: Tasks for Which Respiratory Protection is Required (continued)

Tasks and Type of Respirator Required

Welding/Brazing/Torch Cutting (Minimum 2,000 cfm exhaust ventilation as per confined space standard for each welder/ hot operation)

• Welding will be performed in confined spaces determined by air monitoring.
- Half face air purifying respirator with HEPA cartridge unless otherwise
• Welding galvanized metal or stainless steel determined by air monitoring.
- Requires initial exposure assessment (see SMS for Lead in Construction).
Full face air purifying respirator with
• Brazing or silver soldering with cadmium or lead determined by air monitoring.
HEPA cartridges required until air monitoring deems otherwise.

In addition respiratory protection will be required for any of the above listed activities where any of the following applies:
• An employee will be in the immediate area, i.e., within 10 feet of the job or operation.
• The employee will be inside a confined space where activities are taking place,
• The employee will be inside a "controlled area" such as found in asbestos abatement, lead abatement, radiation control area, or a hazardous waste site.

Respirators will also be required whenever required by:
• A Material Safety Data Sheet
• A product label
• A product use instruction
• A Standard Operating Procedure

RESPIRATORY PROTECTION PROGRAM

Appendix B: Voluntary Use of Respirators

Instructions: Have the employee that is opting to use a respirator for non-overexposure conditions read this page, and then sign on the bottom of the page. Forward a copy of the signed form to the Division Training Records Administrator, and maintain a copy in the employee's personnel file.

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for employees. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the employee.

Sometimes employees may wear respirators to avoid exposures to hazards, even if the amount of the hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your own voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not pose a hazard.

You should do the following:

1. Read and follow all instructions provided by the manufacture on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.
2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety & Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear o the respirator or respirator packaging. It will tell you what the respirator is designed for and how it will protect you.
3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, fumes, smoke or very small solid particles.
4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.
5. If you have any health conditions (e.g., asthma, high blood pressure, emphysema, heart disease) that could be aggravated by using a respirator, you should check with your doctor before using one.

I have read and understand this information on: (date)_____

Employee's name:_____

Employee's signature:_____

RESPIRATORY PROTECTION PROGRAM

Appendix C: Respirator Cartridge Change Schedule

1.0 Cartridge change schedule

A. A cartridge change schedule must be developed for cartridges or canisters used with air purifying respirators that do not have an End of Service Life Indicator (ESLI).

1. The purpose of this is to prevent contaminants from breaking through the respirator's sorbent cartridge(s), and thereby over-exposing employees.

a) NIOSH has approved ESLIs for only four cartridges or canisters:

- Mercury vapor
- Carbon monoxide
- Ethylene oxide
- Hydrogen sulfide

2. Historically we have relied on the warning properties such as odor or irritation of a contaminant to dictate cartridge change.

a) OSHA no longer allows this as the sole basis for changing respirator cartridges.

B. In developing a change schedule the following factors should be considered:

1. Contaminants
2. Concentration
3. Frequency of use

a) Continuously or intermittently throughout the shift

4. Temperature and humidity
5. Work rate
6. The presence of potentially interfering chemicals
7. Multiple chemical exposures

C. The worst case conditions should be assumed to avoid early breakthrough.

1. This must be documented in the project health and safety plan or, in the cases of office or labs, in the site specific Respiratory Protection Program.

2.0 Sources of Help

A. Manufacturers

1. 3M has an interactive "Cartridge Service Life" program that can be downloaded for free

a) http://www.mmm.com/market/safety/ohes2/index.html

2. This program will estimate cartridge service life only for 3M products against many contaminants.
3. The program does not evaluate the service life against mixtures (multiple contaminants).
4. Other respirator manufacturer's have similar tools for their cartridges.

Appendix C: Respirator Cartridge Change Schedule (continued)

B. Because of the complexity in evaluating mixtures, OSHA offers the following guidance:

1. When the individual compounds in the mixture have similar breakthrough times (i.e., within one order of magnitude), service life of the cartridge should be established assuming the mixture stream behaves as a pure system of the most rapidly migrating component with the shortest breakthrough time (i.e., sum of the concentration of the components).
2. Where the individual compounds in the mixture vary by 2 odors of magnitude or greater, the service life may be based on the contaminant with the shortest breakthrough time.

3.0 Rule of Thumb

A. The Occupational Environment: Evaluation and Control

1. If the chemical's boiling point is >70 C and the concentration is less than 200 ppm you can expect a service life of 8 hours at a normal work rate.
2. Service life is inversely proportional to work rate.
3. Reducing concentration by a factor of 10 will increase service life by a factor of 5.
4. Humidity above 85% will reduce service life by 50%.

B. OSHA Interpretation

2. The OSHA inspection procedures for the respiratory protection standard specify that:
   a) Where contaminant migration is possible, respirator cartridges/canisters should be changed after each work shift where exposure occurs unless there is objective data to the contrary (desorption studies) showing the performance in the conditions and schedule of use/non-use found in the workplace.

RETURN-TO-WORK PROGRAM

Scope and Application

This policy applies to all locations or projects where a Return-to-Work Program may need to be implemented.

It is our goal to return employees, who have sustained a compensable injury, back to work as soon as possible.

Our Return-to-Work Program is developed to provide employees, who cannot return to their regular job, with modified/transitional duty during their medical recovery period. Modified/transitional duty is temporary work that is within the employee's physical abilities, knowledge, and skills. Employees with accepted disabling workers' compensation claims are eligible for this program. The Return-to-Work program will involve coordination by the injured employee, Workers' Compensation Claims person, the treating physician, and your insurer.

Implementation

It is the responsibility of management to administer the organization's Return-to-Work program. It is the responsibility of any employee or contractor involved to adhere fully to this policy.

Procedures

1.0 Return-to-Work Procedures:

A. The employee's supervisor is to be contacted immediately if there is any incident, regardless of the magnitude.

B. When a supervisor is notified of a work related injury, he/she should review the "Report of Injury Employee Responsibilities Checklist" with the employee.

1. A first report of injury is completed and sent to the insurer. (If applicable by jurisdiction, for example in Washington State, the attending physician completes the "First Report of Injury".)

C. If immediate medical treatment is indicated, medical care from the appropriate medical facility by the most effective means will be provided.

1. When possible, the employee should take a "Return-to-Work Evaluation" to the physician for completion.

a) If the employee cannot take the evaluation, the name of the physician should be obtained and a copy forwarded to the physician immediately.

2. If a job description for proposed modified/transitional duty and regular job description are available, this should also be sent.

3. The employee should provide his or her supervisor with a completed "Return-to-Work Evaluation" after every visit to the treating physician.

D. If the job description was not previously provided to the treating physician, the "Return-to-Work Evaluation" should be reviewed by the employer contact.

1. A modified/transitional duty position should be considered that is within the employee's physical capacities.

2. If work is available which meets the limitations/ restrictions set forth by the attending physician, the employee may be assigned modified/transitional work which will not exceed ninety (90) days.

a) A job description will be developed and provided to the treating physician by the employer contact for approval.

E. When the treating physician has approved the job description, a job offer letter will be sent to the employee by certified and regular mail.

1. The job offer letter will include a copy of the signed job analysis, a copy of the physician's release for work, the date to report to work, whom to report to, where to report, time to report, wages, hours and duration of modified/transitional duty.

2. The employee will be asked to indicate whether the job is accepted or declined and so indicates with a signature.

a) This information should be forwarded to the insurer after completion.

F. If an employee chooses not to participate in the modified/transitional duty program due to a work-related injury or illness, he/she may become ineligible for worker’s compensation time-loss benefits.

G. When the employee reports to modified/transitional duty, the employer contact should carefully review the job approved by the physician.

1. The restrictions should be reviewed.

a) The employer contact should emphasize that the employee should perform only the job duties within the treating physician's restrictions and within the job description approved by the treating physician.

b) This needs to be monitored to assure compliance and improvement of the person.

2. It is the employee’s responsibility to keep the company apprised weekly of their status after each physician visit.

H. Modified/transitional duty is a temporary program and an employee’s eligibility in a temporary assignment will be based on medical documentation and continued recovery of the employee and the ongoing needs of the employer.

1. Although transitional work is not guaranteed, transitional duty will be available on a fair and equitable basis with the temporary assignment being based on skill, abilities and restrictions as well as the needs of the department.

I. The employer contact will monitor the employee's recovery progress and participation.

1. The employer contact will also be responsible for tracking the hours worked.

RETURN-TO-WORK PROGRAM

a) Every effort will be made to coordinate a restricted work schedule with the employee's normal work schedule.
b) Dependent upon the employee's limitations/restrictions, it may be necessary to design a temporary schedule to accommodate the restrictions that may not match the employee's normal schedule.
2. In the case of reduced work hours, Family Medical Leave may be applied to the hours not worked.
3. Contact Human Resources for further details.
J. Any change in the original modified/transitional duty job must be reviewed by the employer contact and approved by the physician.
1. A new job offer letter will be sent and signed by the employee.
K. Employees must provide a "Return to Work Evaluation" form indicating they are capable of returning to full duty.
1. Permanent job restrictions will be evaluated on a case-by-case basis and relate to the performance of the essential functions of the job.
2. No permanent light duty positions will be created.

RETURN-TO-WORK PROGRAM

Appendix A: Report of Injury - Employee Responsibilities Checklist

• All work-related accidents, injuries, and near misses must be reported immediately to Risk Management and Safety Supervisor.

• If an incident such as an injury or near miss occurs, but does not require professional medical treatment, the supervisor must be informed immediately and an incident report must be completed. If necessary, the employee may receive first aid on-site.

• If an injury occurs which requires medical attention, the employee will follow the emergency response plan. The employee must fill out a Workers' Compensation First Report of Injury form as soon as possible.

• If medical attention is sought, the employee should inform the physician, that UCP has a return-to-work program with modified duty jobs available.

• The employee should be given a "Modified duty offer letter" and completed "Job Description" (if available) from Safety Supervisor. This should be given to the treating physician and should be returned to Safety Supervisor following the initial medical treatment.

• If the treating doctor releases the employee to return to modified duty, as indicated on the "" and "Job Description Form", both forms must be returned to UCP within 24 hours for a modified duty work assignment. The employee must report for work at the designated time. The employee may not return to work without a release from the attending doctor.

• If the employee returns to a modified duty job, they must perform within the limits of the duties of the job, or their treating doctor's restrictions. If at any time, job restrictions change the supervisor is to be notified immediately, and provided with a new medical release from the physician.

• If after treatment, the employee is unable to report for any kind of work, the employee must call their supervisor each week to report their medical status.

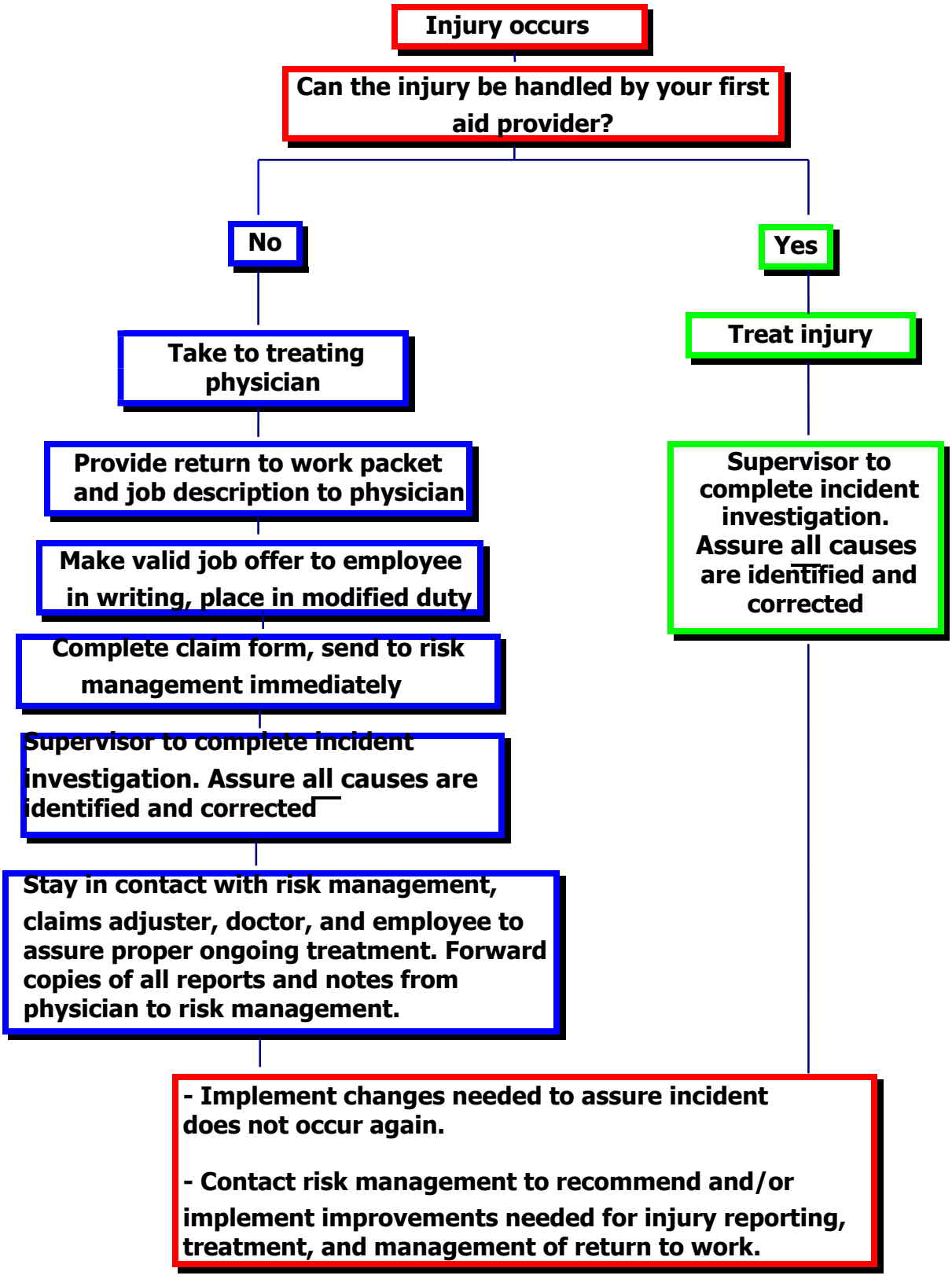
• It is the responsibility of the employee to supply UCP and the on-site supervisor with a current telephone number and an address where the employee can be contacted while not working.

• The employee will notify their UCP and the on-site supervisor within 24 hours of all changes in medical condition.

I have read and understand the above information.

Employee Signature_____ Date_____

RETURN TO WORK INCIDENT FLOW CHART



SAFETY AND HEALTH PROGRAM

Scope and Application

This procedure outlines responsibilities for Occupational Safety and Health and provides general safety requirements. The objective of the Program is to prevent losses to employees and the organization.

Mission:

- To provide a safe and healthful work environment for all employees
- To be a productive, responsible organizational citizen and the employer of choice in our industry

Goals:

- Develop an accident-free work environment, which is safe, clean and productive for our employees
- Minimize our workers' compensation insurance costs to enhance the organization's profitability
- Provide continual training to employees and management such that an understanding of hazards and respective safety requirements are established and supported
- Develop, implement and manage effective loss prevention programs to assure a safe, healthful and productive workplace, and compliance with applicable state and federal regulations
- Encourage the responsibility and participation of all employees and management in the organization's loss prevention efforts

Implementation

The procedure is applicable to all operations and employees. For this facility and operation, the following person is responsible for the implementation of the program:

_____

Managers and supervisors are responsible for implementing and maintaining the IIP Program in their work areas and for answering worker questions about the IIP Program. A copy of this IIP Program is available from each manager and supervisor.

All workers, including managers and supervisors, are responsible for complying with safe and healthful work practices. Our system of ensuring that all workers comply with these practices includes the following practices:

- Informing workers of the provisions of our IIP Program; training each worker in the hazards and respective controls associated with their work area through the use of Job Safety Analyses and Safety Observations
- Evaluating the safety performance of all workers through the continual observation and coaching of staff and completion ad review of monthly Safety Observations
- Recognizing employees who perform safe and healthful work practices

SAFETY AND HEALTH PROGRAM

• Providing training and increased Safety Observation and Coaching to workers whose safety performance is deficient
• Disciplining workers for failure to comply with safe and healthful work practices

All managers and supervisors are responsible for communicating with all workers about occupational safety and health in a form readily understandable by all workers. Our communication system encourages all workers to inform their managers and supervisors about workplace hazards without fear of reprisal.

Our communication system includes the following items:

• New worker orientation including a discussion of safety and health policies and procedures
• Review of our IIP Program
• Training programs covering the respective JSA, and applicable safety training from other programs
• Regularly scheduled safety meetings
• Posted and distributed safety information
• A system for workers to anonymously inform management about workplace hazards

Applicable documents include:

• Injury Illness Prevention Program/ Safety and Health Program
• Safety Work Order
• Safety Suggestion Form
• Incident Investigation Report
• Hazard Assessment & Correction Form
• JSA Process Evaluation
• Back Injury Prevention/ Ergonomics Assessment Program
• Housekeeping Procedures
• Early Return to Work Program
• Forklift Certification
• Noise/ Hearing Conservation Program
• Hot Work Procedures
• Respiratory Protection Program
• Safety & Ergonomics Committee Program
• Fleet Safety Program
• Hand Tool Safety
• Hazard Communication Program
• Ladder Safety
• Lock-Out/ Electrical Safety
• Electrical Safety Program
• Personal Protective Equipment
• Emergency Response/ Action Plan

SAFETY AND HEALTH PROGRAM

Procedure

1.0 Responsibilities

A. The success of our Occupational Safety and Health program is dependent upon the support by all management personnel and employees.

1. Management and employee support of all adopted safety procedures is required.

B. A successful Occupational Safety and Health program assures the protection of all employees, saves the organization unnecessary costs associated with workers' compensation insurance premiums, potential liabilities, and Oregon Occupational Safety and Health Administration citations and fines.

C. To achieve our safety program's mission and goals, everyone's support is necessary and required.

_____

President

D. In addition to our safety and health programs for specific hazards and concerns, Job Safety Analyses will be used as the system to identify and evaluate work-place hazards.

1. Directors, Managers, Supervisory Staff:

a) Support and assure that employees (and visitors to the area) follow adopted Job Safety Analyses (JSAs), safety and health procedures, and protective measures.

• Positive incentives are in place for continued safety performance and adherence to the JSAs by departments. The disciplinary procedure is to be followed for employees (and management) who disregard workplace safety requirements.

b) Conduct monthly JSA Evaluations of staff.

c) Set an EXCELLENT Example.

d) Conduct weekly Employee Meeting and provide a focused training session on a section of the JSA; and conduct the employee Safety Incentive for employees receiving excellent JSA Evaluations.

e) Encourage employee involvement in Safety Committees and assure member attendance.

f) Provide recommendations and discussion material to the departments' Safety Committee representative for improving the safety and health of the work environment.

g) Assist and support the organization's Return to Work/Modified Work Program (RTW) (i.e., have employees back to work as soon as possible).

h) Assure completion of safety issues noted on accident reports, by Safety Committees, or reported through inspections.

i) Unsafe or unhealthy work conditions, practices or procedures shall be corrected in a timely manner based on the severity of the hazards. Hazards shall be corrected according to the following procedures:

• When observed or discovered

• When an imminent hazard exists which cannot be immediately abated without endangering employee(s) and/or property, we will

remove all exposed workers from the area except those necessary to correct the existing condition.

– Workers who are required to correct the hazardous condition shall be provided with the necessary protection.

j) Discuss current safety issues at shift meetings. Each shift is to be covered.

k) Assure that new and transferred employees have received JSA training, attended Hazard Communication training, that they are current on all other safety training (see Section E), and that they are provided with required safety equipment, (e.g., Safety Glasses, Hearing Protection, and Safety Shoes) prior to beginning the work.

• These employees need to be walked through the area by their immediate manager and Supervisor, and receive a review of the specific safety hazards and protective measures for the operations prior to beginning the work.

• The employees are also to be shown the location and availability of the Hazard Communication binders containing the Material Safety Data Sheets.

l) Performance reviews will address the employees and supervisors' "Safety Performance" (i.e., adherence to the RTW Program, no time loss injuries, and the adherence to the safety rules/procedures outlined on the JSAs).

E. Employees

1. Follow adopted safety and health procedures and protective measures outlined on the JSAs and in training received.

a) It is an OSHA requirement for employees to follow the adopted procedures.

2. Provide recommendations to the departments' Safety Committee representative for improving the safety and health of the work environment.

3. Support the Organization's Return to Work Program.

4. IMMEDIATELY Report all unsafe/hazardous conditions to the Supervisor, and the Safety Committee representative.

a) The First Aid Provider will respond immediately.

b) The First Aid Provider and supervisor is to provide necessary treatment, monitor the progress of the injury, and assure that the injury is being properly treated.

c) If the injured employee needs medical attention, a Return to Work Packet is to be given to the injured employee to give to the attending physician such that the physician knows of the Return to Work Packet and assists in getting the employee back to work.

d) This procedure benefits the employee and organization.

e) Whenever possible, the employee will be transported to a designated physician for treatment and return to work duties.

5. Follow and adhere to the organization drug and alcohol policy.

6. All employees who have had a work-related injury requiring First Aid or Medical Attention are to report daily to the Human Resources each day until released.

F. Safety committee

SAFETY AND HEALTH PROGRAM

1. Conduct discussions at departmental shift meetings every month to discuss safety committee meeting items and issues.
2. Conduct quarterly walk through safety audits for each department.
a) Reports are to be posted and distributed to the Manufacturing Manager, and President.
b) These audits are to address ergonomics issues (lifting tasks and repetitive/cumulative trauma situations), identification of hazards, and the implementation of necessary control approaches.
c) Corrective action is to be noted with responsible people and completion dates identified.
3. Report ANY unsafe acts or conditions to their supervisor IMMEDIATELY.
4. Attend and actively participate in all Safety Committee meetings and assure that all safety issues are discussed and resolved.
5. Assist as needed in conducting incident investigations.
a) The reports include corrective actions, responsible parties for completing the corrective response, and completion dates.
6. Continually review the effectiveness of all safety programs.
a) Modifications to increase the effectiveness of the programs must be made as deficiencies are noted.

2.0 Protective Equipment

A. General protective equipment requirements are specified below.
1. All safety related equipment must be reviewed and accepted before purchase or use.
2. Hazard Assessments (JSAs) have been done for all positions to determine protective equipment needs.
a) These are specified in the respective JSAs.
B. Safety glasses
1. Everyone entering a production area must wear (at a minimum) safety glasses with attached side shields (glasses must meet the current ANSI Z87.1 specification). All areas are posted.
2. New employees are to be provided with safety glasses before working in the production areas by the Manager or Supervisor.
C. Chemical protective equipment
1. When handling chemicals, the JSAs and Material Safety Data Sheets are to be referenced for protective equipment needs.
a) This equipment may include chemical splash goggles, face shield, chemical resistant suit, gloves, and boots.
• Gloves are available in all sizes to assure proper fit of employees. The specific material of construction is specified in the JSA.
– Gloves are to be inspected throughout the shift and replaced as necessary if damaged.
– Further, any gloves used for preventing chemical contact (e.g. handling solvents and cleaners) must be changed weekly regardless of condition so as to prevent permeation through the glove and contamination of the skin.
– Fit should be double-checked each time the gloves are donned.

– If you need any assistance, contact your supervisor immediately.

• Respiratory Protection Equipment has been selected based upon the materials to which individuals may be exposed.

– Respirators selected filter materials and do NOT provide Oxygen.

– Respirators are to be fitted properly on the face and provide a good face to facepiece seal.

– Training materials are provided in the Respirator section of the JSA/Safety Book for proper donning and fit of the respirators.

• Eye and Face Protection: Safety glasses, face shield, and side shields are available for all employees.

– These items are to be kept clean and inspected daily for any damage and parts replaced as needed.

– Once again, fit is very important to provide adequate protection.

– A variety of safety glasses are available. Safety glasses and face shields are to be ANSI approved and provide brow and side protection.

• All protective equipment is to be stored outside of the immediate use area in a clean and sanitary location and at the end of each shift is to be inspected, cleaned, and stored so as not to damage the equipment or deform the equipment.

– Respirators are to be stored in plastic bags as well.

– Refer to the specific reference sections in your JSA/Safety Book to get further information on eye protection, respiratory protection, and skin protection.

D. Hearing protection

1. Entering areas of the facility posted for Hearing Protection requires the use of hearing protection.

2. All employees and visitors in the area must wear equipment.

E. Respiratory equipment

1. Our goal is to prevent any over-exposures to chemicals through proper ventilation system use.

2. Respirators are available for any employee desiring to minimize any possible exposure.

3. The Respiratory Protection Program is to be followed for care, selection, limitations, medical evaluation of users, and fit.

3.0 General Safety Rules

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

SAFETY AND HEALTH PROGRAM

1. Foremen and Leads shall insist on employees observing and obeying every rule, regulation, and order as is necessary to the safe conduct of the work, and shall take such action as is necessary to obtain observance.
2. All employees shall be given frequent accident prevention instructions. Instructions shall be given at least every 10 working days through weekly Tool Box Meetings covering a step of the JSA and other Tool Box Subjects.
3. We are a drug free work environment. Anyone known to be under the influence of drugs or intoxicating substances that impair the employee's ability to safely perform the assigned duties shall not be allowed on the job while in that condition.
4. Horseplay, scuffling, and other acts that tend to have an adverse influence on the safety or well-being of the employees shall be prohibited.
5. Work shall be well planned and supervised to prevent injuries in the handling of materials and in working together with equipment.
6. No one shall knowingly be permitted or required to work while the employee's ability or alertness is so impaired by fatigue, illness, or other causes that it might unnecessarily expose the employee or others to injury.
7. Employees shall not enter manholes, underground vaults, chambers, tanks, silos, or other similar places that receive little ventilation, unless it has been determined that is safe to enter.
8. Employees shall be instructed to ensure that all guards and other protective devices are in proper places and adjusted, and shall report deficiencies promptly to the foreman or superintendent.
9. Crowding or pushing when boarding or leaving any vehicle or other conveyance shall be prohibited.
10. Workers shall not handle or tamper with any electrical equipment, machinery, or air or water lines in a manner not within the scope of their duties, unless they have received instructions from their foreman.
11. All injuries shall be reported promptly to the foreman or superintendent so that arrangements can be made for medical or first aid treatment.
12. When lifting heavy objects, the large muscles of the leg instead of the smaller muscles of the back shall be used.
    a) Lift assist gear shall be used and help obtained to prevent injury.
13. Inappropriate footwear or shoes with thin or badly worn soles shall not be worn.
    a) Enclosed top, anti-slip soled shoes shall be worn.
14. Materials, tools, or other objects shall not be thrown from buildings or structures until proper precautions are taken to protect others from the falling objects.
15. Everyone entering a production area must wear the protective equipment specified in postings or in Section IV.B. above.
16. All operators are to check their protective equipment regularly for any defects.
    a) All equipment is to be cleaned after use and stored in a clean designated area for protective equipment.

SAFETY AND HEALTH PROGRAM

17. Excellent work area organization and housekeeping is essential to safety and is everyone's responsibility! Do a pre-break clean-up, and remove trip and slip hazards immediately.
18. DO NOT try to repair or de-jam any equipment without authorization.
    a) Hazards from electrical shock, chemicals or moving parts exist. All equipment must first be locked-out.
    b) Maintenance personnel are the only people authorized and trained to perform this work.
19. Notify the Supervisor of any chemical spills or emergencies, and call "911" in the event of a fire or medical emergency.
    a) DO NOT TRY TO STOP OR CLEAN-UP A MATERIAL UNLESS YOU ARE PROPERLY TRAINED AS A HAZARDOUS MATERIAL RESPONDER AND ARE PROPERLY EQUIPPED AND WORKING AS A TEAM.
20. Keep all exits, aisles, emergency equipment and electrical panels unblocked (36 inch clearance is required).
    a) All electrical panels are to be clearly marked to indicate equipment/circuits controlled by specific breakers.
21. Unsafe working conditions, defective tools and equipment must be reported to your Supervisor and the Safety Committee Chair immediately.
22. All injuries needing medical attention are to be reported to the Supervisor, Manager and First Aid Provider immediately.
    a) The First Aid Provider is to provide necessary treatment, monitor the progress of the injury, and assure that the injury is being properly treated.
    b) If the injured employee needs medical attention, a Return to Work Packet is to be given to the injured employee to give to the attending physician such that the physician knows of the Return to Work Program and assists in getting the employee back to work.
23. Walking on or climbing on equipment is prohibited.
24. Never walk across any moving parts, or place any body part in a hazard zone of machinery or equipment.
25. Report and assure that hazards are corrected: do not "walk on by"!
26. Never stand near any suspended load (crane or lift).
27. Assure that ladders are solid and well based. Affix in place to assure stability.
28. Smoking is prohibited in any area of our facility.
29. Only use chemicals if you have been trained on their safe use, and assure that they are in labeled containers.
30. Loose clothing, hair and jewelry are hazards around machinery as they can get caught and pull you in.

31. Welding and ANY HOT WORK requires the use of a HOT WORK PERMIT, PRIOR TO starting.
    a) Unless welding, stay away from welding and grinding areas, assure that curtains are used.
32. Wear safety glasses when on the floor.
33. Do not use compressed air to clean your clothing.

34. Do not lift items unless necessary.

a) Use cranes, hoist, or forklifts as opposed to manually lifting items. Get help if needed.

35. Never work alone in the facility.

36. Never distract another worker when operating equipment.

37. If injured on the job, see your supervisor to obtain a list of designated workers compensation physicians, and get a copy of the RTW packet prior to visiting the physician.

a) Do not drive yourself if you are injured: see your supervisor.

38. Know where the Emergency Evacuation maps are located, emergency eye wash stations, and first aid supplies are kept and who the first aid providers are.

a) Also, know your assembly point and evacuation point from the facility.

39. Machinery is NOT to be operated without their guards or safeguards in place.

a) Report any needs to your Supervisor.

b) Shut the machine down prior to leaving the floor, and whenever servicing.

c) Follow organization lock-out procedures if you must be in hazard areas.

d) All guards, tool rests, etc. must be in place and on all equipment while in operation.

e) Lock-out procedures are to be used when guards/ interlocks are not in place.

40. Any defective or out of spec tool or machinery is not to be used. It is to be repaired or replaced.

41. All equipment being assembled or tested is to be considered "live".

a) As such, electrical panels are to be kept closed (wired closed if needed).

42. All electrical equipment must have the ground intact.

43. When working with electrical hand tools, make sure ground is intact and that all insulation is sound.

a) Use ground fault circuit interrupters in wet areas No running or horseplay in any area of the plant is permitted.

44. Bay doors are to be completely open or closed, not partially open.

45. Only certified forklift operators are to use the equipment.

a) No more than one person is permitted on the equipment.

b) During use, loads are always to be kept low and weights within limits.

c) Safety restraints must be worn at all time.

46. All employees when in the shop are to assume that forklift operators DO NOT SEE THEM.

a) They are to remain out of forklift corridors as much as possible.

B. Chemical use

1. Always add acid to water; NEVER add water to acid.

2. DO NOT scratch or rub any part of your body while working with chemicals.

a) Always wash hands with soap and water after handling any chemicals.

3. DO NOT use any chemical unless the container is clearly and correctly labeled.

a) Assure that all containers are labeled with the identity of the contents and general hazards.

4. DO NOT taste or sniff chemicals, solvents or any processing solution.

5. All piping systems must be clearly labeled with contents, flow and concentration.

6. DO NOT work alone when handling chemicals.

7. Use all chemicals under proper ventilation.

a) Always check ventilation gauges to be sure of proper function prior to operating/charging.

8. All chemical containers must be tightly closed and returned to the proper storage cabinet (i.e., acid, base, peroxide or Flammable) after use.

a) Chemical containers are NOT to be stored on floors.

9. Use proper procedures and labeled waste containers for disposal of all chemicals.

10. Eating, drinking or smoking is not permitted in any chemical use/storage area.

4.0 Training

A. Training and instruction is to be provided:

1. When the program is first established

2. To all new employees

3. To all employees given new job assignments for which training has not previously been received

4. Whenever new substances, processes, procedures or equipment are introduced to the workplace and represent a new hazard

5. Whenever the employer is made aware of a new or previously unrecognized hazard

6. For supervisors to familiarize them with the safety and health hazards to which employees under their immediate direction and control may be exposed

7. All employees who may be exposed to workplace safety or health hazards must receive training to be made aware of the hazards and respective protective measures.

a) This will be done via the JSA Program and specific program training as well.

b) A JSA is in place for all areas.

c) All new and transferred employees are to receive training prior to beginning work in an area covering the JSA for their work to be done, as well as specific program training as outlined in the respective safety programs.

d) Training in the safety programs will cover the following:

- Implementation and maintenance of the IIP Program
- Emergency action and fire prevention plan.
- Provisions for medical services and first aid including emergency procedures.

• Prevention of musculoskeletal disorders, including proper lifting techniques.
• Proper housekeeping, such as keeping stairways and aisles clear, work areas neat and orderly, and promptly cleaning up spills.
• Prohibiting horseplay, scuffling, or other acts that tend to adversely influence safety.
• Proper storage to prevent stacking goods in an unstable manner and storing goods against doors, exits, fire extinguishing equipment and electrical panels.
• Proper reporting of hazards and accidents to supervisors.
• Hazard communication, including worker awareness of potential chemical hazards, and proper labeling of containers.
• Proper storage and handling of toxic and hazardous substances including prohibiting eating or storing food and beverages in areas where they can become contaminated.
• A review of the applicable Safety Programs (including, Back Injury Prevention, Disciplinary Procedures, Drug and Alcohol, Employee Assistance Program (EAP), Return to Work Program, Emergency Response/ Action Plan, Forklift Certification, Hand Tool Safety, Hazard Communication Program, Incident Investigation, Ladder Safety, Lock-Out/ Electrical Safety, Noise/ Hearing Conservation Program, Respiratory Protection Program, Fleet Safety Program, and the Safety Committee Program.

e) A Weekly Meeting will also be held by each supervisor and documented. At this meeting, the following items are to be covered:
• Refresher training is to be done to communicate with employees on Occupational Health and Safety matters, as well as recent incidents.
• "Informal discussions" of safety/health issues in department shift meetings will occur.
• One step of the JSA is to be covered as a refresher session.
• Employees who have been evaluated under the JSA and Safety Observation process and had excellent results are to be recognized at the meeting.
• Safety Observation results are to be discussed.

f) Records need to be kept of all training and forwarded to Human Resources. This includes:
• Records of scheduled and periodic inspections to identify unsafe conditions and work practices, including person(s) conducting the inspection, the unsafe conditions 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 one (1) year.

• Documentation of safety and health training for each employee, including employee name or other identifier, training dates, type(s) of training, and training providers.
– This documentation shall be maintained for one (1) year.
• Written documentation of the identity of the person or persons with authority and responsibility for implementing the program.

5.0 Accident and Incident Investigation

A. All near misses and incidents where someone else could be injured from the same task, condition, behavior, design, etc. shall be reviewed using the Incident Investigation Form in this program.
1. These are to be done immediately and corrective actions as needed identified and put into place to abate any recognized hazard to prevent a recurrence.
2. These are to be documented and retained.
3. Procedures for investigating workplace accidents and hazardous substance exposures include:
a) Interviewing injured workers and witnesses
b) Examining the workplace for factors associated with the accident/exposure
c) Determining the cause(s) of the accident/exposure
d) Taking corrective action to prevent the accident/exposure from reoccurring
e) Reviewing training and Safety Observations completed for affected staff
f) Recording the findings and actions taken

6.0 Audit Procedures

A. Periodic inspections to identify and evaluate workplace hazards shall be performed by a competent observer in all areas of our workplace.
1. Periodic inspections are performed monthly; when new substances, processes, procedures or equipment which present potential new hazards are introduced into our workplace; when new, previously unidentified hazards are recognized; when occupational injuries and illnesses occur; and whenever workplace conditions warrant an inspection.
2. Any issues identified are t be captured in the JSA or as needed a new JSA developed and all applicable staff and supervision trained.
B. Management and facility reviews and audits will occur to address safety conditions and assure adherence to the JSA Process, and programs and procedures outlined above.
C. Annual audits will evaluate safety and health training, safety evaluations conducted, and all necessary follow-up actions to assure abatement of loss sources, and control of potential hazards.
D. Safety Observations will be completed monthly by all supervisors and documented.
1. The results will be communicated to staff outlining areas for improvement.

E. The Safety Process will be POSITIVE BASED.

1. People will be recognized that perform well.
2. Managers and Supervisors that emphasize the JSA and Safety efforts, and employees that receive excellent Safety Observations will be recognized.

F. Audits will be documented and retained.

G. Corrective actions will be given and reviewed to ensure the continued improvement of the Safety Process.

H. Any safety conditions noted during normal work periods are to be documented and reported to the supervisor.

1. Safety issues noted during audits are to be documented and reported to the facility manager.
2. A Safety Work Order will be developed for each safety issue to be corrected.
3. A Safety Suggestion Form is to be posted and available for people to report any hazardous conditions or issues as well.

7.0 Record Keeping Requirements

A. The following records shall be kept:

1. Records of hazard assessment inspections, and accident/incident investigations including the person(s) conducting the inspection.
2. Records of the unsafe conditions and work practices that have been identified and the action taken to correct the identified unsafe conditions and work practices, are recorded on a hazard assessment and correction form.
3. Documentation of safety and health training for each worker, including the worker's name or other identifier, training dates, type(s) of training, and training providers, is recorded on a worker training and instruction form.

B. Inspection records and training documentation will be maintained for one year.

1. Any exposure or medical records are to be retained for the duration of employment plus 30 years.

Safety Commitment

MOST COMMON WAYS TO BE INJURED ON THE JOB

Not being properly trained

Improper lifting
Improper housekeeping
Improper use of safety protection equipment
Failing to warn others

Using faulty equipment
Unsafe positions Tripping

SAFETY – ON OUR TERMS

New employees should discuss work procedures with their supervisors before beginning their assignment.

Wear protective equipment (hard hats, eye guards, respirators, gloves, etc.) as required, for your own protection.

Wear suitable shoes in good repair. Take advantage of safety training when available.

Back injuries are painful, know your limitations. Use proper positioning – keep your back straight, To prevent pulled muscles, get help when lifting heavy loads.

lift with your legs, and carry the load close to your body. Never twist your back while lifting or carrying a load.

Maintain your work area, keep it clean and organized.

Watch your balance when pulling, pushing, or Watch footing to avoid slips and falls prying – especially in an elevated work area. Do and wipe up spilled fluids immediately. Keep not jump from elevated areas. walkways clear of debris, tools and materials.

Know how to report a fire in your location, the location of the fire pull box, and proper evacuation procedures.

Secure ladders before climbing. Check for defects. Face the ladder when going up or down, and keep hand free of tools and material.

Be familiar with location and proper use of fire-fighting equipment.

Do not use unstable objects (buckets, chairs, tables, etc.) for work platforms or ladders.

No horseplay

Use the proper tools when doing any job.

Correct or immediately report any unsafe conditions or practices to your supervisor and suggest any improvements that could be made.

Obey traffic regulations while driving vehicles or equipment.

Properly ground all electrically powered equipment and make sure electrical cords are in good repair.

Read caution labels on cleaning agents, solvents or flammables. Understand the hazards involved, and take the necessary precautions. Adequate ventilation is a primary concern.

Do not operate, repair or adjust mechanical or electrical equipment unless you are authorized and qualified.

Know where smoking is permitted. Know emergency phone numbers, how to request emergency repairs and how to request help for any injured person.

I have received, read and understand the EMPLOYEE SAFETY COMMITMENT and agree to abide by its safety practices. I realize that violation of the safety practices in the EMPLOYEE SAFETY COMMITMENT may lead to disciplinary action, including suspension and/or termination. I further understand that if I am injured during the course of my work, I will report the injury to my supervisor immediately.

Employee Signature Worksite Date

SAFETY SUGGESTION/HAZARD REPORT FORM

To be completed for any safety related issue (hazard, difficult task, idea for a better or safer way to do a task). Complete and give to your supervisor or safety committee member.

1) **Date: _____**
2) **Name (optional): _____**
3) **Location: _____**
4) **Hazard or Concern:**

_____
_____
_____
_____
_____
_____

5) **Ideas/Recommended Actions:**

_____
_____
_____
_____
_____
_____

The following section is to be to be completed by the manager and then posted

6) **Action to be taken:**

_____
_____
_____
_____
_____
_____
_____

7) **Person responsible to correct: _____**

8) **To be corrected by (date): _____**

SUGERENCIAS DE SEGURIDAD Y FORMULARIO PARA REPORTAR PELIGROS

Por favor utilice este formulario para hacer cualquier sugerencia para mejorar la seguridad o reportar cualquier situación potencialmente peligrosa. Sus ideas son bienvenidas en cuanto a como hacer asignaciones que son difíciles, mas fáciles y asignaciones o ambientes peligrosas, mas seguras. Por favor entregue este formulario ya completo a su supervisor o a un miembro del comité de seguridad. **Gracias por su participación.**

Nombre (Opcional):_____ Fecha:_____

Su sugerencia aplica a que ubicación:_____

_____

Cual es el problema, peligro o preocupación:_____

_____

Cual es su sugerencia para mejorar:_____

_____

_____

_____

Gracias.

Lo siguiente debe ser completado por el Gerente de Seguridad y después registrado o archivado.

Respuesta a la sugerencia arriba:

Acción que se tomara (si habrá): _____

_____

Persona responsable de tomar la acción:_____

La acción se llevara a cabo para esta fecha:_____

_____

Training title—

This form documents that the training specified above was presented to the listed participants. By signing below, each participant acknowledges receiving this training.

Organization: Date:

Trainer: Trainer's Signature:

Class Participants:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Name: Signature:

Tema

Título de formación

Este formulario certifica que la capacitación especificada anteriormente fue ofrecida a los participantes de la lista. Al firmar a continuación, cada participante reconoce haber recibido esta capacitación.

Empresa: _____

Instructor: Firma del Instructor: _____ _____

Participantes de la clase:

Nombre: _____ Firma: _____ Fecha: _____

Nombre: _____ Firma: _____ Fecha: _____

Nombre: _____ Firma: _____ Fecha: _____

Nombre: _____ Firma: _____ Fecha: _____

Nombre: _____ Firma: _____ Fecha: _____

Nombre: _____ Firma: _____ Fecha: _____

Nombre: _____ Firma: _____ Fecha: _____

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Nombre: _____ Firma: _____ Fecha: _____

Nombre: _____ Firma: _____ Fecha: _____

Nombre: _____ Firma: _____ Fecha: _____

Nombre: _____ Firma: _____ Fecha: _____

WATER SAFETY PLAN

Scope and Application

This procedure applies to all locations or projects involving exposure to water. The purpose of this program is to describe the policy in developing, implementing, and maintaining the elements of an effective water safety plan. The scope of this program is to all operations involving any water exposures to staff.

The objectives of the safety program are to provide:

- Safe practices in vessel operation
- Establish effective safeguards against all identified risks
- Assure a safe working environment
- Prevent human injury or death
- Avoid damage to property and marine environment

Implementation

Implementation of this procedure is the responsibility of the management.

Procedure

1.0 Hazard Assessment

A. A pre-use Hazard Assessment must be done to determine potential hazards present, and needed controls.

1. All events which could result in injury and/or damage to property must be considered.
2. The hazard assessment must be documented and include the date of assessment, and name of person performing the hazard assessment.

B. Example hazards to evaluate:

1. Impact (falling objects, struck-by hazards)
2. Puncture and cuts
3. Compression or crushing
4. Heat, cold, wildlife, insects and other environmental conditions
5. Falling
6. Slips
7. Drowning

C. Pre-use checklist

1. Prior to use of a vessel or exposure of any staff to a water hazard, a pre-use checklist specific to the vessel and all related components and safety equipment is to be completed and documented; including consideration of proper water and weather conditions, operation, control devices, communication systems and equipment review.

WATER SAFETY PLAN

D. Assessment of weather and water conditions

1. Only trained and authorized staff are permitted to be in an area wherein an exposure could occur.
2. Be aware at all times of current and projected river conditions.
3. Consider these exposures and acceptable conditions in the pre-use checklist.
a) Our policy is to prevent exposure in any threatening conditions.
4. Constantly monitor the changing water and weather conditions and adjust control approaches appropriately.
5. It is the responsibility of management to monitor and assess the conditions, adjust control approaches or disallow operation/exposure of staff.
6. Use established alarm and communication systems.
7. Working in areas exposed to fall or water
a) Many areas on vessels are inaccessible to maintenance, inspection, or repair crews from decks or built-in work platforms.
• This may mean climbing masts and kingposts are being suspended over the side of the ship on temporary scaffolding, from cranes, or in man baskets.
b) Tasks requiring leading edge work on vessels is also a position of exposure and controls are needed.
c) The greatest hazard associated with this type of work is falling onto the pier or into a dry-dock or the water.
d) Working in these situations requires much preparation and extra precautions.
• These include filling out check lists, certifying cranes and aerial lift equipment, informing nearby vessels, restricting the work area, and inspection of rigging, staging and personal protection equipment.
e) Personnel must receive special training on working from heights and wear special harnesses secured to anchorages that can withstand the forces of a fall.
f) In addition, extra personnel are needed as observers who can assist people working at heights or call for help in the event of an emergency.

E. Assessment of wildlife interaction

1. Consider these exposures, acceptable conditions and measures to help prevent encounters.
2. Only trained and authorized staff are permitted to be in an area wherein an exposure could occur.
3. Use established alarm and communication systems.

4. Do not confront an animal or purposely encounter or encroach upon an animal as they are unpredictable.
a) Avoid a confrontation in all ways, and move away to safe areas if a situation is encountered.

2.0 Vessel and Equipment Inspection, Maintenance and Use

A. Inspections
1. Each day before being used, all vessel components, cables, personal protective equipment and components shall be inspected for damage or defects by a competent person designated by the employer.
2. Additional inspections shall be performed during use, where service conditions warrant.
a) Damaged or defective components shall be repaired prior to use by a competent person.
3. Damaged materials shall immediately be removed from service.
4. Vessel and component inspections shall also be done in accordance with established federal, state and local codes and requirements by properly licensed personnel.
5. Documentation of all inspections shall be retained and organized for inspection.
B. The safe working load of the vessel and components shall be established, incorporated into training, posted, and not exceeded.
1. Management shall ensure that:
a) Vessels are maintained in accordance with federal, state and local regulations.
b) Inspections are held at appropriate intervals.
c) Specific equipment and operational systems that may result in a hazardous situation of a sudden operational failure occurs are identified.
d) Measures that promote the reliability of the equipment and technical systems are identified and standby arrangements and equipment not in regular use are tested.
e) Records of inspections, non-conformities, and corrective actions are maintained.

3.0 Personnel Training

A. Training must include first aid, CPR, fall protection systems, water hazards, equipment inspection, lifesaving, drills, communication and emergency notification, and the use of personal protective equipment.
1. A program specific to the hazards noted, and control solutions shall be developed and provided to all personnel prior to exposure, and at least annually thereafter.
a) Safety Observations and periodic re-training should also occur.

B. Periodic drills shall be conducted for all foreseeable emergencies such as but not limited to:

1. Conducting abandon ship and man overboard drills and training on a regular schedule is necessary for the continued safety of the passengers and crew.

a) Abandon ship and man overboard drills and training ensures that crew members are familiar with their duties to enable them to perform effectively in an actual emergency.

b) Only staff that are strong swimmers are permitted to be positioned on vessels or in exposure situations to water hazards.

C. All training shall be documented.

1. Vessel operators are to be properly trained and licensed through federal, state, and or local regulations. Copies of licenses shall be maintained.

4.0 Personal Protective Equipment (PPE)

A. The selection of appropriate PPE is based upon the hazard assessment; including such elements as:

1. Identifying the potential hazards

2. Determining the types of protective equipment available for the present hazards

3. Evaluating the effectiveness of the PPE

4. Selecting appropriate protective equipment

5. Providing a variety of sizes to properly fit all users

6. Selecting equipment that is compatible with other PPE

B. Protective footwear

1. Workers must wear protective footwear when working in areas where there is a danger of falling or rolling objects or objects piercing the sole.

2. Slip resistant soles

C. Hand protection

1. Gloves that provide protection from lacerations, abrasions, punctures, and cold temperatures

D. Lifesaving equipment

1. Personal flotation devices (PFDs) are required when there is a chance of falling into water such as working near unguarded edges, boarding or leaving the vessel.

2. Lifesaving equipment such as life ring buoys with ropes and ladders must be provided.

3. All PFDs must be U.S. Coast Guard (USCG) approved and of the appropriate Type, as defined by the USCG.

E. Personal fall protection

1. Personal fall protection systems must meet the design, strength, and testing requirements for the equipment.

2. Design requirements include:

a) Maximum permitted arrest forces

b) Minimum system strength

c) Maximum permitted stopping distances
d) Component strength
e) Proof testing
f) Corrosion-resistant materials
g) Compatibility requirements

5.0 Rescue Procedures

A. A written emergency preparedness plan must be in place and drills conducted from the plan.

1. The plan must include procedures that describe the requirements for rescue procedures for all foreseeable emergencies, First Aid and CPR response.

2. It is the responsibility of management to provide an adequate first aid kit on board the ferry at all times.

a) The kit must be maintained with the proper contents at all times.

Ensure that the kit is:

• stowed in an appropriate watertight container clearly marked "First Aid Kit"
• readily accessible to crew
• maintained with all the required contents at all times
• including detailed instructions for the use of each item are available

B. Proper knowledge and skill in first aid are essential.

1. Effective and professional response to an emergency situation may be the difference between life and death or temporary injury and disability of the victim.

2. Drills shall be conducted periodically and as needed to assure everyone's proper response.

a) These shall be documented and re-training conducted based on findings.

C. Vessels sometimes become damaged in groundings, collisions, or from striking submerged objects.

1. These mishaps may result in a holed, cracked, or weakened hull.

a) Inspections shall be completed and documented and if the vessel has been damaged (such as, water is entering the interior of the boat), steps must be taken to ensure passenger safety, identify the source of the leak, and keep the boat afloat and removal from service when any safety concern is noted.

D. Even the best of swimmers can become disoriented when unexpectedly falling into the water.

1. A procedure to address "man overboard recovery", as well as water survival skills, and respective training of staff shall be prepared based on the specific hazards present.

a) Lives depend on every crew member performing these procedures competently and effectively.

E. Water Survival Skills

1. If a crew member enters or ends up in the water due to an emergency, survival procedures should be pre-planned.

a) Preplanning increases the chances for a successful rescue are increased.

b) Never forget that a personal floatation device is one of the best insurances for survival.

2. The length of time a person can stay alive in cold water depends on the temperature of the water, the physical condition of the survivor, and the action taken by the crew and exposed person.

a) The following figure shows the relationship between an uninjured victim's activity, water temperature, and estimated survival time.

b) Swimming typically reduces a person's chance of survival due to more rapid loss of body heat, and fatigue potential.

c) This information is to be included in the training program.

6.0 Documentation Summary

A. File the following documents in the Health and Safety File:

1. Copy of the cover page of the Manufacturer's Operation Manual.
2. Training documentation.
3. List of authorized employees.
4. Operator licenses
5. All inspections

WATER SAFETY PLAN

Appendix A: Access to Vessels Afloat

1.0 Personnel must board vessels in a safe manner using approved boarding devices.

A. Movement of the floating vessel can cause movement of the boarding device, thus increasing the possibility of workers to falling from the device or being injured by a moving device.

1. Potential hazards:

a) Workers being injured when boarding a vessel

b) Workers falling off the gangways or ladders to a lower level or into the water

c) Structural failure of a gangway or ladder causing the worker to fall to a lower level or into the water

d) Movement of the gangway or ladder resulting in injuries

e) Workers being struck by moving material or cargo loads

2. Requirements and example solutions:

a) The employer shall not permit employees to board or leave any vessel, except a barge or river towboat, until the following requirements have been met:

- An adequate gangway must be provided. When a gangway is not practical, then a straight ladder or Jacob's ladder must be used.
  – Gangway must maintain clear access, have at least 33-inch-high hand rails, be properly trimmed, and be properly illuminated.
  – When the end of the gangways overhangs the water, it must be bridged and a net must be present.
  – When the upper end of the gangway or ladder rests on or is flush with the top of the bulwark or hand rail, steps with adequate guardrails are required.
  – Suspended loads must not pass over the gangway.

Improper practice: Hazardous access from deck to vessel

Properly trimmed and guarded gangway with access steps and platform

WATER SAFETY PLAN

Appendix B: Working Aloft or Over the Side

1.0 Working Aloft or Over the Side

A. Many areas on ships are inaccessible to maintenance, inspection, or repair crews from decks or built-in work platforms.

1. This may mean climbing masts and kingposts or being suspended over the side of the ship on temporary scaffolding, from cranes, or in man baskets.

2. The greatest hazard associated with working over the side or aloft is falling onto the pier or into a dry-dock or the water.

3. Working aloft or over the side requires much preparation and extra precautions.

a) These include filling out check lists, certifying cranes and aerial lift equipment, informing nearby ships, restricting the work area, and inspection of rigging, staging and personal protection equipment.

b) Personnel must receive special training on working from heights and wear special harnesses secured to anchorages that can withstand the forces of a fall.

c) In addition, extra personnel are needed as observers who can assist people working at heights or call for help in the event of an emergency.

B. Access to barges and river towboats

1. Potential hazards

a) Workers falling from gangways or ladders when boarding barges and river towboats because of the movement of the vessels

b) Structural failure of the gangway or ladder causing workers to fall

c) Surging of the vessel causing pinching between the gangway, or ladder, and the vessel

Worker on gangway between edge of floating dry dock and vessel

2. Requirements and example solutions

a) Ramps for access of vehicles onto or between barges shall be of adequate strength, provided with side boards, well maintained and properly secured. [1915.74(c)(1)]

b) Unless employees can step safely to the vessel, a gangway or ladder is required. [1915.74(c)(2)]

Access ramp to barge

Access walkways to barge

Health and Safety

At UCP Staffing, we place a high priority on the health and safety of our employees. We believe that every individual has the right to work in an environment that is free from hazards and risks that may compromise their wellbeing. As such, we have developed comprehensive health and safety policies and procedures that are designed to ensure that our employees are protected at all times.

We are committed to providing a safe workplace for all our employees, and we continuously strive to improve our health and safety practices. Our goal is to create a culture of safety where every employee is aware of the risks associated with their work and takes an active role in preventing accidents and injuries. We believe that by working together and promoting a safe work environment, we can reduce the number of workplace accidents and keep our employees healthy and productive.

Thank You!

Let's Work Together

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