TARLTON with ARCHPOINT ENGINEERING

CONTINENTAL TIRE - MT. VERNON SUBSTATION 7

1. TARLTON SAFETY MANUAL
2. ARCHPOINT QMS
3. TARLTON QMP
4. SUBSTATION 7 EQUIPMENT AND PROCUREMENT PLAN
5. SUBSTATION 7 TRAINING PLAN

PREPARED FOR	DATE	CONTACT	PROJECT EXECUTIVE
Continental Tire	September 18, 2026	Shane Spears SSpears@tarltoncorp.com 314.308.9482	Michael Trettel MJTrettel@tarltoncorp.com 314.633.3436

2026

Corporate Safety, Health & Environmental Manual

TARLTON

LET'S BUILD℠

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Appendix A - Glossary of Terms
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To ensure the health and safety of all persons on all Tarlton Corporation project sites, our "Safety First" attitude includes your active participation with OSHA compliance, safety training, the policies outlined in this manual and the principles illustrated below.

Safety and health are a shared responsibility. Everyone from top management and supervisors to each and every worker must take ownership of their own safety and that of co-workers. Everyone is a safety officer! You have the authority and responsibility to stop any unsafe act to include shutting down a project until that unsafe condition is rectified.

We recognize that the prevention of accidents and the promotion of safe working practices are of the greatest importance. Maintaining a safe and healthful work environment is not just an idea – it is a top priority.

We realize that the attitudes of our employees towards safety are of paramount importance in the effective operation of our accident prevention program. Supervisors must constantly endeavor to maintain safe working conditions and keep accident prevention as an essential part of their planning and operations.

It is everyone's job to spot hazards and to correct them or report them immediately.

The hazardous nature of our work will not be accepted as a reason for failing to do all that can be done to eliminate or reduce the waste and suffering that accidents cause. We must do everything possible to decrease work hazards and strive for the best safety experience record possible.

We strongly urge all Tarlton Corporation employees to fully embrace and continually strive to implement the principles listed above as well as our entire safety program. Most importantly, you are our greatest asset; we want you to leave the job each day in the same condition as you arrived. Use this manual to guide you in actively supporting the corporate safety culture and in preventing incidents on your job.

Tracy E. Hart
President/CEO

Dirk G. Elsperman
Exec. Vice President/CAO

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PURPOSE & APPLICATION

The Corporate Safety Department oversees all aspects of the company with regards to safety including development, implementation and maintenance of corporate policies, procedures and programs for safety, health, loss control, and risk management.

The Corporate Safety Department's mission is to develop best practices for a variety of construction-related safety concerns in an effort to create a safer work place for our employees and the community. The safety department will monitor the programs and advise the executive management of changes to policy.

PROCEDURE

The Safety department will operate in the following manner:
Department Staff: The Corporate Safety Department will consist of a full-time Corporate Safety Director, full-time Safety Manager, full-time Safety Engineer(s), and a full-time Safety Assistant as required.

Record Keeping: Tarlton Corporation tracks training, Jobsite Safety Audit Reports, Job Safety Analysis, Incidents, TBTs, Site Specific Orientations, man-hours, etc. This information will be used as the basis for end-of-project safety performance evaluations.

All professions have a code of ethics to follow; construction and safety professions are no different. In order to utilize the safety program to its fullest extent, all documentation must be prompt, accurate, and truthful. Any falsification of safety records or reports is against the law and is grounds for immediate termination of employment. If you have any questions regarding reports, records, or general safety documentation, please contact the Corporate Safety Manager.

Enforcement: Constant awareness of and respect for hazards and compliance with all safety rules are considered conditions of employment. The project management team (Foremen, Superintendents, Engineers, Managers, and Directors), Workforce Manager, as well as individuals in the Safety Department, Human Resources Department, and executive management reserve the right to issue disciplinary warnings to employees, up to and including termination, for failure to follow the guidelines of this program.

Changes to Plan: The Corporate Safety Director and the Executive Vice President/CAO will approve any changes to this manual or any of its policies. Employees shall be notified and trained, if necessary, of any new procedures. A copy of this manual and all approved changes shall be maintained at each project site.

OSHA REFERENCE

NA

RELATED SECTIONS

NA

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PURPOSE & APPLICATION

The purpose of this policy is to establish a process for reviewing Tarlton's current safety program in order to amend the program and/or safety manual as necessary.

PROCEDURE

The following areas or elements will be reviewed annually to institute new policies, programs, procedures, and industry best practices. In conjunction with review of the following safety program elements, the Annual Program Evaluation form will be completed each year to set goals, plan, and assess progress.

Zero Accident Goal:

Tarlton is committed to continued safety program improvement to achieve or improve upon our goal of Zero Accidents. The Safety Committee, Tarlton Executives, and Safety Director will work together to establish new program goals and make program improvements as necessary to advance the safety culture.

The following areas will be assessed annually to develop new goals and improvement areas: safety performance and safety task completion at the completion of each job, safety audit results and trending, quality and consistency of near miss reporting, hazard reporting & safety suggestions, opportunities for "spot recognition" for exceptional safety performance, trending of incidents, accidents, and near misses and OSHA statistics. Tarlton will attempt to use leading indicators of safety performance with review of the safety tasks completed on the jobsite, safety audit results, near miss and hazard reporting, and safety suggestions. Lagging indicators of performance such as incident cause and type, as well as OSHA statistics, will also be reviewed.

Near Miss/Good Catch Reporting:

(Employee Participation)

Near miss incidents are defined as an incident that could have resulted in an injury, illness, medical treatment, and/or property damage. To be proactive in safety, near miss incidents need to be identified and addressed. In cases where there could have been a potential injury, equipment damage, property damage, or bad public relations, complete a Near Miss Report.

Good catch incidents are defined as an unsafe condition or act that was recognized, which if left unaddressed, could have resulted in an injury, property damage, or outage. This could also be a positive recognition of a good work practice or behavior which helped create a safer environment. To be proactive in safety, good catch incidents need to be identified and addressed. In these cases, complete a Good Catch Report.

Spot Recognition:

While visiting project sites, Tarlton's Safety Team may reward safe behavior that goes above and beyond requirements with gift cards, t-shirts, etc.

Incident Trending:

(Injury & Illness Rate Review)

Tarlton will review each year and multiple years of injury and illness data to determine any identifiable trends in incident type, cause, and exposure that need to be targeted during safety audits, for additional training or awareness, and for policy or procedural changes.

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OSHA Statistics:
Tarlton will review OSHA statistics, Incident Rate (IR), Days Away, Restricted or Transferred (DART), Lost Work cases/days, Light Duty cases/days, and Recordable incidents and use this data to track as a lagging indicator to determine program performance based on OSHA and Industry Standards.

OSHA REFERENCE
1926.600 Subpart O, Equipment

RELATED SECTIONS
NA

APPLICABLE FORMS (APPENDIX B)
Annual Safety Program Evaluation

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PURPOSE & APPLICATION

To illustrate and promote a total corporate safety culture, each position of the project team shall actively support the safety objectives of the company and be held responsible for the overall enforcement and performance of the safety program for each project.

In accordance with federal regulations, the employer is responsible for providing a safe work environment for its employees. OSHA extends that responsibility to the prime contractor controlling the site and subcontractors or individuals within company management as a prime contractor.

PROCEDURE

1. Coordinate and supervise the safety program for all Tarlton Corporation employees and subcontractors on the project site.
2. Project manager shall ensure safety start-up meeting is conducted with the project teamand Safety Team prior to project start.
3. Project team shall conduct site-specific orientations for all Tarlton Corporation employees and Subcontractors new to the project site.
4. Conduct weekly Tool Box Talks (TBT) on each site with all site personnel including subcontractors in attendance.
5. Project Superintendents shall be responsible for ensuring a Pre-Task Safety Plan is completed at a minimum of each day for each task and crew prior to the beginning of the shift.
6. Conduct, at least, weekly Job Safety Audit Reports (JSAR) and safety inspections and documentation saved on Tarlton's Project Management platform. All Superintendents (3/moth), Project Managers (1/moth), and Project Engineers (2/month) must complete JSAR's on assigned project(s).
7. Conduct Safety Observations as outlined here. All Superintendents will conduct 8/month, Project Managers will conduct 4/month and Project Engineers will conduct 6/month.
8. Ensure that all required Personal Protective Equipment (PPE) is provided and used as required.
9. Ensure all safety related communications/documents are uploaded to the Procore project site.
10. Project site team shall respond to all suggestions made as a result of inspections on project.
11. Report all injuries, incidents, near misses, and good catches in accordance with Section 18 of the Corporate Safety, Health and Environmental Manual.
12. Project team shall review all accident reports and investigations with Safety Director. Ensure suitable corrective action has been taken to prevent similar occurrences (see Section 18).
13. Project Team in coordination with the Safety Department should investigate all near miss, good catch, incidents and injuries that are reported.
14. Include Tarlton Corporation safety program requirements at all subcontractor's pre-construction meetings. Point out any unusual conditions or methods to be used or encountered on the project site. Require all subcontractors to provide a Site-Specific Safety Plan to address hazards associated with their scope of work prior to job start. A Subcontractor Pre-Construction meeting must be held with all subcontractor prior to starting on a Tarlton jobsite.
15. Post all required OSHA, EEO documents and posters on the project bulletin board. Also post a list of phone numbers for emergency response. Maintain a list of emergency contact numbers for all subcontractors.
16. Review and provide protection for the general public e.g. fences, barricades, sidewalks, and streets. All appropriate warning signs and flagging should be erected and maintained.
17. Provide adequate toilet facilities required by the project size.

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18. The competent person for OSHA Safety and First Aid/CPR is the Superintendent unless otherwise specifically designated.
19. Code all incident related project costs to cost code 1551. This code will be used to capture the labor cost for an injured employee, any attending field craft workers to travel to a medical facility to seek treatment, labor costs for subsequent visits to a medical facility, and labor costs for physician approved light duty. The cost code will also capture material costs for medical bills or deductibles, or any other cost assignments associated with an incident and equipment costs for equipment lost or damaged as a result of an incident.
20. Document all on-the-project safety training sessions (TBT, PTSP, etc.), project site inspection results, incidents, deficiencies, near misses, safety warnings, and subcontractor directives. Falsification of any document is a violation of corporate policy and may result in immediate dismissal.

OSHA REFERENCE

In accordance with Subpart B of 29 CFR 1926.16(a) "…In no case shall the prime contractor be relieved of overall responsibility for compliance with the requirements of this part for all work to be performed under the contract."

RELATED SECTIONS

Weekly Tool Box Talk (TBT) Meetings (Section 16)
Project Inspections (Section 17)
Incident Management (Section 18)
Pre-Task Safety Plan (Section 21)

APPLICABLE FORMS (APPENDIX B)

Toolbox Talk (TBT)
Job Safety Audit Report (JSAR)
Pre-Task Safety Plan (PTSP)
Task Specific Behavior Observations (TSBO)

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PURPOSE & APPLICATION

All Tarlton Corporation Safety Personnel, Project Directors, Project Managers, Project Engineers, Superintendents, and selected Foremen are required to complete and keep current their certifications to meet the corporate safety training requirements.

Tarlton Corporation is committed to having the best-trained personnel. This commitment encompasses all training: technical, managerial, and safety.

The following courses are mandatory for all project supervisory personnel:

Course	Renewal Period
First Aid	2 years
CPR/AED	2 years
Bloodborne Pathogens	1 year
Incident Investigation	3 years
Hazard Recognition & Evaluation	1 year
Reasonable Suspicion Drug & Alcohol Testing	1 year
Annual Safety Refresher Training	1 year
OSHA 30 Hour Course	Once
Safety Documentation	As Needed
Confined Space	3 Years
Excavation	3 years
Fall Protection	3 years
Scaffolding	3 years
Lockout/Tagout	3 years

The following courses are mandatory for the office project team:

Course	Renewal Period
OSHA 30 Hour	Once
Confined Space	3 years
Excavation	3 years
Fall Protection	3 years
Safety Documentation	As Needed
Scaffold Safety	3 years
Incident Investigation	3 years
Annual Safety Refresher Training	1 year

The following course is mandatory for all field personnel:

Course	Renewal Period
OSHA 10 Hour	Once

PROCEDURE

The Corporate Safety Department will schedule the above courses for the project staff and coordinate their certification and re-certification. All training will be coordinated with a minimum 2-week notice when possible. Employees are responsible for attending their scheduled courses. Should employees need to cancel

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a course they must provide 1-week notice to the Corporate Safety Assistant. If an employee misses two scheduled training sessions in a row, or three over a one-year period, they will receive a letter of notification that will be copied to their personnel file for record and will result in disciplinary action.

OSHA REFERENCE

Subpart C of 29 CFR 1926.21(b)(2) and 1926.32(f) requires that "all employees be trained in the recognition and avoidance of unsafe conditions and…to control or eliminate any hazards or other exposure to illness or injury." The regulation further defines the requirements of a "competent person."

RELATED SECTION

NA

APPLICABLE FORMS (APPENDIX B)

NA

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PURPOSE & APPLICATION

Statistics show that nearly 70% of all incidents occur as a result of unfamiliarity with the task or unfamiliarity with the project. *This means that new employees or employees new to a project are most likely to be involved in incidents.*

The new employee and site-specific orientation programs minimize the risk of new employee incidents.

Tarlton Corporation requires all new employees to receive corporate and site-specific orientations. Current employees who are new to a project (have not been on the project in the last six-months) will receive a site-specific orientation only.

PROCEDURE

All employees shall review the corporate safety policies in conjunction with the New Hire orientation program.

Craft Workers

On the first day of work, all new craft workers will be given a New Hire safety orientation and complete a Drug & Alcohol test. Orientations will include an orientation presentation, a quiz, and a brief overview of the minimum safety requirements for all employees. New employees will be required to sign and acknowledge understanding of Tarlton's minimum safety requirements.

All new employees will comply with Tarlton Corporation's Drug & Alcohol Policy.

In addition, all supervisory personnel will closely monitor all new project employees to ensure they are adequately familiar with proper work techniques and associated safety requirements. These items will be discussed during the mandatory Site-Specific Orientation Checklist that will be conducted by the project Superintendent or another qualified person for each individual on the project site. A site-specific orientation video may also be used. The supervisory staff must correct any deficiencies noted at once.

New Foreman and Superintendents will be given a New Foreman/Superintendent Orientation.

OSHA REFERENCE

NA

RELATED SECTIONS

Drug and Alcohol Policy (Section 20)

APPLICABLE FORMS (APPENDIX B)

Site Specific Orientation Checklist

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PURPOSE & APPLICATION

All projects must meet these minimum safety requirements to provide a safe work environment for our employees.

The Minimum Safety Requirements listing found in Appendix B serves as a guide for providing a safe work environment but is not all inclusive as each project has its own site-specific requirements based on the hazards and each hazard carries its own detailed requirements.

PROCEDURE

Every new Tarlton employee will read Tarlton's Minimum Safety Requirements and acknowledge understanding with his/her signature.

OSHA REFERENCE

NA

RELATED SECTIONS

NA

APPLICABLE FORMS (APPENDIX B)

Minimum Safety Requirements

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PURPOSE & APPLICATION

All projects must meet these minimum safety requirements to provide a safe work environment for our employees.

The project team is responsible for providing and maintaining a safe project site and must meet all applicable requirements of the Tarlton Corporation Safety Manual, Federal Regulations, Owner Requirements, or requirements of the Corporate Safety Team, an Officer of the company, or Tarlton Corporation's insurance representative(s).

PROCEDURE

1. Each project is to have first aid materials and supplies, which are sufficient to handle emergencies. There will be at least one first aid certified person on each project at all times.
2. All incidents must be reported immediately to the Superintendent no matter how minor.
3. Incident reports are to be completed by the Superintendent, including all incidents or injuries. The Corporate Safety Director is to be contacted immediately on all incidents.
4. Tool Box Talks (TBTs) will be conducted each week on all Tarlton Corporation projects. Jobsite TBTs will be held on all jobsites.
5. The Superintendent will make a daily safety and fire inspection of the project. Hazards noted will be corrected as soon as possible.
6. A sufficient supply of fire extinguishers or fire suppression equipment will be available on the project and the location clearly marked and made known to all employees. Fire extinguishers will be inspected monthly by the project team.
7. Every attempt will be made to engineer out all possible fall hazards regardless of height. Where this cannot be accomplished, guardrails and barriers will be used as required. All floor and wall openings will be protected. Any unprotected fall hazard above 6' will have appropriate fall protection, i.e., harness and lanyard.
8. Housekeeping must always be maintained at an exceptional level to allow for a safe and effective work environment. Materials will be stored in an orderly fashion. Work areas will be kept as clean as possible. Traffic pathways will be available through all areas. Hazard free landing areas at tops and bottoms of ladders and stairways will be maintained.
9. Flagmen or other traffic control devices will be used to provide worker protection and to minimize risk at public access areas. Coordinate use of hard physical barricades to protect workers from public vehicle access.
10. Excavation work will always be conducted in a safe manner. Any excavation deeper than 4' will require a means of safe access and excavations over 5' will require a determination for proper protection per OSHA standards.
11. Compressed gas cylinders will have protection caps in place and valves shut off except when in use. Cylinders will be stored and transported in an upright position and will be secured at all times. Oxygen, acetylene, and liquid propane must be stored separately (20' minimum) and per storage requirements.
12. All temporary 15 and 20 - amp outlets on single phase, 120-volt circuits for construction sites must be protected by a ground-fault circuit interrupter (GFCIs) and/or assured equipment
    Grounding Conductor Program where required by client.
13. Only approved safety containers and portable tanks will be used for storage and handling of flammable and combustible liquids. Plastic gas containers will not be allowed. Only authorized

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personnel will transport gasoline. All portable containers will be marked indicating the contents of the container. Outside storage tanks will be located at a safe distance from all buildings, and a dike or other effective method of protection will be provided for possible spills. The area around the tank will be kept free of combustible material and will have NO SMOKING signs posted. Appropriate size and type fire extinguishers will be located nearby. Properly constructed storage areas shall be located 50' from combustible materials and shall be properly identified and protected.

14. Inspect all construction vehicles and equipment daily before use. Bi-directional equipment shall be equipped with a backup signal alarm when required.
15. Scaffolding will be erected per the Scaffolding section of this manual, to include full decking and use of appropriate guardrails when required. Scaffolds shall be inspected by competent person prior to use and tagged as required.
16. Special care must be taken to prevent injury to the public or damage to public property. Warning signs, lights, barricades, etc., will be erected and maintained where necessary.
17. Project Inspections: Each week a member of the project team shall conduct a Jobsite Safety Audit report (JSAR) on all projects, in accordance with required amounts. This form will highlight the good points and areas of concern for safety on each project.
18. A Pre-Task Safety Plan (PTSP) must be completed, prior to beginning work, by all crews on the project site. All workers on the jobsite must have participated in a PTSP before they begin work.
19. The Tarlton Stretch and Flex program must be conducted and all workers on site must participate in the program prior to work starting each shift.

OSHA REFERENCE

The minimum project requirements are compiled from many subparts of 29 CFR 1926, however, the contractor requirements to comply with OSHA regulations are referenced in Sub part C 1926.20(a) stating that "…no contractor or subcontractor…shall require any [person] employed in the performance of the contract to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health or safety."

RELATED SECTIONS

NA

APPLICABLE FORMS (APPENDIX B)

Tool Box Talk (TBT)
Jobsite Safety Audit Report (JSAR)
Incident Forms
Mobile Equipment Inspection

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PURPOSE & APPLICATION

In order to ensure a safe workplace for our employees, it is necessary to establish a company-wide disciplinary policy for enforcement of safety rules.

Although not the preferred method, the intent of the discipline policy is to have a positive impact in improving safety on all projects and limiting liability to all other employees by setting a clear, consistent policy. It is also Tarlton Corporation's policy to dispute unemployment benefit claims filed by workers dismissed for safety violations.

The Corporate Safety Director, Safety Team Members, Superintendents, Workforce Manager, Project Teams and any company official will utilize the Disciplinary Action Policy as necessary to enforce compliance with the Tarlton Safety Program and applicable OSHA Regulations.

In any case, where failure to enforce Tarlton Corporation's safety rules has placed employees in imminent danger, the employee and/or supervisor may be subject to disciplinary action immediately.

All Tarlton employees, *as a condition of employment,* are required to comply with all safety rules / safe working procedures and applicable OSHA Regulations.

PROCEDURE

Documentation of safety violations will be made via Safety Audits, Daily Reports, Email, and/or the Safety Violation Form. All reports of safety violations will become part of the employee's personnel file.

Tarlton Corporation has a ZERO tolerance policy for violence and/or threats of violence by any site employees (Tarlton or subcontractors). The class of Disciplinary Action will be determined by the severity of the occurrence.

CLASSES OF DISCIPLINARY ACTION:
The Disciplinary Action Policy is not necessarily a step-by-step process!

Class #1 – Minimum Verbal Warning and/or Written Notification – Example of Class #1 violation: Failure to utilize proper personal protective equipment, the *exposure potential may be relatively minor* and the employee has not received a previous warning for the same or similar violation.

Class #2 – Written Notification and Minimum 1 Day Off Without Pay – Example of Class #2 violation: Employee fails to follow established safety guidelines; the *exposure potential is moderate to high* and/or this is a first offense.

Class #3 – Written Notification and Minimum 3 Days Off Without Pay – Example of Class #3 violation: Employee fails to follow established safety guidelines; the *exposure potential is high* and/or this is a repeat offense.

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Class #4 – Written Notification and Removed from Jobsite – Example of Class #4 violation: A) Employee has repeatedly failed to follow proper safe work procedures and/or blatantly disregards safety measures even after being warned. B) Hazard potential is severe and could result in major injury and/or death. C) Employee is a *Foreman* who has been properly trained and fails to follow established safety rules/guidelines. Setting a poor example will not be tolerated! [Terminated employees may be considered for re-hire after one year.]

All subcontractors working for Tarlton Corporation, *as a condition of contract*, agree to comply with all Tarlton Safety, Health, and Environmental Program requirements and applicable OSHA Regulations and as such will also be subject to actions under the Disciplinary Action Policy (additional information regarding subcontractor disciplinary action is contained in Section 10).

The Corporate Safety Team, Project Managers, Project Directors, Workforce Manager, Project Team and any company official, at their discretion, may use *any* of the previously mentioned classes of disciplinary action to ensure compliance with the Tarlton Safety Program and applicable OSHA Regulations. It is the responsibility of the Project Teams, the Superintendents, and the Foremen to observe and enforce the safety compliance and work rules compliance of the employees each supervises.

In the event of a safety or work rule violation, the supervisor shall determine the class of disciplinary action to be taken depending on the severity of the infraction and meet with and review the violation and expectations for corrective actions with the employee involved.

The Owner's jobsite safety procedures may differ from Tarlton's safety procedures; in such a case, whichever procedure is the most stringent is the policy the employee should follow. Prior to beginning a new project, each employee shall review Tarlton's safety orientation and the jobsite specific safety orientation to see what differences may exist. If an employee has questions about a safety issue, they should ask their supervisor for clarification.

Employees found in violation of safety rules or company policies and procedures may be subject to disciplinary action procedures, up to and including termination, depending on the perceived severity of the violation by his/her supervisors.

CRAFTWORKER MINIMUM SAFETY REQUIREMENTS

Each employee "shall comply with all Occupational Safety and Health Association standards and all rules, regulations and orders issued under the Act." Employees shall by signature acknowledge they understand and will adhere to the following items as Tarlton's Minimum Safety Requirements:

1. I have the authority and duty to "STOP WORK" due to an unsafe act or condition until that act or condition is resolved.
2. Every Tarlton Corporation jobsite requires 100% hard hats, safety glasses, hi-vis outerwear, gloves, and sturdy work boots for all employees and visitors at all times. Additional PPE requirements may be outlined in a site-specific safety plan.
3. I must report any incident, accident, or near miss to the Superintendent immediately, no matter how minor.

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4. If I am working at an elevation above 6', I will ensure there are proper handrails or I must tie-off to an approved connection point, designed to prevent falling more than 6' or contacting a lower level or obstruction. **6' Rule – Fall Protection**
5. If I remove a hand rail, guard rail, or hole cover, I am responsible for replacing it immediately upon completion of my task; there is no trade jurisdiction for replacing safety items.
6. I will ensure any ladder I am using will extend at least 3' above the top platform, will be placed on stable footing, will be tied off at top and bottom, will have non-skid shoes, and will be inspected prior to each use.
7. I will not use stepladders on the top two rungs or use them in a folded position, unless specifically designed to do so.
8. I will inspect each tool or piece of equipment prior to use. I will identify and report any defects, remove the tool from service, and return it to the TEAM Facility for repair.
9. I will use a ground-fault circuit interrupter (GFCI) on all required construction power.
10. I will ensure any equipment or power source is locked and tagged out prior to working on or near it. I will never remove a lock or tag of another employee or start up on an operation with a tag on it.
11. I will never walk or work under a suspended load and will ensure a competent person has inspected the rigging of any of my materials. I will not perform any rigging or signaling to an operator unless I am a certified rigger or signal person.
12. I will keep my work area as clean as possible at all times.
13. I will not enter any excavation deeper than 5' without proper benching, sloping, or engineered shoring per OSHA standards.
14. I understand the possibility of exposure to hazardous materials exists. I have a right to know what the substances are, how they might affect me, and what the steps are to be taken to protect myself. I understand this information is on the Safety Data Sheets (SDS) located at the project office or other designated area.
15. I will use proper lifting techniques to include keeping my feet shoulder-width apart, getting a firm grip, lifting with the legs and not the back, avoiding twisting the torso, and always getting help if the object is heavy or awkward.
16. Prior to entering a confined space, I must be trained, have proper PPE, air monitoring and retrieval equipment, and must use a confined space entry permit.
17. If I encounter or suspect any material resembling asbestos or lead, I will cease work in the area until the material is identified. If the material is tested and confirmed to be hazardous, a qualified independent contractor will perform abatement.
18. **I will request a site-specific orientation from the Project Superintendent before starting work on any new site.**
19. I understand any Tarlton Corporation employee found to be under the influence of or actively using alcohol or other controlled substances will be ground for immediate dismissal.
20. I understand offensive language, apparel, fighting, or possession of any weapon may be grounds for immediate dismissal.

WORK RULES

1. Report to work fit for duty. Employees who are fatigued, ill, wounded, or under the influence of drugs or alcohol (prescribed or not prescribed by a medical professional) which may interfere with job performance are not fit for duty.

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2. Attend required weekly safety meetings. Safety meeting dates, topics, and attendance shall be documented, and the records maintained. If you have questions about safety, ask.
3. Perform assigned tasks and duties safely and competently.
4. Report any unsafe condition immediately to the supervisor or site Foreman.
5. Use and care for Tarlton's tools and property in a responsible and safe manner.
6. Be alert and observe safety signs, notices, barricades, and warnings posted on the job site.
7. Should any question arise concerning the safety of a particular procedure, task, tool, or operation, contact a supervisor to review the question to avert a possible incident.
8. Report for work on time and as scheduled. Tardiness, absenteeism, and early quits are not acceptable and may lead to disciplinary action or termination.
9. Use designated areas on the jobsite for breaks, parking, smoking, restrooms, and working.
10. Horseplay and gambling on the job are prohibited.
11. Harassment of any type is prohibited; this includes sexual harassment in word or gesture.
12. Unauthorized use of company vehicles is prohibited.
13. Compliance with safety regulations and procedures is expected. Non-compliance with safety regulations may lead to disciplinary action or termination.
14. Refusal or failure to perform work assigned or to comply with supervisory direction (insubordination) shall not be tolerated and will be grounds for dismissal.
15. Firearms or any other weapons are not permitted on Tarlton jobsites.
16. Participate in a daily Pre-Task Safety Plan (PTSP).
17. Participate in the Daily Stretch and Flex program.

OSHA REFERENCE

OSHA does not specifically reference disciplinary policies but does state in Subpart C 1926.20(b) *Accident prevention responsibilities.* "It shall be the responsibility of the employer to initiate and maintain such programs as may be necessary to comply with this part."

RELATED SECTIONS

Drug and Alcohol Policy (Section 20)
Company Vehicle & Defensive Driving Policy (Section 43)

APPLICABLE FORMS (APPENDIX B)

Tarlton Employee Safety Violation
Confined Space Permit

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PURPOSE & APPLICATION

As the prime contractor, Tarlton Corporation is responsible for ensuring that subcontractors are compliant with company policy, Owner requirements, and federal regulations. All project subcontractors are contractually required to comply with all OSHA and Owner requirements as well as the Tarlton Corporation safety program.

Requiring compliance with these policies and standards reduces risks to our subcontractor employees, our individual employees, our projects, and our clients.

Subcontractor compliance to our safety program is very important to Tarlton Corporation. It is a standard part of our contract and will be enforced on the project. The contract reads as follows:

"Tarlton Corporation will issue a Subcontractor Directive to the Subcontractor for repeated violations of Safety requirements and will require the Subcontractor to respond promptly to the Contractor's Directive. Failure of the Subcontractor to correct the violation will cause Tarlton Corporation to take whatever steps are necessary to correct the violation in order to provide a safe worksite for everyone. Any associated costs incurred by Tarlton Corporation due to a Subcontractor's violation will be the responsibility of the Subcontractor. Particular attention is called to the requirements of wearing hard hats and safety glasses by all personnel at all times on all jobsites; maintenance of good housekeeping conditions in all of its work areas; proper construction of all scaffolds, scaffold platforms, and job built ladders; barricading all excavations and/or floor openings resulting from Subcontractor's work; replacement of all removals required to permit work access for/by subcontractor forces; and, taking due care to prevent fires from burning, welding or any other of its operations including the providing of adequate fire-fighting equipment in its work area."

In the event that a Subcontractor Directive is issued to address non-compliance with an OSHA, Tarlton Corporation, or Owner's safety standards, and the subcontractor fails to immediately correct the non-compliance issue, a deductive change order of $250.00 may be issued as a penalty. If an additional violation of the same safety standard occurs, a $500.00 deductive change order may be issued for the repeat violation. The funds acquired from this policy will be donated to a charity, not used by Tarlton Corporation.

PROCEDURE

Any failure of a subcontractor employee to follow the established requirements will result in use of the Tarlton Disciplinary Policy. Documentation of safety violations will be made via Safety Audits, Daily Reports, Email, and the Safety Violation Form.

Tarlton Corporation has a ZERO tolerance policy for violence and/or threats of violence by any site employee (Tarlton or subcontractor). The class of disciplinary action will be determined by the severity of the occurrence.

All subcontractors working for Tarlton Corporation, *as a condition of contract*, agree to comply with all Tarlton Safety, Health, and Environmental Program requirements and applicable OSHA Regulations and as such will also be subject to actions under the Disciplinary Action Policy. Violations requiring a Class #2 disciplinary action toward employees of Tarlton subcontractors will result in formal written notification provided to subcontractor management and request for verification of recommended correction action. Violations requiring a Class #3 or #4 disciplinary action will result in formal written notification to

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subcontractor management and removal of the individual from the Tarlton jobsite, and/or issuance of Subcontractor Directive.

The Corporate Safety Team, Project Managers, Project Directors, Project Teams, and company officials, at their discretion, may use *any* of the previously mentioned classes of disciplinary action to ensure compliance with the Tarlton Safety Program and applicable OSHA Regulations.

OSHA REFERENCE

Subcontractor requirements to comply with OSHA regulations are referenced in Subpart B 1926.16 *Rules of Construction* and particularly 1926.16(c) stating "To the extent that a subcontractor of any tier agrees to perform any part of the contract, he also assumes responsibility for complying with the standards…with respect to…his portion of the work…"

RELATED SECTIONS

Drug and Alcohol Policy (Section 20)

APPLICABLE FORMS (APPENDIX B)

Subcontractor Employee Safety Violation
Subcontractor Directive

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PURPOSE & APPLICATION

To ensure safety is a properly planned activity, every project must have a Safety Start-up Meeting. The project safety start-up meetings will be conducted within a month of any work beginning on the project. More than one safety start-up meeting may be necessary, if scope changes, if the project start date pushes past a month of the start-up meeting, if smaller scopes need to be discussed separately, ect..

The project safety start-up meeting will establish clear policies and procedures for the project in conjunction with the Tarlton Corporation Safety Manual. The start-up meeting will also help determine specific project needs as well as determine the need for a site-specific safety plan.

PROCEDURE

The Safety Assistant, Project Manager, or Engineer requests a project safety start-up meeting.

The safety start-up meeting will accomplish the following:

- Discuss the safety performance agenda evaluation criteria.
- Establish incident reporting and investigation criteria.
- Designate a competent person for specified project tasks.
- Ensure posting compliance with Tarlton Corporation safety board.
- Determine time for weekly TBT/JSAR meetings.
- Review the project scope and elements for inclusion in the SSSP and site employee orientation checklist.
- Develop site-specific safety plan as necessary.

Subcontractor Startup Meeting

A subcontractor startup meeting must be held with all subcontractors prior to the subcontractor mobilizing to the jobsite. Items to be included in the subcontractor Startup meeting include:

- Review of jobsite logistics
- Review of workforce reporting
- Review Procore requirements
- Review invoicing requirements
- Review safety requirements/expectations

OSHA REFERENCE

NA

RELATED SECTIONS

NA

APPLICABLE FORMS (APPENDIX B)

Project Difficulty Rating

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PURPOSE & APPLICATION

When required by the complexity of the project or by Owner requirements, The Project Team, in conjunction with the Safety Team as needed, will develop a site-specific safety plan.

The plan will consist of any known information important to the safety and health of personnel working at the project site and the distribution of that information to prevent situations which could lead to injury or accident.

The site-specific safety plan must meet or exceed all Corporate, Owner, and OSHA safety criteria. It will be used as the document for managing safety on the project.

PROCEDURE

The safety start-up meeting will serve as the basis for developing the site-specific safety plan.

Development of the site-specific safety plan will be a cooperative effort between the Project Team and the Corporate Safety Team, as needed. Responsibility for implementation of the plan will be assumed by the Project Team. Conducting training or inspections will also be the obligation of site personnel. Specific tasks will be listed and copies distributed to the Owner when project specifics are known. The Project Management team will designate project-specific safety duties.

On-Site Emergency Response

In the event that medical assistance is not reasonably accessible to the jobsite, a first responder or an employee certified in CPR/First Aid/AED shall be assigned to the jobsite and made available to assist in the event of an incident. Employees providing first aid must have a valid and documented certificate from the American Red Cross, the US Bureau of Mines, or an equivalent agency.

The site-specific safety plan shall take into account the possibility of employees being exposed to corrosive materials. If such materials are used, suitable eye-flushing and washing facilities for quick drenching of the skin/body or eyes shall be provided.

The plan will address the following:

Changes:

The site-specific safety plan is a working document and may be changed at any time.

Changes need to be communicated to the Corporate Safety Department and/or Project Team. The plan shall be updated by the Project Team.

Signage:

Establish posting requirements and location of safety board.

Establish marketing or Owner-specific signage requirements.

Reports:

Identify and address reporting requirements setup in the contract between Tarlton Corporation and the Owner.

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Permits:
Address site/Owner-specific permit requirements and processes.

Hazard Communication Program:
The plan will designate the on-site representative responsible for coordination of information between subcontractors, Tarlton Corporation and the Owner.
This person will request and compile Hazcom information and ensure employees are trained per Tarlton Corporation requirements.

Site Inspections:
Establish an inspection schedule and responsibilities and identify special inspection needs.
Reference the PROJECT INSPECTIONS section of this manual for the inspection process and checklist.

PPE:
Address any requirements over and above Tarlton Corporation's minimum safety requirements (Sections 7 & 8).

Training:
Identify special training requirements for site, job tasks, or competent person(s).
Toolbox Talks may be used to meet site-specific training needs and can be developed as part of the training plan.

Project Medical Assistance:
Identify First Aid Responder(s).
Identify local medical care facility.
Identify emergency medical care facility.
Identify emergency phone numbers and procedures.

Emergency Evacuation and Crisis Management
Identify on-site and off-site evacuation points.
Develop a communication process for crisis management in accordance with the Tarlton Corporation Crisis Plan.

Subcontractors:
Identify specific safety requirements relating to subcontractor scopes of work.
Identify the need for subcontractor safety plans as required.
Subcontractors must provide a Pre-Task Safety Plan (PTSP)
Subcontractors must submit a Site-Specific Safety Plan for their scope of work.

Site Specific Orientations
Identify orientation procedures (who, what, when, where).
Identify site-specific issues.

Subcontractors are required to submit a site-specific safety plan before their portion of work begins.

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OSHA REFERENCE

Any subpart of 29 CFR 1926 may be referenced for the site-specific safety plan.

RELATED SECTIONS

Crisis Communication Plan (Section 15)
Emergency Action Plan (Section 41)
Project Inspections (Sections 17)

APPLICABLE FORMS (APPENDIX B)

Site-Specific Safety Plan (sample available in Forms & Shells)

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PURPOSE & APPLICATION

High visibility signage is a way to promote a safety culture while also meeting federal posting requirements.

Keeping employees informed of hazards associated with their work is the responsibility of the employer. Federal law requires that certain signage and employment documents are posted in conspicuous places and/or are readily available for all employees to view.

Safety signage will be determined by the Corporate Safety Team or the site-specific safety plan. Tarlton Corporation has developed a standard safety banner to be posted on all project sites. This safety banner will meet all federal and state posting requirements and may need to be modified to meet Owner specific criteria.

PROCEDURE

The following items will be included on the project safety banner or posted in the project trailer:
Medical Facility Location(s) and Contact information
Emergency Procedure document
Project Emergency Phone Numbers list
Hazcom Chemical poster
Crane & Rigging Hand Signal Chart
State & Federal Labor Law posters
Notice regarding Drug & Alcohol testing
Workers' Compensation poster
Minimum PPE Requirements sign
Tarlton Corporation Safety, Health & Environmental Manual
SDS Chemical Inventory
HR Policies and Procedures
Safety Documentation
Jobsite Safety Audit Report (JSAR)
Pre-Task Safety Plan (PTSP)
Tool Box Talk report forms

The following items are required but may not be part of the safety banner:
First Aid Kit
Safety Glass Cleaning Station
Visitor hard hats and safety glasses

OSHA REFERENCE

The project safety board is developed in accordance with Subparts B, C, and D of 29 CFR 19.26.

RELATED SECTIONS

NA

APPLICABLE FORMS (APPENDIX B)

NA

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PURPOSE & APPLICATION

Tarlton Corporation is a member in good standing of the St. Louis Construction Industry Partnership Program, Labor – Management – OSHA. This entitles Tarlton Corporation to certain incentives to which only a handful of contractors are entitled.

The Occupational Safety and Health Act of 1970, as amended, is designed to give strict guidelines to employers for providing safety protection for employees. The Act also provides the employer with certain rights.

Whenever possible, an officer of the company or a the Corporate Safety Director will communicate with the OSHA inspector during a project visit.

PROCEDURE

When an OSHA inspector arrives at your project:

1. Ask them to please go to the project office and wait while the Corporate Safety Director and/or an officer of the company are notified.
2. Contact the Corporate Safety Director and/or an officer of the company immediately.
3. The OSHA inspector will wait a reasonable time (approximately one hour) for a representative to arrive (per the OSHA operations manual).
4. Once the Corporate Safety Director or officer of the company arrives, the opening conference can begin.
5. If the Corporate Safety Director or officer of the company cannot be located in time, the Superintendent will notify the Project Manager.
6. Notes should be taken during the investigation of any request and comments made by the compliance officer. Take photos of everything the compliance officer takes photos of. Take photos of multiple angles if possible.
7. Take notes of the closing conference. This is where the OSHA compliance officer will review any potential citations or issues.
8. Send all notes and photos taken during the inspection to the corporate safety team.

OSHA REFERENCE

29 CFR Part 1903 – Inspections, Citations and Proposed Penalties

RELATED SECTIONS

NA

APPLICABLE FORMS (APPENDIX B)

OSHA Inspection Report

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PURPOSE & APPLICATON

Tarlton's Emergency Management & Communications Plan may be implemented in the case of a catastrophic event, death or disabling injury in any place where employees are present (jobsite or main office). Catastrophic events may include acts of God, natural disasters, toxic chemical releases, large hazardous material spills or any event involving Tarlton employees or the Project Owner that may cause media attention.

This plan is designed to care for the individuals involved and to maintain company control during an emergency at a jobsite, the main office, or other Tarlton facility. *(For non-physical emergencies, refer to the last paragraph of this plan: NON-PHYSICAL EMERGENCY MANAGEMENT)*

PROCEDURE DURING OR IMMEDIATELY FOLLOWING INCIDENT

CARE / REPORT – In the event of a physical emergency, respond in this order:

1. **Care for any person or people who require care**

2. **Secure the site**

3. **Gather employees on site at a predesignated safe location**

4. **Call the Corporate Safety Director (Crisis Team Leader is backup)**
   Ryan Wehrle: 573.619.9138 mobile / 314.633.3329 direct
   Dirk Elsperman, backup: 314.713.4923 mobile / 314.633.3345 direct

5. **Get witness statements from anyone who what happened – important for investigation ***
   *Safety Director will tell you whether the event will potentially require an OSHA investigation – see media notes below

RESPOND TO THE MEDIA – If contacted by the media, follow these instructions:

Do not say anything about what happened. Be courteous. Refer all media questions to our media contact:

Michelle Spires, Senior Marketing Manager
314.633.3381 direct / 314.309.5236 mobile

If you are put on the spot and must say something to a media representative:

- **DO NOT SAY: "No comment."**
- **DO SAY:** "My name is _____, and I work at Tarlton as a (state your title/role).
  We are currently gathering information. For details, please contact our company spokesperson. Her name is Michelle Spires, Tarlton's senior marketing manager and you can reach her directly at 314-633-3381.

Prohibit workers from speaking to the media. Instruct workers to tell the media to contact Michelle Spires.
Our goal is an accurate and fair account of what took place, which we may not yet know.

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Secure the affected area. If possible, conceal viewing of the area. The media may take this photo opportunity to create a controversy even if one does not exist.

Courteously prohibit members of the media from entering the site or secured area. Show them a safe place where they can stand or sit.

Write down names of reporters or photographers and which publication, TV or radio station they represent. Contact Michelle Spires at 314-633-3381 with this information.

Contact the Safety Director or Crisis Team Leader for direction BEFORE cleaning up the site. A Tarlton investigation must be completed first. (Safety Director or Crisis Team Leader will tell you if they anticipate OSHA getting involved.)

Communicate confidential or sensitive information by land line or cell phone only. Do not text or email any information; it can be documented and used as evidence later.

> **Note:** Immediately after an event, information can be inaccurate or incomplete. The Safety Director and/or Crisis Team Leader will determine the appropriate time and message to communicate to other employees by email or/or text.

EMERGENCY RESPONSE PROCEDURE – Wait for Instruction and Follow Our Plan

Be prepared to follow the Emergency Management Plan on the following page and to receive direction from the Crisis Team Leader.

Responsibilities are assigned in the Emergency Management & Communications Plan chart. Each task lists a **primary** and **alternate responsible person.**

For Tarlton representatives authorized to speak with employees or family members: Communicate only facts when discussing the incident. Do not speculate.

NON-PHYSICAL EMERGENCY MANAGEMENT

Non-physical situations may develop that require an immediate action and/or response from Tarlton to keep our people safe and our reputation solid. Sometimes, a non-physical situation turns into a physical emergency.

Examples include a labor strike, employee indictment, pending jury verdict, or planned public protest.

Tarlton executives, safety and communications leaders proactively prepare for potential non-physical emergencies. The company also relies on every employee to report any behavior or situation they think might turn into an emergency.

If you see or hear something, say something. Report anything suspicious to your supervisor, who will report it to the Safety Department.

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OSHA REFERENCE
See paragraph 1926.35 of sub part C in 29 CFR 1926 for emergency action plan requirements.

RELATED SECTIONS
NA

APPLICABLE FORMS (APPENDIX B)
Crisis Management Responsibility Listing
Crisis Management External Contact Listing
Major Injury Flowchart (site-specific sample)

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Tarlton Corporation Emergency Management & Communications Plan - Responsibilities

Site-specific

Crisis Team Leader	Dirk Elsperman, Exec VP/CAO	Sondra Rotty, Sr VP/COO	Mike Trettel, VP
First Available: Dirk Elsperman, Sondra Rotty, Mike Trettel	314.633.3345 work 314.713.4923 mobile	314.633.3378 work 314.220.3903 mobile	314.633.3436 work 724.882.9299 mobile

Task / Position	Primary Person Responsible			Alternate		
Personnel Accountability/ Secure the Site	Site Superintendent (PE & PM Support)		work mobile	General Foreman (PE & PM Support)		work mobile
Contact Family Members * ***Dirk, James and Victoria will determine best person to contact family members**	FOR OFFICE EMPLOYEE Dirk Elsperman Exec VP/CAO	314.633.3345 314.713.4923	work mobile	Victoria Stanley HR Director	314.633.3316 314.242.9784	work mobile
	FOR FIELD EMPLOYEE James Tillman Workforce Manager	314.633.3365 314.807.3060	work mobile	Victoria Stanley HR Director	314.633.3316 314.242.9784	work mobile
Notify Owner ***Sondra will delegate to Joe, Andrew or Mike unless she has a strong tie to the client.**	Sondra Rotty Sr VP/COO	314.633.3378 314.220.3903	work mobile	Joe Scarfino VP	314.633.3312 314.568.6141	work mobile
				Andrew Nelch Project Director	314.633.3323 314.220.0926	work mobile
				Mike Trettel VP	314.633.3436 724.882.9299	work mobile
Media Contact & Spokesperson	Michelle Spires Senior Marketing Manager	314.633.3381 314.309.5236	work mobile	Sondra Rotty Sr VP/COO	314.633.3378 314.220.3903	work mobile
Site Investigation	Ryan Wehrle Corporate Safety Director	314.633.3329 573.619.9138	work mobile	Tobe Schmidt Safety Manager	314.633.3319 913.369.5491	work mobile
Coordinate Hospital Support	Ryan Wehrle Corporate Safety Director	314.633.3329 573.619.9138	work mobile	Tobe Schmidt Safety Manager	314.633. 913.369.5491	work mobile
Coordinate Family Support/ Establish Communications for Employees/Families	Victoria Stanley HR Director	314.633.3316 314.242.9784	work mobile	Ashley Claxton HR Generalist II	314.633.3425 314.285.7808	work mobile
Notify Other Entities	Michelle Spires Senior Marketing Manager	314.633.3381 314.309.5236	work mobile	Nina Elsperman Proposal Coordinator	314.633.3428 557.214.9561	work mobile
Post-Emergency Evaluation	Ryan Wehrle Corporate Safety Director	314.633.3329 573.619.9138	work mobile	Tobe Schmidt Safety Manager	314.633.3319 913.369.5491	work mobile
Emergency Equipment Coordination	Tom Kramer TEAM Facility Manager	314.633.3353 314.437.7380	work mobile	Joe Scarfino VP	314.633.3312 314.568.6141	work mobile
Notify Switchboard	Nina Elsperman Proposal Coordinator	314.633.3300 314.633.3428 557.214.9561	switchbd work mobile	Fill-In Receptionist	314.633.3300	switchbd

PURPOSE & APPLICATION

One of the primary requirements of the Tarlton Corporation safety program is the weekly Toolbox Talk (TBT). At least once per week, each project is to conduct a TBT for all Tarlton Corporation employees. TBTs will be held on the first day of the work week at 12:30PM or as close as possible. If working 2nd or 3rd shift, TBTs will be held on the 1st day of the work week at the beginning of the shift.

Performance of these talks is a company requirement because: l) they help in identifying jobsite hazards and ways to alleviate the hazards; 2) they allow the company to meet the continuing education requirements of OSHA.

Even if the particular TBT may not be relevant to the current project activities, personnel may move to projects where that information is applicable.

Attendance is mandatory and will be recorded on the Weekly TBT Report form. A member of the project team will complete the weekly TBT form on Procore. The Corporate Safety Director is responsible to see that these talks are conducted on a consistent basis. All members of a Project Team shall participate by periodically conducting a TBT on their assigned project(s).

A 52-week schedule has been developed to address topics within the safety manual and in accordance with OSHA requirements. Although the main topics are set, there is room for job-specific customization to reflect current Corporate or project conditions. The best talk is one which deals specifically with one condition found onsite and which outlines the problem (hazard) and the specific corrective action to be taken.

Periodically the Corporate Safety Department will distribute Safety Alert on various safety topics. When the Safety Alerts are distributed, they should be used as an additional Toolbox for that week.

PROCEDURE

All Tarlton Corporation's senior management are committed to participating in the TBT meeting process.

Corporate Safety Department will publish a schedule showing meeting dates and the person responsible for conducting the meeting. Topic information will also be provided to all management personnel to facilitate their talks.

Note: For projects outside the immediate St. Louis area, this program may have to be modified.

All subcontractors should attend our meetings. If the subcontractors do not attend our meetings, they must submit copies of their weekly safety meeting minutes to the Project Team. Subcontractors are required to complete and submit one safety meeting per week.

Where possible a site-wide Toolbox Talk should be held including all subcontractors onsite. This ensures a consistent safety message throughout the jobsite. It also allows for discussion about the project. Subcontractor/employees can bring up any safety concerns and also allow the project team to discuss any pertinent activities that will be taking place on the project.

OSHA REFERENCE

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Specific training requirements are referenced in each of the subparts of 29 CFR 1926. The requirement for company training in general is referenced in subpart C paragraph 1926.21.

RELATED SECTIONS
NA

APPLICABLE FORMS (APPENDIX B)
Tool Box Talk (TBT)
Tool Box Talk Schedule (sample)

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PURPOSE & APPLICATION

Project inspections are required by federal law. Having each team member involved in the inspection process provides a well-rounded approach to identifying hazards on a weekly basis.

It is imperative that Tarlton Corporation constantly evaluate the effectiveness of the corporate safety program. The inspection process is a means to evaluate this process by benchmarking safety on projects and to help illustrate our commitment to continuous improvement.

Jobsite Safety Audit Report (JSAR) forms are available on Procore.

PROCEDURE

The evaluation process is conducted as follows:

At least one JSAR will be conducted weekly by the Superintendents, Project Team member, or TBT presenter on each Tarlton project. (Note: The Project Team will be held accountable for ensuring at least one JSAR is completed weekly).

The Superintendent will have a craftsman available to the inspector while conducting the audit.

The inspector will use the Jobsite Safety Audit Report (JSAR) form as a guide in the safety inspection process.

Any deficiency (even if immediately corrected) shall be noted.

Use the Observation section of Procore to identify hazards and/or violations found during the inspection process. Corrective actions taken during the audit can be included in the notes section of the observation.

The JSAR form will be completed on Procore for the corresponding project and hazard/violations noted in Observations.

The Project Team will use the JSAR form and observation reports to ensure corrective action has been taken and repeated concerns do not continue.

<u>JSAR Requirements:</u>

- Superintendents/General Foreman – 3/Month
- Project Engineers – 2/Month
- Project Managers – 1/Month

<u>Observation Requirements:</u>

- Superintendents/General Foreman – 8/Month
- Project Engineers – 6/Month
- Project Managers – 4/Month

Occasionally, Tarlton's insurance broker's and carrier's loss control representatives may inspect projects. The Corporate Safety Director will coordinate the inspection schedule of loss control representatives and may accompany them on these inspections. It is important to extend our best courtesies to the insurance representative(s) and provide them with access to all projects.

Weekly Tarlton Leadership Safety Audits will also be conducted on various Tarlton projects. Members of the Audit Team may consist of the Vice President of Operations, EVP/CAO, Safety Team, and other members of the Safety Committee. The Project Director will be notified approximately a day in advance that one of their projects will be audited. The advanced notice is given with the expectation that as many of the project team members as possible will attend the audit. These audits are an educational safety awareness and culture development process with a focus on correcting any deficiencies.

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OSHA REFERENCE

29 CFR 1926 Sub part C paragraph 1926.20(b)(2) states "Such programs shall provide for frequent and regular inspections of the job sites, materials, and equipment to be made by competent persons designated by the employers."

RELATED SECTIONS

NA

APPLICABLE FORMS (APPENDIX B)

Jobsite Safety Audit Report (JSAR)

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PURPOSE & APPLICATION

All incidents, regardless of their nature, shall be reported to the Safety Department as soon as reasonably possible, and investigated.

It is an integral part of any safety program that documentation takes place as soon as possible, so the cause and means of prevention can be identified to prevent a recurrence.

All incidents will be *reported immediately* to the Corporate Safety Team and investigated by a member of the Project Team regardless of its seriousness. In the event of an incident or good catch/near miss, the appropriate policy/plan shall be reviewed to determine if additional practices, procedures, or training need to be implemented to prevent similar type incidents from occurring.

PROCEDURE

Incident Management / Reporting

- Notify Superintendent / Foreman and first-aid trained personnel.
- Take the victim to the project office or bring a first-aid kit to the injured person; administer first-aid as necessary. Contact emergency medical services if the injury is life-threatening.
- Contact the Corporate Safety Director at 573-619-9138 for initial report, guidance on treatment, or to report status if emergency medical services are required.
- Treat injury if possible. If injury cannot be treated, but is not life-threatening, the project Superintendent and Corporate Safety Team members will determine what medical treatment is required.
- Follow the Corporate Crisis Plan as necessary.
- Take injured to pre-arranged medical facility or contact emergency medical services as necessary for medical treatment and post-incident drug testing. Regardless of incident, near miss, injury requiring medical treatment, post-event drug testing is required.
- Secure the incident area to ensure there is no hazard exposure present to other workers and to maintain the integrity of the scene.
- Get statements from witnesses.
- Take photos of the incident scene.
- Fill out the Tarlton Incident Investigation Report immediately.
- As necessary, or requested by the Corporate Safety Director, the Project Team will complete a Root Cause Analysis and present the incident during an Incident Review Meeting as soon as practical.

Incident Investigation

All incidents and/or accidents, no matter the severity, must be reported to the Safety Department immediately and an investigation conducted. An investigation must take place by the project team, with the assistance of a safety department team member if necessary. An incident investigation report must be completed with appropriate corrective actions identified within 24 hours, unless circumstances of the incident will not allow. Steps that must be taken during an incident investigation:

1. Secure the area to preserve accident scene.
2. Report the incident to a Safety Representative and Management
3. If possible, interview and obtain statements from injured personnel.
4. Interview and secure statements from any other witnesses
5. Take picture of the incident area.

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6. Secure any equipment/material that may have been involved in the incident.
7. Complete an incident investigation report.
8. Implement any immediate corrective actions.
9. In the event of a subcontractor incident or injury, obtain the subcontractor's incidnet investigation report within 24 hours of the event.

Near Miss - Near Miss incidents are defined as an incident that could have resulted in an injury, illness, medical treatment, and/or property damage. To be proactive in safety, near miss incidents need to be identified and addressed. In cases where there could have been a potential injury, equipment damage, property damage, or bad public relations, investigate and complete a Near Miss/Good Catch Report.

Good Catch – Good catch incidents are defined as an unsafe condition or act that was recognized, which if left unaddressed, could have resulted in an injury, property damage, or outage. This could also be a positive recognition of good work practice or behavior which helped create a safer environment. To be proactive in safety, good catch incidents need to be identified and addressed. In these cases, investigate and complete a Near Miss/Good Catch Report.

Reportable incidents to OSHA: Certain events must be reported to OSHA in a prescribed time frame.

1. Fatality: Within 8 hours
2. Hospitalization: Within 24 hours
3. Amputation: Within 24 hours
4. Loss of Eye: Within 24 hours

Incidents must also be reported to the Owner/client as soon as possible or in a timely manner (within 24 hours of the incident). Written reports must be turned in to the Corporate Safety Director within 24 hours to ensure they are filed on a timely basis with the appropriate insurance carrier and the National Council for Compensation Insurance (NCCI).

Copies of all completed Incident Reports are routed to upper management for review and comment.

Incident Review Meeting - After the initial incident investigation has been complete, an Incident Review Meeting may be requested to further review and analyze the incident. Any incident may be subject to an incident review meeting. The Corporate Safety Director and EVP/CAO will review all incidents and determine which incidents require an Incident review meeting. The Project Team will be required to complete an incident Root Cause Analysis (RCA) and present the incident and all findings to the incident review committee for further consideration and corrective measures. Below types of incidents will require an incident review meeting.

1. Recordable injury
2. Any incident that could have caused a serious injury and/or fatality.
3. Hand/finger injuries
4. Any incident that involves underground utility damage.
5. Any subcontractor injuries that involve the above.
6. Any other incident/injuries that is deemed to need a more in-depth review.

Equipment

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Proper equipment will be available to assist in conducting an investigation. Equipment may include some or all of the following items: writing equipment such as pens/paper, measurement equipment such as tape measures and rulers, cameras, small tools, audio recorder, PPE, flags, equipment manuals, etc.

Initial Identification/Assessment of Evidence
Initial identification of evidence immediately following the incident could include a list of people, equipment, and materials involved and a record of environmental factors such as weather, illumination, temperature, noise, ventilation, etc.

Collection/Preservation and Security of Evidence
Evidence such as people, positions of equipment, parts, and papers must be preserved, secured, and collected through notes, photographs, witness statements, flagging, and impoundment of documents and equipment. All evidence shall be dated.

TRAINING
Tarlton shall train personnel in their responsibilities and incident investigation techniques. Personnel must be trained in their roles and responsibilities for incident response and incident investigation techniques. Training requirements relative to incident investigation and reporting are described below:

- Training frequency will be based on the specific area of responsibility but shall not exceed once every three years.
- Training requirements relative to incident investigation and reporting shall include:
  - Awareness
  - First Responder Responsibilities
  - The Initial Investigation at the Accident Scene
  - Collecting Data
  - Analyzing Data
  - Developing Conclusions and Judgments of Need
  - Reporting the Results
  - Managing the Accident Investigation

OSHA REFERENCE
29 CFR Part 1904

RELATED SECTIONS
Company Vehicle and Defensive Driving (Section 43)

APPLICABLE FORMS (APPENDIX B)
Incident Investigation Report – Standard Form
Incident/Accident Investigation Short Form
Near Miss Reporting Form
Good Catch Reporting Form
Root Cause Incident Report

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PURPOSE & APPLICATION

OSHA requirements state the employer must provide and enforce use of the correct PPE related to the task at hand.

Due to the inherent hazards of the construction industry and Tarlton Corporation's commitment to providing the safest work environment possible, Tarlton has implemented a 100% PPE policy regarding hard hats, safety glasses, hi-vis outerwear, gloves (cut level 4), and sturdy work boots.

The preferred method of controlling hazards is to eliminate them through engineering or administrative controls. When hazards cannot be eliminated, PPE must be used to minimize risk.

PROCEDURE

Hard hats, ANSI-approved safety glasses with side shields/side protection, high visibility outerwear, gloves (at least rated at cut level 4 minimum) and sturdy work boots are the minimum requirements for ALL Tarlton Corporation project sites.
Type II hard hats are required to be worn by all Tarlton employees with chin strap connected at all times.

The project site is defined as: *Any area within the construction limits of the project.*
To further clarify this matter, the minimum PPE requirements are not required while in the project trailer or while in a completely enclosed company or personal vehicle.
The above items are the minimum requirements and will be enforced consistently in accordance with the Tarlton Corporation Disciplinary Policy.

Additional Requirements

While hard hats, safety glasses, hi-vis outerwear, gloves, and sturdy work boots are the **minimum** requirements, they do not relieve the responsibility of the Project Team or the individual to have the proper PPE for the specific task at hand. This PPE can include, but not be limited to:

- Face shields and/or goggles
- Hearing protection (plugs and/or muffs)
- Respirators or SCBAs
- Gloves
- Reflective vests
- Tyvec suits
- Rain suits
- Knee pads
- Metatarsal guards
- Fall protection (harnesses & lanyards)

****Additional PPE required for work being performed will be identified on the daily PTSP****

Employees shall review the daily PTSP (Pre-Task Safety Plan) identifying the hazards for the project/tasks prior to beginning work. Project crew members sign their acknowledgment and awareness of the required PPE on the PTSP.

Training

All employees using PPE shall receive training in PPE during the New Hire Orientation. In addition, when the job, circumstances, or tasks change, or if a new type of PPE is issued, retraining shall be provided. If a

deficiency or improper use by the employee is noted by the employee's supervisor(s), the employee shall receive retraining. Training shall be documented and cover the following:

- What items constitute PPE for this type of work or jobsite?
- What PPE is necessary for a given task or tasks to be accomplished by the employee or on the particular job?
- What is the minimum acceptable PPE?
- How to properly don, doff, adjust & wear PPE. PPE must be fitted to the employee correctly to be effective.
- The limitations of PPE.
- Proper care, maintenance, useful life and disposal of PPE to be used regularly.
- Awareness that there exists specialized PPE, such as respirators. If specialized PPE is required, further training shall be provided.

PPE Requirements

PPE shall be maintained in sanitary condition and in good repair. Damaged or defective PPE shall not be used and shall be replaced at no cost to the employee. The employee is required to inspect his/her PPE prior to use to ensure that PPE is not damaged.

Reimbursements

Tarlton authorizes the reimbursement of 50% (up to $75) for your purchase of safety-toed work boots. Please keep in mind that your receipt must show that the boots you purchase are safety-toed work boots. Tarlton authorizes the reimbursement of 50% (up to $100) for prescription safety glasses. There is a once per year allowance for these reimbursements. Submit your receipt (or a copy of it) to the Safety Department to process the reimbursement.

Respiratory Protection

For duties that require respiratory protection because the hazard cannot be engineered out, employees will be required to undergo a medical evaluation and be fit tested and trained on the specific equipment in use. Employees are required to be fit-tested annually, as well as undergo a review to determine if a respiratory medical re-evaluation is needed due to changes in health, stature, etc.

Corporate Office and TEAM Facility

The Corporate Office and TEAM Facility are considered project support facilities consisting of office, maintenance, storage, and common areas. PPE requirements of the office will be task/hazard specific.
PPE Requirements in the TEAM facility is exempt (unless a specific hazard is present) while in green designated "Safe Zones." At a minimum TEAM Facility employees must wear safety glasses, high visibility outerwear, gloves and sturdy work boots and always have hard hats readily available while working outside of "Safe Zones."

OSHA REFERENCE

Personal Protective Equipment is referenced by the entire Subpart E of 29 CFR Part 1926.

APPLICABLE FORMS (APPENDIX B)

Pre-Task Safety Plan (PTSP)
Respirator Medical Evaluation (Fit Test)

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PURPOSE & APPLICATION

The purpose of this program is to maintain a safe, productive, and drug-free work environment for all employees of Tarlton Corporation. This policy outlines the procedures for implementing a combination in-house and third-party drug testing program to identify and deter substance abuse among employees.

Construction work has constantly changing conditions which pose inherent risks to our employees. Employees under the influence of drugs or alcohol pose an even greater risk to themselves, the Project Team members and the general public. Ensuring a drug and alcohol-free workplace is imperative to providing a safe working environment for employees and the public.

Policy Statement:
Tarlton Corporation is committed to preventing workplace substance abuse. All employees are required to adhere to the company's drug-free and alcohol-free policy, which includes participation in instant saliva drug testing and/or third-party lab based testing as part of our safety protocols.

Drug and Alcohol Testing Scope:

- All applicants for employment and employees of Tarlton Corporation, as a condition of employment or continued employment, who haven't taken a drug test within 120 days of employment, will be required to submit to and pass a drug and/or alcohol screening test.
- Employees of Tarlton Corporation will be randomly tested.
- Employees will be subject to a post-accident test based on their involvement in an incident.
- Tests for reasonable cause may be required in specific situations. In the event that a supervisor suspects that an employee is working under the influence of a substance, a Reasonable Suspicion Document will be filled out by two witnesses and provided to the testing agency. The testing agency representative will report to the jobsite to conduct testing of the suspected substance. TESTING FOR SUSPICION WILL ONLY BE CONDUCTED WITH THE INVOLVEMENT OF THE *TARLTON SAFETY MANAGER/DIRECTOR* AND/OR *TARLTON HUMAN RESOURCES DIRECTOR (OR OTHER DESIGNATED PROGRAM COMMUNICATOR)*! All supervisory and management personnel will receive "Reasonable Suspicion" training.
- Approximately 5% of company employees will be selected, randomly, for tests on a monthly basis.
- Approximately 60% of employees will be tested per year.

Testing Types:

1. **Pre-Employment Testing**: All prospective employees must undergo drug and alcohol testing before employment.
2. **Random Testing**: Approximately 60 percent of employees will be randomly selected for testing throughout the year . Random selections will be conducted monthly.
3. **Post-Incident Testing**: Employees involved in workplace accidents or incidents may be required to submit to testing, depending on their involvement and the circumstances surrounding the incident.
4. **Reasonable Suspicion Testing**: If a supervisor observes behavior that indicates potential substance use, the employee may be required to undergo testing.

The initial Pre-employment and random testing will be conducted by a Tarlton Employee, if reasonable available, if a confirmation test is needed a third party will conduct the confirmation test.

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A third party will conduct all post-incident and reasonable suspicion drug and alcohol testing.

PROCEDURE

Self-Referral

- If an employee feels that he or she has an alcohol or drug problem, it is important that the condition be diagnosed, and proper treatment followed.
- Tarlton Corporation maintains an Employee Assistance Program (EAP), which can provide confidential assistance and direction to an employee with such problems.
- Craft workers also have access to their own MAP through each respective local union.
- For detailed information about the EAP/MAP service, contact the Human Resources Director.

Failed Test

- If an employee should fail an alcohol or drug screening, the Human Resource Department (or designated Drug Communicator) will direct the employee to the appropriate EAP, through Tarlton's Human Resource Department.
- It is the employee's responsibility to contact the EAP and to follow an appropriate treatment program.
- All information passed between the employee and representative of the EAP is completely confidential.
- The Human Resource Director has the right to determine if the employee has contacted the EAP and maintained appointments and is successfully progressing toward "reinstatement."
- As part of the "reinstatement process" the employee will be required to pass a drug and/or alcohol screening; completion of this process makes the employee eligible for re-employment. Completion of the reinstatement process only makes an employee eligible for re-employment; due to production requirements, positions will be filled as necessary and could result in a position no longer being available.

Test Refusal:

Refusing to take a pre-employment, random, post-incident, reasonable suspicion, or confirmation drug and alcohol test automatically classifies as a positive test.

Disciplinary Measures

Pre-employment:

Full-Time Positions:

- Applicants who refuse a drug and/or alcohol screening and/or confirmation test will not be considered for employment.
- Applicants who fail a drug and/or alcohol screening will not be considered for the position at the time of the failed screening. The Applicants will be ineligible for re-application for a period of 6 months. The applicant can re-apply after the 6-month period and will be considered for the position again if a full-time position is available.

Internship or Temporary Positions:

- Applicants who refuse a drug and/or alcohol screening will not be considered for employment.
- Applicants who fail a drug and/or alcohol screening will be required to produce a negative drug test, at their cost, before they will be able to start their internship and/or temporary employment.

Craftworker/Union Member

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- Applicants who refuse a drug and/or alcohol screening will not be considered for employment.
- Applicants who fail a drug and/or alcohol screening will not be considered for the position at the time of the failed screening. The Applicants will be ineligible for re-application for a period of 6 months. The applicant can re-apply after the 6-month period and will be considered for the position again if a full-time position is available.

Self-Referral: There will be no disciplinary measure for first-time self-referred employees.

Non-Negative Test Results:

- Employees who provide non-negative test results will be required to submit to a second confirmation test, performed by a third party, that will be sent to a lab for confirmation.
- Refusal to submit to a confirmation test will be considered a failed test.

Failed Test

First Offense – employees must complete a "Reinstatement Process" which includes drug consultation with an Employee Assistance Program/Member Assistance Program Drug Counselor, completion of recommended course of treatment, retesting at employee's expense and achievement of negative test result. REMEMBER - completion of this process ONLY makes the employee eligible for re-employment!

- If the employee is a member of a Union and cannot complete the reinstatement process through their MAP, the employee will not be eligible for employment at Tarlton until the below criteria are met.
    1. A minimum of 30 days has passed since the failed test
    2. Retesting, at employee's expense, and achievement of negative test result is provided.
- The employee will be subject to drug and alcohol testing on a monthly basis for a 1-year period.

Second Offense – employees testing positive for a second time are ineligible for re-employment with Tarlton for a period of one year.

Third Offense – employees testing positive for a third time are ineligible for re-employment with Tarlton.

Extreme circumstances: Tarlton Corporation retains the right to terminate employment at any time for involvement in acts that do not promote a safe work environment.

Return to work: All work assignments are based on availability of work. Completing the "reinstatement process" and disciplinary measure does not guarantee work availability.

OSHA REFERENCE

Employees under the influence of drugs or alcohol pose a greater risk to other members of the project team and the public. Under Subpart C, 29 CFR 1926.20(a) "…no contractor…shall require any [employee] to work in surroundings…which are hazardous or dangerous to his health and safety."

RELATED SECTIONS

NA

APPLICABLE FORMS (APPENDIX B)

Reasonable Suspicion

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PURPOSE & APPLICATION

Many job-related injuries occur because employees are not trained in the proper job procedures. This is true particularly for new employees. One way to prevent these injuries is to conduct a job safety analysis. This has proven to be an effective tool for eliminating or minimizing workplace hazards. The "Safety Production Huddle" form is Tarlton's Daily Pre-Task Safety Plan (PTSP) process.

Effectively planning each day's work and completing the Pre-task safety plan is an excellent tool for training employees to plan their work activities effectively and in a safe manner. A PTSP form can also be useful in an accident investigation. By referring to the completed PTSP, a supervisor can determine if the analysis must be reviewed or if the worker failed to follow recommended procedures.

The Pre-Task Safety Plan has three functions:
Provides written documentation of work to be performed and the safest manner for performing a task or job.
Serves as a method for training, communicating, and identifying the work to be performed each day and hazards associated with the tasks.
Identifies and documents the means for reducing or eliminating those hazards.

PROCEDURE

The Pre-Task Safety Plan meeting should be limited to 5-10 people, if there are more people than 5-10, it's less likely that everyone's task will be covered in detail.

The meeting should take place at the work area/gang box – this is to try to have everyone engaged and ask questions. Also, so people aren't eating their breakfast and putting on work boots, etc. Everyone should be ready to go to work before the meeting starts.

The meeting should be conducted at the foreman level, if possible, so the PTSP is more oriented to the task the crews will perform.

Superintendent and Management should periodically audit/review the process while the foreman is conducting the meeting.

The primary steps in completing a job safety analysis are:

1. Determine the work processes to be planned and analyze the afternoon of the day PRIOR to the work.
2. Ensure that all checklists and permits have been completed for work to be performed.
3. Determine accomplishment of the previous day's goals.
4. Identify the work to be performed.
5. Determine how it will be accomplished, sequenced and coordinated with other trades.
6. Determine who will be involved; both Tarlton employees and Subcontractor employees.
7. Determine specifically what tools and materials will be needed.
8. Plan use of equipment that will be needed for the work such as cranes, concrete pumps, other material handling equipment (lull), generators, compressors, power washer, etc. and the timeframe in which they will be used.
9. Establish goals for this work period.

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10. Determine fallback work or other work that will take place if the planned work is completed ahead of schedule or the planned work sequence is altered.
11. Assess the hazards associated with each step.
12. Recommend safe work procedures, controls, and safeguards to minimize or eliminate the hazards.
13. Employee shall acknowledge by signature that they are injury free at the end of each shift.

Use the PTSP worksheet to document your observations and employee comments.

After listing all job elements, identify the hazards with the work, tools, handling of materials, and equipment. Identify all actual and potential hazards whether they result from an unsafe act, unsafe condition, or both.

After identifying hazards, develop recommended procedures and safeguards. Determine whether the job can be performed in another way to eliminate hazards or whether safety equipment and precautions are needed to reduce the hazards. Describe the recommended procedures or safeguards in detail.

After the PTSP form is completed, and prior to the start of work, review it with all members of the crew performing the work and have all employees acknowledge by signature. This is to ensure understanding of the work to be performed, how it will be performed, and the hazards associated with it. At the conclusion of the task or shift, all employees shall sign off the PTSP form injury and incident free if there are no reports otherwise.

Before work begins, all employees are required to participate in the daily Stretch & Flex program.

- All employees shall participate
- Employees should complete the stretch in accordance with the Stretch & Flex manual.
- Employees should only use the range of Motion that they can control. Employees should avoid intense pain. Stretches should be rated 3-5 out of 10 on a scale of perceived pain.

After the lunch break a review of the PTSP should be conducted to ensure nothing has changed throughout the workday. If changes have occurred the changes, potential hazards, and safeguards should be discussed with the crew prior to work beginning. The Mid-Day review box should only be checked after the review takes place.

OSHA REFERENCE

OSHA does not specifically reference the JSA process, however, paragraph 1926.21(b)(2) states “The employer shall instruct each employee in the recognition and avoidance of unsafe conditions…to control or eliminate any hazards or other exposure to illness or injury.” The JSA process meets this requirement by helping to recognize, identify and control hazards associated with a particular task.

RELATED SECTIONS

NA

APPLICABLE FORMS (APPENDIX B)

Pre-Task Safety Plan (PTSP)

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PURPOSE & APPLICATION

The purpose of this policy is to inform employees of any required training and safe work practices for using hand, power, pneumatic, and powder-actuated tools.

PROCEDURE

Safe Work Practices:

HAND TOOLS

- Tools must be used for their intended use. Example of improper use may be using a screwdriver as a chisel, which may cause the tip of the screwdriver to break and fly, hitting the user or other employees.
- Worn or damaged tools or tools not in compliance with regulations shall be tagged and removed from service.
- Wrenches, including adjustable, pipe end, and socket wrenches shall not be used when jaws are sprung to the point that slippage occurs.
- Impact tools such as drift pins, wedges, and chisels, shall be kept free of mushroomed heads.
- The wooden handles of tools shall be kept free of splinters or cracks, shall be kept tight in the tools, and shall not be taped.
- Utility knives should be the last options to use for cutting material, objects, ect.. on all Tarlton jobsites. Several alternatives are available and should be used instead of Utility Knives.
- Pocket knives should not be used on Tarlton jobsites.

POWER TOOLS

- Never carry a tool by the cord or hose.
- GFCIs should be used with all construction power tools.
- All prongs should be in place on plugs; do not use if even one prong is missing.
- Never yank the cord or the hose to disconnect it from the receptacle.
- Keep cords and hoses away from heat, oil, and sharp edges.
- Disconnect/remove battery from tools when not in use, before servicing, and when changing accessories such as blades, bits, and cutters.
- All observers should be kept at a safe distance away from the work area.
- Secure work with clamps or a vise, freeing both hands to operate the tool.
- Avoid accidental starting. The worker shall not hold a finger on the switch button while carrying an energized tool.
- De-energize/remove battery from power tools before maintenance.
- Do not refuel a power tool while it is in use or powered on.
- The use of a secondary/auxiliary handle is required if the tool is designed to have one.
- Tools shall be maintained with care. They shall be kept sharp and clean for the best performance. Follow instructions in the User's Manual for lubricating and changing accessories.
- Be sure to keep good footing and maintain good balance.
- The proper apparel shall be worn. Loose clothing, ties, or jewelry shall be removed or secured as they can become caught in moving parts.
- All portable electric tools that are damaged or not in compliance with regulations shall be removed from use and tagged “DANGER DO NOT USE” and dated.

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- Tools shall be operated with proper guards in place.

PNEUMATIC TOOLS

- Eye protection is required, and face protection is recommended for employees working with pneumatic tools.
- Safety toe boots and metatarsal protection is always required when using jackhammers.
- When working with noisy tools, such as jackhammers, proper hearing protection is required.
- When using pneumatic tools, employees shall check to see that they are fastened securely to the hose to prevent them from becoming disconnected. A short wire or positive locking device "whip check" attaching the air hose to the tool will serve as an added safeguard.
- A safety clip or retainer shall be installed to prevent attachments, such as chisels on a chipping hammer, from being unintentionally shot from the barrel.
- Air hoses should have secured connections or whip checks.
- Screens shall be set up to protect nearby workers from being struck by flying fragments around chippers, riveting guns, staplers, or air drills.
- Compressed air guns shall NEVER be pointed toward anyone. Users shall NEVER "dead-end" it against themselves or anyone else.
- Do not point pneumatic tools at other people or yourself.
- Pneumatic tools not in compliance with regulations, damaged, worn, or with missing guards, shall be removed from use and tagged "DANGER DO NOT USE" and dated.
- Efforts shall be made to use pneumatic tools and equipment designed to reduce or eliminate worker exposure to silica dust.
- Where a worker may be exposed to silica dust, they will comply with the provisions of the Respirator Program.

POWDER-ACTUATED TOOLS

- Operation of power-actuated tools present unique hazards and requires Powder-Actuated Tool Operator Certification.
- Never point powder-actuated tools at anyone.
- Identify and control line of fire hazards for the public and employees working with the tools on the daily PTSP.
- Establish Controlled Access Zones for areas where powder-actuated tools are in operation.
- Additional PPE is required when using these tools to protect against noise, line of fire hazards, projectiles, eye, and face injuries.
- Powder-actuated tools not in compliance with regulations, damaged, worn, or with missing guards, shall be removed from use and tagged "DANGER DO NOT USE" and dated.

Hazard Recognition:

Tool Hazards

Each employee must be familiar with the hazards associated with the tool being used whether it is a hand tool, power tool, pneumatic or powder actuated. Hazards will be identified in daily training through the PTSP.

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Guards (Power, Pneumatic, Powder-Actuated Tools)
Safety guards should never be removed when a tool is in use. Guards protect against hazards such as point-of-operation hazards, in-running nip points, rotating parts, and flying chips and sparks.

Safety Switches (Power Tools)
A safety switch is a constant pressure switch or control that will shut off the power when pressure is released.

The following hand-held power tools must be equipped with a constant pressure switch or control that shuts off the power when pressure is released: drills; tappers; fastener drivers; horizontal, vertical, and angle grinders; disc sanders; belt sanders; reciprocating saws; saber saws, scroll saws, and jigsaws; and other similar tools.

Electric Shock (Power Tools)
Some of the chief hazards of electric power tools are burns and slight shocks. For protection, tools shall either have a 3-wire cord with ground and be grounded, double-insulated, or be powered by a low-voltage isolation transformer.

Additional PPE (Powder-Actuated)
Each employee must be aware of the tool hazards and needs for additional PPE.

Overhead Work
Anytime tools or work operations require work at face height, overhead, or over other employees, additional protective systems, PPE, or barricading will be required.

Line of Fire
All tools have the potential for line of fire hazards. These hazards should be identified on the PTSP and covered in the annual TBT training topics.

Training:

- A fire extinguisher should always be accessible when using power tools. Employees should receive training on the P.A.S.S. method of using a fire extinguisher.
- Powder-Actuated Tool Operator Certification for powder-actuated tools.
- General construction hazard training in OSHA 10 and 30-hour training, daily PTSP, and weekly TBT topics.

Inspection:
All tools, hand or power, should be inspected prior to each day's use and removed from service if damaged. Specific defects to look for can be found in the safe work practices listed above.

OSHA REFERENCE
29 CFR 1926 Subpart I Tools – Hand and Power

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RELATED SECTIONS
NA

APPLICABLE FORMS (APPENDIX B)
NA

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PURPOSE & APPLICATION

OSHA requires that ground fault circuit interrupters (GFCI) be placed on all temporary power circuits, or an assured grounding program be in place for all tools and cords. Tarlton Corporation requires that GFCIs are to be used on all construction equipment, whether it is a temporary or permanent power source.

Using GFCIs can prevent shock or electrocution in the moist and wet construction environments we typically work in.
GFCIs and electrical tools will be inspected prior to each use and periodically while on projects.

PROCEDURE

GFCI check prior to use:
Employees will test all GFCIs by pushing the test button.
When the GFCI trips, the employee will push the reset button.
When the reset button holds, the GFCI is ready for use.

GFCI Periodic Inspections:
GFCIs will be spot-checked during each weekly inspection.
The person conducting the job-safety audit report will ensure GFCIs are in use on all power and spot check the test buttons according to the above.

Tools Inspection prior to use:
Employees will ensure that all electrical tools and cords have been inspected for cuts, gouges, breaks, missing prongs, loose/missing guards, damaged plugs, or exposed wires.
The employee will also ensure the tool functions properly.

Quarterly Tool Inspection:
At the beginning of each quarter, the Superintendent (or designated Foreman) will conduct an inventory of all tools on the jobsite against the latest tool's report. During this time the Superintendent will also inspect tools and cords for serviceability.

IF an OWNER/CLIENT requires an Assured Grounding Program is maintained on all equipment, the color-coding system is as follows:

Winter	White	January, February, March
Spring	Green	April, May, June
Summer	Red	July, August, September
Fall	Orange	October, November, December

When the tool has been verified to be in good working condition, it will be labeled with the appropriate color tape on the male end of the plug. Any defective tools or cords will be returned to the TEAM Facility immediately. The TEAM Facility will also conduct inspections of all tools, cords, and GFCIs in their inventory following the same procedures above.

OSHA REFERENCE

1926.404(b) 1 and 2 in Subpart K of 29 CFR Part 1926.

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RELATED SECTIONS
NA

APPLICABLE FORMS (APPENDIX B)
NA

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PURPOSE & APPLICATION

The purpose of this policy is to inform employees of any required training and safe work practices for working with or near electrical hazards.

This policy applies to workers including electronic engineers, electricians, machine operators, mechanics, repairmen, painters, riggers, and material handlers and welders, among others.

PROCEDURE

Safe Work Practices:

ELECTRICAL AWARENESS

- In addition to the minimum required PPE, proper hazard specific PPE must be worn while performing electrical work or working near energized lines or equipment.
- Necessary PPE for electrical or power-related tasks should be identified on the daily JSA. The PPE and work practices identified during the JSA are to protect employees from either direct or indirect contact with energized systems, electrical equipment, overhead lines, or circuitry.
- Clothing and apparel used during electrical work must be non-conductive or appropriately covered or wrapped with non-conductive material. If you have questions, please contact the safety officer.
- Prior to beginning work, energized systems or equipment shall be de-energized and disconnected from the electrical or power source; system or equipment to be isolated must be locked and tagged out using Tarlton LOTO procedures.
- When working on or near exposed, de-energized parts, employees will assume that those parts are live and use appropriate safety precautions.
- If work is to be performed on a system and the employee cannot determine whether a line or equipment is energized or de-energized, the employee shall assume that it is live and energized and use appropriate safety precautions including obtaining an Energized Electrical Work Permit from the Tarlton Safety Department. Only qualified persons may work on energized systems or parts.
- Parts of equipment or circuits that have been de-energized but not locked and tagged out will be considered energized.
- Required clearances: Maintain a 10-foot standoff distance from overhead powerlines unless other precautions are taken. Working closer than 10 feet to power lines requires clearance from the Safety Team. Safety Team shall determine if work may be done within the clearance required according to OSHA standards as follows:

  “Unqualified persons shall not approach overhead lines of 50kV or below any closer than 10 feet. For lines of 50kV or above, employees shall remain 10 feet plus 4 inches distant for every 10kV over 50kV. A person may not approach any closer than the above reference distances with a conductive tool, object, equipment or vehicle that he/she may be using.“

- In confined spaces or enclosed areas or where required clearances cannot be maintained, insulated materials, protective barriers, or protective shields may be erected or lines may be de-energized and grounded. Consult the safety department if clearance cannot be maintained.
- Inspect all equipment and cords prior to each use. Tag and remove any frayed or damaged electrical cords or tools with frayed or damaged cords.
- Energized systems, electric tools and equipment, and systems with potential stored energy shall be de-energized and disconnected from the energy source prior to beginning work on such systems.

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- LOTO tags shall contain a statement prohibiting unauthorized removal of the tag and/or operation of the system that is disconnected.
- An electric shock or other unintentional exposure to released energy constitutes an incident and must be reported to the Superintendent.
- Illumination shall be provided that enables qualified employees to enter spaces with potential or real electrical hazards and perform work safely. No employee shall enter a hazardous space without appropriate light.
- All employees to know emergency procedures in the event of an electrical shock or fire.
- No wooden or aluminum ladders may be used in proximity to overhead lines. Use ladders with non-conductive side rails such as fiberglass.

LOTO Procedures

- LOTO Procedures will be followed when employees work on, repair, install, or relocate equipment, power lines, outlets, circuits, gas pipes, or water pipes to ensure that employees are not subjected to hazards associated with the sudden, unexpected release of electrical power or other types of stored energy.
- See section titled Lock Out / Tag Out Safety Procedures.

Approach Distances for Qualified Employees

- When performing tasks, qualified employees must adhere to the approach distances outlined in TABLE S-5 per OSHA regulations.

TABLE S-5 – APPROACH DISTANCES FOR QUALIFIED EMPLOYEES – ALTERNATING CURRENT		
Voltage range (phase to phase)	**Minimum approach distance**	
300V and less	Avoid Contact	
Over 300V, not over 750V	1 ft. 0 in.	(30.5 cm)
Over 750V, not over 2kV	1 ft. 6 in.	(46 cm)
Over 2kV, not over 15kV	2 ft. 0 in.	(61 cm)
Over 15kV, not over 37kV	3 ft. 0 in.	(91 cm)
Over 37kV, not over 87.5kV	3 ft. 6 in.	(107 cm)
Over 87.5kV, not over 121kV	4 ft. 0 in.	(122 cm)
Over 121kV, not over 140kV	4 ft. 6 in.	(137 cm)

Hazard Recognition:

Fire Hazards
Electric Shock
Stored Energy Release

- When working in close proximity to Overhead powerlines, the Minimum Approach Distance Work Permit must be completed, prior to work beginning.

Training:

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- Employees in occupations or assigned to tasks that expose them to electrical hazards will be trained to recognize those hazards, understand the potential for injury, identify appropriate PPE, and understand safe work practices related to energized and de-energized electrical hazards. Training shall be documented and maintained for the duration of the employee's employment.
- At each jobsite, each employee should receive a Site-Specific Orientation which will inform them of electrical hazards, LOTO procedures, appropriate PPE, the presence of overhead lines, and clearance requirements.
- Only qualified persons may work on energized equipment. Such person shall be fully trained and capable of working safely on energized circuits, familiar with appropriate PPE, techniques, tools and equipment; aware of insulating, and shielding materials and tools.

Inspection:

- Electrical equipment and cords are to be inspected by employees prior to use, including GFCIs.
- LOTO equipment, including locks and tags, are to be inspected by employees prior to use.
- Quarterly Tool Inspections for Assured Grounding Program; see GFCI Program.

OSHA REFERENCE
1910.332 of Subpart S 29 CFR Part 1910
1910.333 of Subpart S 29 CFR Part 1910

RELATED SECTIONS
NA

APPLICABLE FORMS (APPENDIX B)
NA

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Purpose

The purpose of this program is to ensure the safe use of hazardous chemical substances and to comply with the requirements of OSHA HCS 2012.

Introduction

In 2012, OSHA revised the Hazard Communication Standard (HCS) to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). As a result, this Hazard Communication Program (HCP) has been revised to comply with the requirements of the OSHA HCS 2012.

It spells out how Tarlton will inventory chemicals stored and used, obtain and use Safety Data Sheets, maintain labels on chemical substances, and train employees about the hazards of chemicals they are likely to encounter on the job.

Preparation of this program indicates our continuing commitment to safety among our employees in all of our locations.

- Each facility is expected to follow this program and maintain its work areas in accordance with these requirements.
- Employees, their designated representatives, and government officials must be provided copies of this program upon request.
- In addition to the program, other information required as part of our hazard communication effort is available to workers upon request.
- Asking to see this information is an employee's right.
- Using this information is part of our shared commitment to a safe, healthy workplace.

Scope

This program is applicable to all Tarlton employees who may be exposed to hazardous chemical substances. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Tarlton employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Responsibilities

A written Hazard Communication Program shall be developed, implemented and maintained at each workplace that describes how labels and other forms of warning, Safety Data Sheets, and employee information will be met.

Safety Manager or Designee

The Safety Manager, or designee, is responsible for administering the Hazard Communication Program. This person is also responsible for:

- Reviewing the potential hazards and safe use of chemicals.
- Maintaining a list of all hazardous chemicals and a master file of SDSs.
- Ensuring that all containers are labeled, tagged, or marked properly.
- Providing new-hire and annual training for employees.
- Maintaining training records.
- Identifying hazardous chemicals used in nonroutine tasks and assessing their risks.
- Informing outside contractors who are performing work on Tarlton property about potential hazards.

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- Reviewing the effectiveness of the Hazard Communication Program and making sure that the program satisfies the requirements of all applicable federal, state, or local hazard communication requirements.

Employees

- Employees are responsible for following the requirements in the Hazard Communication Program.
- Any employee who transfers any material from one container to another is responsible for labeling the new container with all required information.
- All employees are responsible for learning the requirements of this section and for applying them to their daily work routine.
- Identifying hazards before starting a job.
- Reading container labels and SDSs.
- Notifying the supervisor of torn, damaged, or illegible labels or of unlabeled containers.
- Using controls and/or personal protective equipment provided by the company to minimize exposure.
- Following company instructions and warnings pertaining to chemical handling and usage
- Properly caring for personal protective equipment, including proper use, routine care and cleaning, storage, and replacement.
- Knowing and understanding the consequences associated with not following Tarlton policies concerning the safe handling and use of chemicals.
- Participating in Tarlton training.

Procedure

List of Hazardous Chemicals

Tarlton shall maintain a list of hazardous chemicals on the job site. A list of the hazardous chemicals known to be present using an identity that is referenced on the appropriate Safety Data Sheet shall be maintained.

The Hazardous Chemical List is updated as necessary and at least annually by the Safety Manager or their designee. The Hazardous Chemical List must be available for review upon request.

Safety Data Sheets (SDS)

SDSs must be obtained for each required chemical. Chemical manufacturers are responsible for developing SDSs. The company shall have an SDS for each chemical used.

The purchasing of any potentially hazardous chemical products from any supplier that does not provide an appropriate Safety Data Sheet in a timely fashion is prohibited.

SDSs are to be maintained in a readily accessible location to employees. SDSs shall be maintained and readily accessible in each work area. SDSs can be maintained at the primary work site. However, they should be available in case of an emergency. SDSs must be made available, upon request, to employees, their designated representatives, the Assistant Secretary, and the Director.

The Safety Data Sheet must be kept in the SDS library for as long as the chemical is used by the facility.

Electronic access (telephone, fax, internet, etc.) may be used to acquire and maintain SDS libraries and archives.

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The Manager is responsible for seeing that the Chemical Inventory List inventory is maintained, is current, and is complete. He/she will review the Chemical Inventory List at least annually. When a hazardous material has been permanently removed from the work place, its SDS is to be removed from the Chemical Inventory List.

SDSs for hazardous materials to which Tarlton employees have been exposed must be maintained after the employee leaves the employment of Tarlton.

Methods to be Used to Inform Employees of the Hazards of Non-Routine Tasks
The methods that Tarlton will use to inform employees of the hazards of non-routine tasks (i.e., the cleaning of reactor vessels, etc.) and the hazards associated with chemicals contained in unlabeled pipes in their work areas include:

- Conducting a Job Hazard Assessment (PTSP).
- Employees will be advised of methods and special precautions, PPE, and the hazards associated with chemicals and the hazards associated with chemicals contained in unlabeled pipes in their work areas.
- In the unlikely event that such tasks are required, the supervisor, or designee, will provide an SDS for the involved chemical.

The Use and Care of Labels and Other Forms of Warning
Container labels should contain the following information:

- Product identifier
- Signal word
- Hazard statement
- Pictogram(s)
- Precautionary statement(s), and
- Name, address and telephone number of the chemical manufacturer, importer or other responsible party.

The Manager will ensure that all hazardous chemicals used or stored in the facility are properly labeled.

Damaged labels or labels with incomplete information shall be reported immediately.

Workplace labels or other forms of warning will be legible, in English, and prominently displayed on the container or readily available in the work area throughout each work shift.

If employees speak languages other than English, the information in the other language(s) may be added to the material presented as long as the information is presented in English as well.

Tarlton will use the GHS labeling system for secondary containers.

Portable containers into which hazardous chemicals are transferred from labeled containers and that are intended for the immediate use of the employee who performs the transfer do not require a label.

If the portable container will be used by more than one employee or used over the course of more than one shift, the container must be labeled.

Received from vendors that are not properly labeled must be rejected.

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Pictograms and Hazards

Health Hazard • Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity	**Flame** • Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides	**Exclamation Mark** • Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non-Mandatory)
Gas Cylinder • Gases Under Pressure	**Corrosion** • Skin Corrosion/ Burns • Eye Damage • Corrosive to Metals	**Exploding Bomb** • Explosives • Self-Reactives • Organic Peroxides
Flame Over Circle • Oxidizers	**Environment** (Non-Mandatory) • Aquatic Toxicity	**Skull and Crossbones** • Acute Toxicity (fatal or toxic)

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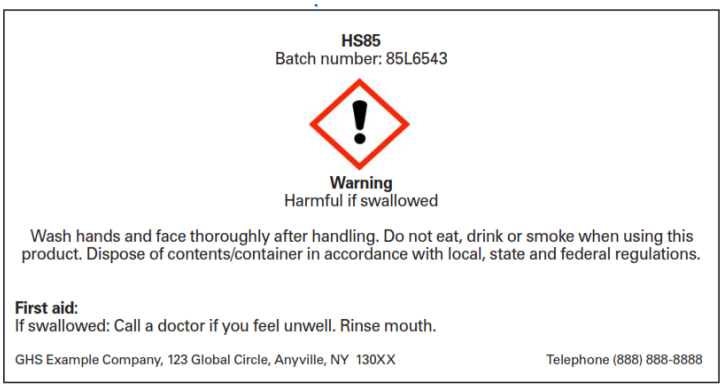
Example Label



Multi-Employer Job Sites and/or Multi Work Site

The following specific methods for providing other employer information concerning hazardous chemicals at job sites, methods of providing SDS sheets, methods of precautionary measures to be taken, and methods of providing information on labeling systems:

Multi-Work Sites

Where employees must travel between work places during a work shift (multi job sites), the written program may be kept at a primary job site. If there is no primary, then the program should be sent with employees.

Multi-Employer Job Sites

A pre-job briefing shall be conducted with the contractor prior to the initiation of work on the site.

- During this pre-job briefing, contractors shall notify Tarlton and present current copies of Safety Data Sheets and label information for every hazardous chemical brought on-site.
- Tarlton shall notify and provide required SDS and label information for all hazardous chemicals the contractor may encounter on the job.
- The facilities labeling system and any precautionary measures to be taken by contractor during normal conditions and emergencies shall be addressed.
- By providing such information to other employers, Tarlton does not assume any obligations that other employers have for the safety of their employees.

Training

Employees shall be provided with information and training. Employees shall be provided with effective information and training on hazardous chemicals in their work area at the time of their initial assignment and whenever a new physical or health hazard the employees have not previously been trained about is introduced into their work area. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals. Chemical-specific information must always be available through labels and safety data sheets.

Additional training will be provided whenever a new chemical hazard is introduced into the work area. To reinforce the importance of handling chemicals properly when performing new or non-routine tasks supervisors will conduct supplementary training as needed.

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Formal training will be conducted by facility employees or individuals who are knowledgeable in the Hazard Communication Program.

The Hazard Communication Program documented training shall, as a minimum, include:

- Requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 (General Industry) or 29 CFR 1926.59 (Construction Industry).
- Operations in the work area where hazardous chemicals are present.
- Location and availability of the Hazard Communication Program, chemical inventory list, and SDSs.
- Methods and observations used to detect the presence or release of a hazardous chemical in the work area, such as monitoring devices, visual appearance, or odor of hazardous chemicals when being released.
- Explanation of the labels received on shipped containers.
- Explanation of the workplace labeling system.
- Explanation of the SDS, including order of information and how employees can obtain and use the appropriate hazard information.

The Manager shall ensure records of employee training are maintained.
Implementation Requirement

Per OSHA Requirements

Effective Completion Date	Requirement(s)	Who
December 1, 2013	Train employees on the new label elements and safety data sheet (SDS) format.	Employers
June 1, 2015* December 1, 2015	Compliance with all modified provisions of this final rule, except: The Distributor shall not ship containers labeled by the chemical manufacturer or importer unless it is a GHS label	Chemical manufacturers, importers, distributors and employers
June 1, 2016	Update alternative workplace labeling and hazard communication program as necessary, and provide additional employee training for newly identified physical or health hazards.	Employers
Transition Period to the effective completion dates noted above	May comply with either 29 CFR 1910.1200 (the final standard), or the current standard, or both	Chemical manufacturers, importers, distributors, and employers

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PURPOSE & APPLICATION

The Lockout/Tagout procedure applies to anyone working on or near an active process, equipment, machinery, energy source, or utility.

The purpose of Lockout/Tagout is to assure that employees are protected from unattended machine operation or unintended release of energy which could cause injury when they set up, adjust, repair, service, install, or perform maintenance work on equipment/machinery. Injuries may occur from potential hazardous energy sources such as unexpected startup or releases of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, kinetic, radioactive, or other potential hazardous energy sources or during blinding and opening of process equipment and / or piping to facilitate maintenance activities.

Lockout is the preferred method of isolating machines or equipment from energy sources. On devices or equipment where lockout cannot be accomplished, tagout is the acceptable alternative. The tag should be placed at a point where it will be highly visible on the energy control device.

When a tagout device is used, the tagout device shall be attached at the same location that a lockout would normally have been attached. The tagout program must provide a level of safety equivalent to that obtained by using the lockout program. A lockout device should be used whenever possible.

Energy Isolation

Hazardous energy may exist as stored energy in several circumstances. Stored energy must be relieved prior to blocking and installing lockout devices. The energy generating mechanism must be defeated to remove the possibility of regeneration. Examples of stored energy are springs, elevated components, capacitors, contained pressure, and flywheels.

NOTE: Capacitors must be discharged, shorted, and grounded in addition to lockout of the source of energy by a qualified person.

PROCEDURE

All employees subject to working on processes, machinery, or energy sources will be provided with locks, lockout devices, and tags that specifically identify them as the individual responsible for lockout/tagout of the machine, device, or energy source to which the tag is attached.

Machinery/equipment shutdown procedures must be followed when de-energizing.

1. When any work around or on a utility or piece of equipment is to be done, all parties must clear work through the Tarlton Corporation Superintendent who will approve or disapprove all requests and issue a tag/permit. Authorized employees shall have knowledge of the type and magnitude of the energy, the hazards of the energy being controlled, and knowledge of the means to control the energy.
2. Parties working in the area will be notified by those conducting the lockout, of the extent of work to be performed, and the effect of such work to the associated parties.
3. Tarlton supervisor must Authorize the LOTO request before process continues. A Tarlton Lockout/Tagout Permit must be completed.
4. Disconnect all equipment and/or sources to be sure they are off. Use proper established procedures to shutdown systems or turn off equipment. Process equipment/systems shall be shut down and

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prepared for mechanical work by the affected person(s) who has the responsibility for operating that equipment. All energy sources must be identified and energy isolation devices installed.

5. Release any residual energy such as springs, unsecured machine parts, etc. Lockout energy source using lock and tag. The authorized person must physically identify the energy sources associated with and the isolation devices/techniques required to achieve isolation for his/her job. Energy source(s) must be released after the lockout device has been installed. Each individual worker involved in the work activity must place their own lock and tag on each energy control point.
6. Verify energy source isolation/zero energy by retesting to make sure equipment or energy source is off after the lockout device has been installed. Energy source(s) must be isolated and verified before any maintenance/work is performed.
7. Perform necessary permitted work.
8. Before putting back into service, check to be sure all safety devices such as guards are in place and functional. Then check to make sure all tools, parts, etc., are removed.
9. Remove tags/locks.
10. Restore power and check to see that everything is functional.

Type of Devices

All locks for the lockout program should be of substantial durable construction.
Tarlton locks will be green in color, with Tarlton engraved on the lock. The lock will also have a unique number identification and matching key. Each lock shall identify the individual apply the device.

Each employee or subcontractor potentially exposed to the hazardous energy is required to have their own lock placed on the energy source that is locked out or on a group lockout device.

A Lockout/Tagout tag shall accompany all lockout/tagout operations. The tag shall identify the equipment being de-energized, the reason for the de-energization, date, duration, and contact information for the Lockout/Tagout supervisor.

All tags shall warn against hazardous conditions if the machine or equipment is energized and shall include a warning such as: "Do not start, do not open, do not close, do not energize, or do not operate." The tag shall also identify the individual that has placed the lock or tag and the date it was placed.

General Employee Responsibility

All employees and subcontract personnel are to be familiar with the lockout/tagout process and the prohibition against removing a lock or tag without authorization. Attempts to restart or re-energize machines which are locked out or tagged out, without the authorization of the individual that has placed the tag, will result in disciplinary procedures.

Shift or Personnel Change

At the time of a shift change, the individual or individuals currently having lockout/tagout authority shall meet with and inform the incoming individual or crew of the status of the de-energized locked out/tagged out equipment.

The lock and tag may be removed and replaced by the oncoming crew when:
The current status of the repair or maintenance project is explained to the oncoming shift personnel and

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inspection of the device is completed to assure that employees are away from the area.

The new crew is to implement their lockout/tagout procedures and test sequences to assure that the equipment is de-energized and securely locked out/tagged out in the off position.

Procedures for Handling Multiple Groups of Workers Involved in a Group Lockout:
A crew of authorized employees may use a group lockout or tagout device. This will afford the group of employees a level of protection equal to that provided by a personal lockout or tagout device. Procedures include:

- A tailgate meeting shall be conducted to review the lockout procedures and other information as required for safe work to continue – all crafts and effected departments shall be involved.
- An authorized employee will isolate the equipment and ascertain the exposure status of individual group members.
- All workers will then place their individual locks on the device's group lockout or tagout device after they have verified the procedure.
- An authorized employee has primary responsibility for a set number of employees working under the protection of a group lockout or tagout device. The authorized employee should ascertain the exposure status of individual group members. Each Tarlton Corporation employee or contractor shall attach a personal lockout or tagout device to the group's device while he/she is working and then removes it when finished.

If any outgoing person leaves the site and their lock/tag is still attached then follow Removal of Locks guidelines below.

Release from Lockout/Tagout
When servicing or maintenance is completed or when Lockout / Tagout devices must be temporarily removed, the equipment requires testing and the machine or equipment is ready for testing or to return to normal operating conditions, the following steps shall be taken, in this order:

- Check the machine or equipment and the immediate area surrounding the machine or equipment to ensure that all nonessential items such as tools have been removed and that the machine or equipment components are operationally intact.
- Check the work area to ensure that all personnel have been safely positioned or removed from the area.
- Remove the Lockout/Tagout device
- Energize and proceed with testing
- Deenergize and reapply control methods including Lockout / Tagout devices
- Document the procedure by use of the completed isolation log and provide to supervisor for filing.

Removal of Locks
The authorized employee who applied the lock shall be the one to remove their lock. However, after all work has been completed, certain conditions may arise which prohibit this person from being present to remove the lock.

The following procedures shall be followed to allow for the removal of a lock that another person has applied:

- Every effort shall be made to contact the authorized employee who applied the lock to obtain the key(s).
- If the key(s) cannot be made available, the employee who requests removal of the lock shall contact their supervisor.

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- The supervisor shall verify that every effort was made to contact the original authorized employee who applied the lock and to obtain the key(s).
- The employee removing the lock shall note on the Service Report that the lock(s) were removed with permission by supervisor.
- All reasonable efforts will be made by supervisor to notify that employee their lock has been removed, ensuring that the authorized employee has this knowledge before they return to work.
- If the equipment is client owned, the supervisor or employee requesting to remove the lock(s) shall contact the client to get the lock removed. Clients must remove their lock(s).

NOTE: COMPANY employees shall not remove any client locks.

Subcontractors

Subcontractors performing lockout procedures on Tarlton Corporation projects shall comply with this procedure. Subcontractors shall supply their own locks.

Subcontractors shall identify the color and type of lock to be used prior to lockout taking place.

Training

Tarlton Corporation shall train employees on how to lock, tag, and try according to proper procedure. The training should include information about the types and degrees of hazards the employee will be exposed to at work. LOTO training and retraining shall be documented. Tarlton must maintain the trainee's name, date, and training content. Retraining will be required annually or when there is a change in energy control procedures or a new hazard has been introduced into the work area. Tarlton competent person will receive Lockout/Tagout competent person training every 3 years.

Inspections

Tarlton shall audit the lockout procedures at least once per year for compliance with this procedure and modify his/her activities accordingly.

OSHA REFERENCE

29 CFR part 1926, Subpart K paragraph 1926.417

RELATED SECTIONS

SIFs (Serious Injury and Fatality)

APPLICABLE FORMS (APPENDIX B)

Lock Out / Tag Out Permit

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PURPOSE & APPLICATION

This policy applies to all work in any area that meets the following definition of a confined space. A confined space is any area:

- Not designed for human occupancy
- That has restricted access (entry and exits)
- That may have or has potential to develop a hazardous atmosphere

Confined space work can be hazardous in itself, but the difficulties associated with accessing endangered employees can lead to catastrophic results. Properly identifying confined spaces, planning for work, and preparing for emergencies can limit the risk of these catastrophic events.

Confined spaces can be identified as:

1. Non-permit required: Based on the results of atmospheric testing the space does not contain or have potential to contain any hazard capable of causing death or serious physical harm.
2. Alternate Entry: Permit required space poses only an actual or potential hazard that can be controlled with continuous forced air ventilation alone, the space can be entered without an attendant and the use of a retrieval system.
3. Full Permit Required: contains or has the potential to contain any serious safety or health hazard to include entrapment, engulfment, hazardous atmosphere, etc.

These areas may include but are not limited to:

- Sewers/manholes
- Basements/crawl spaces
- Utility chases
- Storage areas
- Tanks
- Bins (grain)
- Industrial freezers/refrigerators
- Elevator shafts
- Low-lying areas (pools or sub basements)
- Excavations
- Sump areas

Any of the following conditions may be present in a confined space:

1. Oxygen-deficient atmosphere:
   - Less than 19.5% oxygen (O_2) is not suitable for unassisted breathing.
   - Oxygen level can be reduced by the work being done (i.e. welding or painting).
   - Oxygen can be displaced by another gas such as nitrogen or carbon dioxide.
2. Flammable atmosphere:
   - Created by oxygen in the air plus a flammable gas, vapor, or dust in the proper mixture.
   - Addition of a source of ignition will result in an explosion.
3. Toxic atmosphere - toxic substances can come from several sources:
   - The product previously stored in the space.
   - The work being performed or product being used.

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- Leakage into a confined space from adjacent areas.
- Animal or other biological decay.

4-Gas Monitor

- Must be calibrated every 30 days
- Must be bump tested daily, prior to testing any atmosphere.
- Can be obtained through the TEAM facility.

PROCEDURE

Any personnel entering or supporting confined space work must have proper training. Training shall prepare employees for their specific responsibility. Training requirements shall meet those described in OSHA 29 CFR 1926 Subpart AA. Confined Space Entry Training and Confined Space Entry Attendant Training shall be documented. The completed Confined Space permits at Tarlton shall be reviewed annually by the Safety Officer and the confined space program and/or permit revised if necessary.

Confined Space Entry Training will be provided prior to assignment to all employees entering a confined space. Confined Space Entrants shall have documented training prior to entering a confined space or when a change in duties, location, special circumstances, or the presence of a new hazard is created. Confined Space Entry Training shall be required every three years and provided to any employees who demonstrate unfamiliarity with proper procedure.

Entry into confined spaces or permit-required confined spaces is a non-routine operation and requires consultation with the Safety Team prior to entry.

Duties of Entrant

- Review permit
- Wear protective clothing
- Use protective equipment
- Pay attention to own physical reactions
- Maintain communications with attendant(s)
- If the entrant senses any reaction to the environment, he or she should signal the attendant for assistance and leave the confined space immediately

Duties of Attendant

- Review permit
- Monitor occupants
- Keep unauthorized people out of confined space
- Maintain continuous communication with the entrant
- Make sure ventilation equipment is working
- Monitor atmospheric testing equipment
- Attend to the lifeline attached to the entrant
- Attend to the airline, if used
- Remain alert for danger
- Watch for hazards

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- Maintain clear access
- Order evacuation, if necessary
- Call for emergency assistance, if needed
- Remain at entry point unless relieved by another trained attendant

Any entry to a permit-required confined space must utilize Tarlton Corporation's Confined Space Entry Permit. Site-Specific Permits may be utilized in lieu of Tarlton's Confined Space Entry Permit where special hazards exist such as testing required for more than 4 gases or substances or more than two entrants are required.

Duties of Entry Supervisor
Prior to any entry into a confined space, an entry supervisor or safety officer shall:

- Assess the confined space for hazards and determine if the space is a permit-required confined space or a non-permit required confined space.
- Determine the existence of any external hazards (such as vehicle traffic, pedestrians, or other external conditions like flooding or other contract workers in the area) which might impact the confined space. Provide any necessary barricades or guardrails or signage to keep passersby or other workers out of the confined space.
- Coordinate entrance of subcontractors or others performing work in the confined space and ensure that work being performed by multiple parties does not cause additional hazards.
- Complete the Confined Space Entry Permit.
- Post permit with owner/clients and at confined space entrance with the assigned attendant.
- Cancel or terminate permit if changes occur making the space unsafe. (Unless canceled, confined space permits expire as noted on the permit.)
- Verify the availability of rescue equipment, rescue services, and a communication method for summoning emergency rescue.
- Ensure that all safety equipment required for safe entrance and work inside a confined space is available.
- Ensure the 4 gas monitor is properly calibrated and bump tested.

All Tarlton Corporation personnel entering a permit-required confined space will observe the following procedures and requirements:

1. Air supply system to adequately ventilate a confined space shall be properly designed and of the positive flow type. Air monitoring shall be periodically conducted to ensure proper ventilation.
2. Solvents and atomized coating particles are generally heavier than air and will tend to settle and concentrate in the lowest parts of confined areas. Therefore, in designing a ventilation system for these areas, particular attention should be paid to the lowest and most remote spots.
3. Air monitoring before entry shall include one or more of the following tests:
    i. Oxygen (O_2) level.
    ii. Combustible vapors (LEL).
    iii. Toxic vapors (solvents/hydrocarbons/H_2S).
    iv. Carbon Monoxide (CO).

    - Each piece of monitoring equipment must be examined daily to verify that it is in good condition and ready for use.

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- Entrants or their representatives may ask to review results or participate in air monitoring at any time before entry or after periodic air monitoring.
- Exact procedures for calibrating and checking the testing equipment for airflow are contained in the instrument's manufacturer's instruction sheets.
- Please contact the TEAM Facility if there are any questions regarding the condition or calibration of monitoring equipment.

4. For permit required confined space, continuous air monitory must be conducted for non-permit spaces.
5. Additional tests shall be taken during the shift if it is anticipated that air quality may change.
6. Tests must be conducted prior to beginning work, daily, and at each shift, by a supervisor familiar with the proper operation of the air-monitoring equipment.
7. The criteria for determining if a tank atmosphere is safe to enter without the use of an air-supplied respirator (non-hazardous) are as follows:
   - Oxygen (O_2) is greater than or equal to 19.5%.
   - Combustible vapors are less than or equal to 10% of the lower explosive limit (LEL).
   - Toxic vapors are less than or equal to the values noted per the Confined Space Entry Permit.
   - Carbon Monoxide (CO) is less than 35 ppm.
8. Secure machinery, processes, or energy sources in accordance with this manual's Lockout / Tagout section.
9. A "stand by" worker attendant shall be on the outside of a confined space and shall be in constant visual or voice contact with workers inside. Attendants shall monitor only one space at a time.
10. A retrieval system shall be connected to each employee in the confined space for emergency evacuation.
11. A self-contained breathing apparatus such as a Scott SCBA shall be available for emergency use.
12. If a non-hazardous condition cannot be maintained, all workers inside the confined space will be required to use air fed or compressed air masks in place of standard cartridge respirators.

Tarlton uses the following equipment for safety and emergency rescue. Tarlton may provide or hire a rescue service, or the host facility may provide a rescue service to be used on their site. In any case, the rescue service shall be given the opportunity to examine the entry site, practice rescue, and decline as appropriate. If the confined space is determined by the Safety Officer or entry supervisor to be an IDLH (*Immediately Dangerous to Life and Health*) environment, a rescue service shall be onsite in the immediate area to assist with all equipment and any emergency situations that might arise.

<u>Safety and Emergency Rescue Equipment</u>

A. Safety Equipment
   - Mechanical device for retrieval of personnel.
   - Full body harness allowing retrieval line attachment to the center of the entrant's back near the shoulders or above the head.
   - Retrieval line.
   - Tripod.
   - Portable hand lights.
   - Access ladder or other access equipment.
   - Ventilation equipment.

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- Barriers (i.e. collapsible guardrails, fences, locks, etc.).

Emergency Rescue Equipment

B. Extra retrieval line.
   - Extra full body harness allowing retrieval line attachment to the center of the entrant's back near the shoulders or above the head.
   - Emergency medical/first aid kit.
   - If emergency team is not on site, call 911 for emergency rescue.

OSHA REFERENCE

Confined spaces are governed by the construction standard 29 CFR 1926 Subpart AA

RELATED SECTIONS

SIFs (Serious Injury and Fatality)

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Purpose

The purpose of this procedure is to identify the controls and actions necessary to prevent adverse health effects to employees from occupational exposure to lead, and to ensure that Tarlton lead exposure management practices meet regulatory requirements.

Scope

This procedure applies to Tarlton operations where employees may be exposed to lead while working with lead containing materials during routine maintenance or emergency situations. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Tarlton employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Responsibilities

Managers and Supervisors

- In coordination with the Safety Manager, develop and implement written project/task specific lead exposure management procedures prior to the start of activities to reduce exposure to or below the permissible limits.
- Ensure personnel are aware of work that has the potential of exposure to lead.
- Ensure individuals responsible for monitoring areas of exposure are properly trained.
- Ensure personnel receive documented medical surveillance.
- Ensure that all affected employees receive initial and annual lead management training.
- Inform the Safety Manager of upcoming work involving lead-containing materials, allowing the Safety Manager to provide any necessary monitoring.
- Ensure employees have the appropriate personal protective equipment (PPE) and are properly trained in its use and care, including respiratory protection, full body disposable clothing, and gloves, when the Action Level is expected to be met or exceeded.
- Ensure employees comply with the lead exposure management procedure.

Safety Manager

- Coordinate air sampling and monitoring activities, ensuring monitoring equipment is in proper working order and, as necessary, modifying the lead exposure management procedures to reflect exposure monitoring data.
- Maintain the lead exposure management procedure, notifying management of any regulatory changes and ensuring compliance with federal and state requirements.
- Coordinate initial and annual refresher training activities.
- Coordinate the medical surveillance program for employees exposed to lead above the Action Level for more than 30 days per year.
- Coordinate waste management and disposal activities, ensuring waste with lead containing materials is disposed of only at an approved facility.

Affected Employees

- Comply with the lead exposure management procedure, consulting with the supervisor or Safety Manager to ensure the proper PPE is used when required.

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- Comply with the medical surveillance program.
- Attend initial and annual refresher training.
- Wear respiratory protection equipment and other specified PPE as required by the project/task specific control program.
- Maintain respiratory protection equipment in good working order, notifying the supervisor or Safety Manager of any problems prior to starting work.
- Review safety data sheets or consult with the supervisor to identify any container with lead-containing material.
- Leave the work area to wash if skin irritation is noted or if PPE has been compromised.
-

Procedure

Written Compliance Program

- Each worksite shall develop and implement written project/task site-specific lead exposure management procedures prior to the start of activities to reduce exposure to or below the permissible limits if exposure is possible.
- The procedure shall include engineering controls, work practices, PPE, documentation of air sampling, including the source of lead, a description of each lead related task in which lead is emitted should be outlined, and all employees shall be trained prior to work beginning.
- The program shall be revised and updated at least every 6 months.

Permissible Exposure Limits

- Per OSHA regulation, employees shall not be exposed to greater than 50 micrograms per cubic meter of air (50 µg/m3), time-weighted average, during an 8-hour workday. This permissible exposure limit (PEL) includes the use of respiratory protection. If an employee is exposed more than 8 hours in any one workday, the maximum PEL (µg/m3) shall be calculated by using the following formula:
- 400/hours worked in the day
- For example: 400/12 hours = 33.33 µg/m3
- If respirators are used to supplement engineering and/or work practice controls, the respirator's protection factor may be used to determine compliance with the PEL.

Exposure (Air) Monitoring

- Exposure is defined in this section to be any employee who is not wearing a respirator to meet the Action Level and monitoring requirements in this section.
- Initial air samples shall be representative of the employee's regular, daily activities.
- Initial breathing air sampling results:
  - If the initial monitoring is less than the Action Level, monitoring need not be repeated unless there has been a production, process, control, or personnel change which may result in new or additional exposure to lead.
  - If the initial determination or subsequent monitoring reveals employee exposure to be at or above the Action Level but below the PEL, monitoring must be performed at least every six (6) months, with the cycle continuing until two (2) samples taken at least seven (7) days apart are below the action level.

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- If the initial determination exceeds the PEL, monitoring will be performed quarterly until two (2) samples taken at least seven (7) days apart are below the PEL, but above the Action Level, and the monitoring frequency described above will be used.
- Within 15 working days after the receipt of the results of any monitoring, Tarlton shall notify all affected employees of these results either individually in writing or by posting the results in an appropriate location that is accessible to affected employees.
- Whenever the results indicate that the exposure, without regard to respirators, exceeds the permissible exposure limit, Tarlton shall include in the written notice a statement that the permissible exposure limit was exceeded and a description of the corrective action taken or to be taken to reduce exposure to or below the permissible exposure limit.

Control Measures

Engineering Controls

- If an employee is exposed to lead above the PEL for 30 or more days in a year, engineering controls, including administrative controls, will be implemented to reduce the exposure to or below the permissible exposure. If such controls are not feasible, Tarlton must demonstrate and document the reasons.
- Respiratory protection will be used if engineering and administrative controls are not effective in reducing the exposure to or below the PEL.
- If air is re-circulated back into the workplace, the system must be equipped with a HEPA (high efficiency particulate air) and backup filter, and a system to monitor the lead level will be installed.
- When using mechanical means to remove lead-containing paints or coatings, use equipment which is equipped with a HEPA collection system.
- Whenever possible, use a wet system to reduce airborne dust.
- Whenever possible, substitute lead material with non-leaded material.

Administrative Controls

- Administrative controls will include job rotation schedules to reduce employee PEL exposure.
- When exposure to lead is at or above the PEL, Tarlton shall provide lunch rooms, decontamination, changing, shower and hygiene facilities.
- Regulated access signs will demarcate the lead exposure regulated work areas. Signs should not be removed or defaced. The signs will read as follows:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING

Personal Protective Equipment

- Respirators shall be used during the time period required to install or implement control if engineering and work practices are insufficient, as well as for emergency use.
- PPE will be selected on the basis of its ability to prevent absorption, inhalation, and ingestion and will be provided to employees at no cost.
- PPE will reflect the needs of the employee based on work conditions, amount and duration of exposure, and other known environmental factors.

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- If respirators are required, they will be NIOSH certified and all employees will follow the Tarlton Respiratory Protection Program.
- An employee may choose a NIOSH certified powered, air purifying respirator (PAPR) at no extra cost to the employee. The respirator shall be used during the time period necessary to install or implement engineering or work practice controls.
- Gloves, hats, vented goggles, shoes, or disposable shoe covers shall be provided at no cost. Protective clothing shall be clean and dry. Protective clothing shall be cleaned, laundered, repaired, and replaced as necessary and disposable clothing shall be identified and handled properly.

Medical Surveillance

- A baseline blood sample shall be obtained prior to any lead exposure.
- Employees who are or may be exposed above the Action Level for more than 30 days per year will be included in a medical surveillance program which is performed by or under the supervision of a licensed physician at no cost to the employee.
- Any employee with elevated blood levels shall be temporarily removed.
- Blood sampling and monitoring will occur at least every 6 months to each affected employee until two consecutive blood samples and analysis are acceptable.
- Employees shall be notified in writing within 5 days of blood sampling results when lead levels are not acceptable.
- Blood sampling shall occur on a monthly basis during a removal period of each employee removed from exposure to lead due to an elevated blood lead level.
- Whenever the results of a blood lead level test indicate that an employee's blood lead level exceeds the level for medical removal, Tarlton shall provide a second (follow-up) blood sampling test within two weeks after Tarlton receives the results of the first blood sampling test.

Medical Removal

- Employees will be removed from exposure to lead when an exposure meets or exceeds the Action Level on each occasion that a periodic and follow-up blood sampling test indicates that blood lead level is at or above 60 µg/100 g of whole blood.
- An employee will be removed from exposure to lead when the average of the last three (3) blood sampling tests indicates the employee’s blood level is at or above 50 µg/100 g of whole blood (the employee need not be removed if the last blood sampling test shows blood lead level to be at or below 40 µg/100 g of whole blood).
- If the employee’s blood lead level does not decline adequately with 18 months of removal, the employee will be offered a medical examination to determine if the employee may be returned to his or her former job status.
- Medical Removal Protection requirements of 1910.1025(k)(2) shall be followed.

Recordkeeping

- Medical surveillance records shall be maintained for 30 years after termination of employment.
- Exposure monitoring records shall be maintained for 30 years after completion of the project.
- Exposure and medical monitoring records shall be made available to affected employees or their representatives and to regulatory agencies upon request.

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Training

Training shall be provided to employees who have the potential to exposure of lead prior to the time of initial assignment and annually thereafter. All affected employees are required to attend training programs. Training will include the following:

- Distribute a copy of the content of the lead standard and Appendices A and B of the regulation and ensure it's readily available for employees.
- Content of any compliance plan in effect.
- Access to information and training records.
- Specific operations where lead exposure is or could result in being above the action level.
- Engineering controls and work practices associated with the job.
- Purpose, proper selection, fitting, use, and limitations of respirators.
- Purpose and description of the medical surveillance program, which will include potential health effects, (including there could be adverse effects on reproductive systems) and the medical removal program.
- Instructions to employees that chelating agents should not routinely be used to remove lead from their bodies and should not be used at all except under the direction of a licensed physician.

Tarlton is committed to maintaining a safe and healthy work environment for all employees, clients, and the public. To support this commitment, our employees are strictly prohibited from performing any type of lead abatement, lead removal, lead disturbance, or other activities that fall under regulated lead abatement work. If a project requires lead abatement or related specialized services, such work will be performed only by properly licensed and certified lead-abatement contractors. In general our employees will not engage in these tasks under any circumstances.

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PURPOSE & APPLICATION

The following excavation procedures apply to trenches and excavation. An excavation is any cavity or hole in the earth formed by digging or blasting. A trench is defined as any excavation deeper than 4' and deeper than it is wide but the width at the bottom is less than 15 feet.

Tarlton Corporation's policy is to permit only trained and authorized personnel to create or work in excavations. These procedures are applicable to both daily workers and those who only occasionally work with excavations.

Competent Person: *one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.*

The project Superintendent or Site Safety Supervisor is the competent person in charge of these excavation procedures, with employees being trained to the level of competence for the types of excavations with which they work.

All supervisors and management employees are required to attend OSHA Excavation training prior to starting any excavation work. This training shall be renewed every 3 years.

PROCEDURE

Before excavating:
Complete an Excavation Permit
Contact utility companies or property owners for utility locations.
Missouri One Call at 1-800-DIG-RITE (1-800-344-7483).
Illinois, J.U.L.I.E. at 1-800-892-0123.
Any other state, contact local utility locator program or Corporate Safety Department for assistance.
Remove or adequately support objects in the excavation area that could create a hazard to employees (i.e. trees, rocks, sidewalks, adjacent structure underpinning, etc.).
Classify type of soil or rock by visual and manual test in accordance with Appendix A in Subpart P of the OSHA standard.
Prior to any excavation, the Tarlton Excavation Permit must be completed.

The Competent Person chooses method for sloping, benching, or protective support system, as necessary.

- Sloping & Benching
- Timber Shoring
- Aluminum Hydraulic Shoring
- Pneumatic Hydraulic Shoring
- Trench Jacks (screw Jacks)
- Trench Shields/Boxes

Excavation Requirements
The Competent Person inspects the excavation and adjacent areas on a daily basis for possible cave-in, failure of protective systems/equipment, hazardous atmospheres, or other hazardous conditions and completes a daily excavation checklist.

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Inspections are required after occurrence of any natural or manmade events (such as rain or blasting) that could increase the potential for hazards.

Employees may not begin work until after Competent Person inspections are complete.
A warning system shall be used to alert operators of heavy equipment and other employees at the work site of the edge of an excavation (i.e. leading edge protection/barricades.)
Place spoils, equipment, materials, and/or debris a minimum of 2 feet from the edge.
Provide overhead protection or the use of retaining devices that are sufficient to prevent materials or equipment from falling or rolling into the excavation.
Fall protection or prevention will be required around excavations or trenches greater than 6 feet deep.
Cranes must maintain a standoff distance from excavations and trenches; 1.5 feet for every 1 foot of depth unless engineering data is available.
Employees are not permitted under loads that are handled by lifting or digging equipment.
Employees are not allowed to work in the excavation above other employees unless the lower level employees are adequately protected.
Provide diversion ditches, dikes, or other means to prevent surface water from entering an excavation and to provide drainage to the adjacent area.
Competent Person tests atmosphere where oxygen deficiency or a hazardous atmosphere exists or could reasonably exist.
Emergency rescue equipment is readily available and attended when hazardous atmospheric conditions exist or may develop.
Sufficient means for exiting within 25 feet of lateral travel (maximum spacing 50').
Guardrails if there are walkways or bridges crossing over an excavation.
If emergency team is not on site, call 911 for emergency rescue.

Hydro-Excavation is required to daylight or pothole any excavation within a 24" Tolerance Zone on either side of located utilities.
If a project installed utility needs to be backfilled and the backfill is temporary or the location of the utility will need to be known during future phases of the project, the utility must be marked with a 2X4 or similar marking device noting the depth of the utility and/or backfill utility with sand and placing marking tape 1' above utility, identifying the proximity of the known utility.
NEVER use a steel probe to locate underground utilities. Only nonconductive probes, such as fiberglass probes with a steel tip, shall be used.
In excavations greater than 20 feet deep, protective support systems MUST be designed by a registered professional engineer.

For detailed information on the above mentioned protective systems, see appendices B, C, D & E in Subpart P of the OSHA construction standard

OSHA REFERENCE
Excavations are covered in the OSHA Construction Standard 29 CFR 1926 Subpart P.
RELATED SECTIONS
SIFs (Serious Injury and Fatality)
APPLICABLE FORMS (APPENDIX B)
Daily Excavation Checklist

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Excavation Checklist

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PURPOSE & APPLICATION

The purpose of this policy is to inform employees of any required training and safe work practices for using ladders during the course of their work.

This policy applies to step ladders, extension ladders, fixed ladders, and job-built ladders. Ladder accidents usually are caused by improper selection, care, or use, not by manufacturing defects. Some of the more common hazards involving ladders, such as instability, electrical shock, and falls, can be predicted and prevented. Prevention requires proper planning, correct ladder selection, good work procedures, and adequate ladder maintenance.

PROCEDURE

Safe Work Practices:

GENERAL

- Whenever possible, avoid working from ladders; substitute a stable work platform or scaffold that is fully decked with a complete guardrail system.
- All ladders will be visually inspected on a regular basis and before each use.
- Do not hand-carry tools or other loads while climbing a ladder.
- Always face the ladder. Keep belt buckle between rails to prevent overreaching when ascending or descending. Do not try reaching so far that you lose your balance; move the ladder.
- Check Duty Rating. Ladders are designed for loads, including worker, tools, clothing, and materials; ladders must be rated 1A or greater. Loads for ladders shall not exceed duty rating.
- Ladder rungs must be uniformly spaced on all ladders according to OSHA standards.
- There will be only <u>one</u> person on a ladder at a time. Place both ladder feet on a firm level surface.
- Always maintain 3 points of contact with the ladder. Three points of contact can mean two feet and one hand, or two feet and the body supported by the ladder.
- Do not try to move ladder while on it by "walking" or bouncing the ladder.
- Avoid applying excessive force while on a ladder.
- Never use a ladder as a plank, brace, or support or on a scaffold.
- Check for fatigue or damage by testing to see if the ladder leans or tips over when positioned on a level surface.
- Never climb through guardrails or wire rope perimeter protection to access ladders.
- Absolutely, under no circumstances, should a defective ladder be used. Tag and remove from service immediately and report it to the proper person.
- Use the ladder only for its intended and designed purpose.
- Proper usage of ladders must be noted on all applicable PTSP.
- Double-cleated or double ladders are required when ladders are the only access/egress to a work area where 25 or more employees work or when a ladder serves simultaneous two-way traffic.
- Each contractor will be required to use their own ladders and not ladders belonging to other trades.
- No wooden or aluminum ladders may be used on Tarlton jobsites.
- Job-built ladders must meet or exceed OSHA's design strength criteria for vertical uprights, rungs, and rung spacing.
- Ladders must be properly stored so they will not be damaged when not in use.
- Maintain a 10 feet standoff distance from overhead powerlines unless other precautions are taken. Working closer than 10 feet to power lines requires clearance from the Safety Team.

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- Never repair a manufactured ladder in the field; only qualified facilities and technicians are to make repairs to ladders.
- Always maintain clear, unobstructed access to ladders, at least 3' around the ladder.
- Fixed ladders over 20 feet long must be equipped with additional safety devices to prevent falls; otherwise fall protection systems must be utilized while climbing.
- If a stable position cannot be maintained while working from a ladder, fall protection systems will be required. Some clients require the use of fall protection systems when working on ladders over 6 feet or they will prohibit the use of ladders for anything other than access.
- *Fall protection may be required during ladder use if an employee cannot maintain a stable position. Stable position is considered to be three points of contact or two feet stable, facing the ladder with belt buckle inside the uprights, and upper body in contact with the ladder.*

STEP LADDERS

- Do not stand or sit on the top 2 steps of a stepladder.
- Step ladders should be securely spread open. Never use a folding step ladder in a closed position unless it has been designed to be used in both open and closed positions.
- Do not stand on or climb cross bracing.

EXTENSION/STRAIGHT LADDERS

- Extension ladders should extend 3 feet above the access area.
- Secure the ladder from movement. If possible, secure at the top and bottom; have someone hold the ladder if necessary.
- Install offset guardrails around or install walk through attachment on extension or other ladders used to access landings, scaffolds, or floors whenever possible to prevent falls or gaps in guardrail systems.
- Don't stand on the top 4 rungs of a straight ladder.
- Set up straight ladders using the 4 to 1 rule. The distance from the wall to the base of the ladder should be one-fourth the distance from the base of the ladder to where it touches the wall.
- The rails of the extension ladder must be supported equally at the top.

LADDERS LAST

Tarlton has adopted the ladder's last philosophy. Ladders should be the last option when working in elevated positions. Whenever possible other means of working in elevated positions should be considered and used before the use of ladders. Other means can include but are not limited to scissors lifts, aerial lifts, scaffolding, baker scaffolding, ect…

Hazard Recognition:

Falls
Possible injury from falls as a result of ladders slipping or moving while in use.

Collapse/Failure
Failure of a ladder from overloading, defects, or damage.

Electrocution/Shock
Contact with overhead power lines.

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Slips, Trips, and Falls
Debris, materials, extension cords, etc in path of ladder access.

Struck By
Fall equipment/material from employee working from a ladder.
Ladders being struck by moving equipment or doors opening into them.

Training:

- General construction hazard training in OSHA 10 and 30-hour training, daily PTSP and weekly TBT topics.

Inspection:
Before each use, perform a ladder inspection. If one of the following conditions is present, the ladder must be discarded or tagged for repairs.

- Broken, missing, or loose-steps, rungs, or cleats.
- Cracked side rails.
- Movable parts do not operate.
- Excess play in movable parts.
- Damaged or missing safety feet.

Before using a ladder, inspect the area in which the ladder is to be used and if possible remove any tools or material that may increase the chance of injury in the event of a fall.

OSHA REFERENCE
29 CFR 1926 Subpart X Ladders

RELATED SECTIONS
NA

APPLICABLE FORMS (APPENDIX B)
NA

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PURPOSE & APPLICATION

The purpose of this policy is to inform employees of any required training and safe work practices for use of jobsite mobile equipment such as skid steers, aerial lifts, forklifts/lulls, backhoes/track hoes, and cranes.

PROCEDURE

Safe Work Practices:

- Only certified/qualified operators are authorized to operate equipment.
- Jobsite minimum PPE must be worn by all operators when off the equipment.
- Additional PPE must be worn based on the hazards of the work – respirators, hearing protection, and/or fall protection may be required for certain operations.
- All equipment should have a daily, documented inspection.
- Seat belts should be worn at all times.
- All mobile equipment should have a working fire extinguisher on board.
- The swing radius and overhead work areas of equipment should be barricaded at all times.
- Do not approach equipment in use without the operator's knowledge; ensure operator sees you and you see him.
- Only the operator should ride the equipment unless a seat is provided for another person.
- Keys should be removed when equipment is not in use or secured so it cannot be operated by others.
- Minimum 4 inches thick oak lumber should be used to crib outriggers when wood is used for cribbing.
- Equipment must be set on firm, level ground.
- Cranes – the tires must be off the ground when a mobile crane is set to make a pick, do not leave a crane with a suspended load, standoff distance for a crane from an excavation should be 1.5 times the depth unless stipulated by a registered engineer.
- Hoisting of materials must be conducted according to safety rigging practices by a qualified rigger and within the manufacturer's guidelines and capacity of the equipment.
- Hoisting of personnel with mobile equipment may only be performed in an engineered platform compliant with OSHA and manufacturer's requirements.
- All equipment must have a yearly documented inspection and a copy kept on board.
- Equipment should not be within 10 feet of energized power lines unless OSHA 1926.1401 guidelines are met.
- Weights of all loads should be known.
- Loads imposed on surfaces must be planned for equipment operation, weight of equipment on roadways, near excavations, soil, sidewalks, parking lots, etc.
- Loads over 75% of capacity require a critical picking permit.
- Anytime equipment is being operated in the blind, there must be someone directing the operator.
- No other employees or subcontractors are to operate mobile equipment owned by Tarlton without proper, documented authorization, hold harmless agreements, and proper insurance.
- Extreme caution must be taken regarding pinch points for operation of equipment and changing of attachments. Only qualified persons shall perform attachment changes on equipment under the direction/supervision of a qualified or certified operator or Competent Person.
- When available, all mobile equipment must be equipped with overhead and rollover protection.
- Spill kits must be available onsite when any mobile equipment is being operated to remediate any fluid or fuel spillage or leaks; diapers may be required on certain equipment in certain circumstances.

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- Spotters must be used when moving, loading, unloading, or transporting mobile equipment in congested areas to avoid contact with people or fixed objects.
- No equipment shall be loaded beyond the equipment's established load limits.
- All material and equipment shall be secured for safe transport prior to transport beginning.

Hazard Recognition:

Electrocution

Overhead and underground utilities must be identified in work areas prior to equipment operation and proper standoff distances maintained. Soft dig methods will be required when in proximity to known underground utilities.

Tip Over

All equipment operators must understand the stability characteristics of the equipment being operated and plan accordingly to maintain stability and protect themselves in the event of an overturn.

Caught Between

Public or employees caught between equipment and immobile structures, materials, and earth banks. A minimum of 6 feet standoff distances must be maintained for all personnel (public and site personnel) around mobile equipment.

Struck By

Public or employees struck by rotating, moving, turning, swinging, or pile driving equipment and immobile structures, materials and earth banks. Again, a minimum of 6 feet standoff distance must be maintained for all personnel (public and site personnel) around mobile equipment.

Training:

- All operators must be certified to operate mobile equipment.

Inspection & Maintenance:

A documented inspection must be performed at the start of each work shift and include the following:

- Operational checks – lights, brakes, steering, gauges, wipers, horn, backup alarm, windows, seat belt, heater/air conditioner, indoor window latches
- Safety devices
- Levels/Condition – fuel, engine oil, transmission fluid, hydraulic fluid, tires, handrails, catwalk, fire extinguisher
- Any deficiencies should be noted on the documented inspection form and immediately reported to the site superintendent for repair.

OSHA REFERENCE

1926.600 Subpart O, Equipment

RELATED SECTIONS

SIFs (Serious Injury and Fatality)

APPLICABLE FORMS (APPENDIX B)

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Aerial Work Platform Daily Inspection Log
Crane Operator's Inspection Log
Forklift Pre-Shift Inspection Checklist
Mobile Equipment Operator's Inspection Log
Skid Steer/Bobcat Safety Inspection Checklist

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PURPOSE & APPLICATION

The purpose of this policy is to inform employees of any required training and safe work practices for scaffold use.

This policy applies to all scaffolds used in work areas, to include mobile scaffolds (Baker scaffold and others with wheels) supported (tube & frame, structural) and suspended (swing stage). It does not apply to crane and derrick manbaskets or aerial lifts.

PROCEDURE

Competent Person:

The competent person will oversee the scaffold selection, erection, use, movement, alteration, dismantling, maintenance, and daily inspection. The competent person will be knowledgeable about proper selection, care, and use of the fall protection equipment and shall assess hazards related to scaffold use.

Competent Person Responsibilities:

- Continued experience with specific type of scaffold (by training or professional experience).
- Continued familiarity with all applicable regulations and industrial standards.
- Recognition that a qualified engineer should design: wood pole scaffolding over 60 feet high and tube and coupler scaffolding over 125 feet high.
- Documented daily inspection of all scaffolding: assembly procedures, guardrails, toe boards, mesh screens, planking, bracing, work practices, operational controls, housekeeping, protection from overhead hazards, and tagging all scaffolds.
- Scaffold tags: Red – DO NOT USE, Yellow – USE WITH CAUTION (fall protection or other noted protection required), Green - OK (no additional protection required).
- Enforcement of corporate policy and federal regulations.

Safe Work Practices:

Scaffolds

- Erection and dismantling to be performed under the supervision of a Competent Person.
- Guardrails must be installed on scaffolding that is 6’ feet in height or higher.
- Platform must be fully decked with no more than 1 inch between boards. Scaffold boards cannot be painted. Platforms are to be a minimum of 18 inches wide.
- Position scaffolding only on ground capable of supporting the anticipated load. Scaffolds must be able to support 4 times its intended load.
- Use proper supports (steel plate, oak timbers). Do not use barrels, boxes, loose bricks, or concrete blocks for supported scaffolds.
- Use well wheel or hoist when hoisting materials onto scaffolds.
- Scaffolds must not be moved unless all tools and materials are secured.
- Wheels/casters must be locked while stationary.
- Use only similar metals in assembly for tube and coupler scaffolding.
- Follow directions of Competent Person.
- Secure or cleat all planking.
- Maintain and inspect guardrails, toe boards, and mesh screens.
- Report damaged or weakened scaffolding components to the competent person. Damaged boards or components are to be removed from use.

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- A scaffold's height to base width ratio of more than 4:1 shall be restrained from tipping by guying, tying, bracing, or other equivalent means. Baker Scaffolds more than 2 sections high require outriggers for stabilization.
- Use only approved access ladders.
- Controlled Access Zones are to be used below/around masonry scaffolds and overhead work areas.
- Work platforms cannot be more than 14 inches from the face of the work.
- Avoid hot work on staging suspended by rope.
- Saw horse/horse scaffolds are prohibited from use on Tarlton projects.
- No more than 2 employees at a time will be on an 8 feet span of craftworker's bracket scaffolding unless otherwise designed for that purpose.
- Employees are not permitted to ride on mobile (rolling) scaffolds unless specifically designed to do so.
- Using mobile, foldable, two-tier painter-style scaffolding as a work platform is prohibited on all Tarlton projects.

Scaffold Erection

Scaffolds are to be erected and dismantled under the supervision of a Competent Person. Dismantling activities should be planned and performed with the same as with erection. If scaffold erection or dismantling cannot be completed by the end of the shift, the scaffold should be tagged "out of service".

Platforms

Each platform must be a minimum of 18 inches wide and fully planked or decked. Each platform plank shall be installed so that the space between adjacent units is no more than 1 inch. Guardrails, mid-rails, and toe boards are required on all supported, mobile, and swing stage scaffolds. Cross or horizontal bracing is required at each level of supported scaffolds to keep it square or plumb. When a scaffold's height reaches 4 times its width it must be attached to the structure every 30 feet.

Scaffold Access

All metal frame scaffolds must have a means of access/egress. This can be gained from attached or portable ladders, stairways, or the adjacent structures. Ladders must extend 3 feet above the working platform and be secured. Gates, removable guardrails, or safety chains must be used at the ladder landing.

Hazard Recognition:

Employees working on any type of scaffold are exposed to the following hazards:

Falls

Caused by slipping, unsafe access, improper construction, and/or the lack of fall protection such as guardrails, chains, or personal fall arrest systems.

Struck-By Injuries

For supported or suspended scaffolds, this can include falling tools, materials, or debris.

Scaffold Collapse

Scaffold collapse can be caused by improper construction, damaged components, ground instability, overloading, or improper modification.

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Training:

- All employees who work on scaffolds must receive scaffold user trainer by a qualified person. Employees must receive training on the particular types of scaffolds that they are to use prior to starting work. Training should focus on the identification of hazards (such as falling, dropping items, electrical hazards, over-reaching, etc.), proper load ratings, proper erection, handling, use, inspection, dismantling, and care of the scaffolds. Training must also include the installation of fall protection, particularly guardrails, and the proper selection, use, and care of fall protection.
- Training for suspended scaffolds (aka swing stages) should include inspection, operational, and emergency descent training on the exact model the employee will be using. This is normally conducted by the swing stage installer and is required for anyone who will be on the swing stage, as well as the foreman or superintendent on site. Inspection training teaches the worker how to inspect the swing stage components, lanyard, rope grab, independent vertical lifeline, and an independent lifeline anchorage.
- Employees working on electric scaffolding (e.g. swing stages) must be trained in emergency procedures to include shutdown and egress.
- Scaffold training shall be documented with employee's name, signature, date of training, and training materials. Retraining shall occur every 3 years for employees using scaffolds. An employee may be retrained sooner if he/she shows deficient understanding or skill in handling work on a scaffold.

Inspection:
Whichever type of scaffold is chosen, due diligence must be used when constructing and inspecting. Each component of the scaffold should be inspected by a Competent Person prior to erection to make sure it is not damaged or defective. The Competent Person shall inspect the scaffolding periodically throughout the shift.

Once the supported or suspended scaffold is constructed, it should be signed-off on by the Competent Person prior to any use. This is easily documented with a scaffold tag. A scaffold tag should be placed at each point of entry onto a scaffold. Green tags indicate the scaffold has been inspected prior to the shift and is ready for use; Yellow tags indicate inspection prior to start of the shift and ready for use WITH fall protection; and a red tag indicates the scaffold is unsafe and cannot be used for any reason.

OSHA REFERENCE
1926.450 Subpart L Scaffolds

RELATED SECTIONS
SIFs (Serious Injury and Fatality)

APPLICABLE FORMS (APPENDIX B)
Suspended Scaffolding Inspection Log

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PURPOSE & APPLICATION

This policy applies to all aerial lifts, including boom lifts and scissor lifts. For suspended personnel platforms, see SCAFFOLDING. For manbaskets, see RIGGING, HOISTING & SIGNALMAN.

PROCEDURES

Competent Person:

The Competent Person will remain knowledgeable about aerial lift use and inspection. He/she will manage the daily activities involving aerial lift work and will perform daily, documented inspections. The competent person will ensure that:

- Basket occupants are wearing a body harness attached to the engineered tie-off point (boom lifts and where required in other lifts).
- The lift is not moved when the boom is elevated unless specifically designed to do so.
- Lift controls are operational.
- Audible and visual alarms are operational before each use.
- Lifts are equipped with motion alarms for both travel and swing.
- Manufacturer's boom and basket maximum intended loads are not exceeded.
- Outriggers are positioned on pads or solid ground when used. Brakes are set anytime outriggers are used. Wheel chocks are installed before use on an incline.

Safe Work Practices:

- Only certified operators are authorized to operate aerial lifts.
- Ensure workers who operate lifts are properly trained in the safe use of the equipment.
- Boom lifts require 100% tie-off at all times. Scissor lifts require tie-off if foot contact with the platform cannot be maintained or if required by the manufacturer and/or client.
- Never override hydraulic, mechanical, or electrical safety devices.
- Never move the equipment with workers in an elevated platform unless this is permitted by the manufacturer.
- The guardrail or gate chain must be secure at all times.
- Lift should only be operated on firm, level ground.
- A daily documented inspection must be maintained on the lift.
- Do not allow workers to position themselves between overhead hazards, such as joists and beams, and the rails of the basket. Movement of the lift could crush the worker.
- Maintain a minimum clearance of at least 10 feet away from the nearest overhead lines. Operation within 10 feet requires compliance with OSHA guidelines and the completion of Minimum Approach Distance Work Permit.
- Work areas should have a Controlled Access Zone to warn of overhead work.
- Always treat powerlines, wires, and other conductors as energized, even if they are down or appear to be insulated.
- Use a body harness with a lanyard attached to the engineered tie-off point in the boom or basket to prevent the workers from being ejected or pulled from the basket.
- Set the brakes and use wheel chocks when on an incline.
- Use outriggers if provided.
- Do not exceed the load limits of the equipment. Allow for the combined weight of the worker, tools, and materials.

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- Never walk under a boom to gain access to the platform.
- Do not tie the platform off to any structure for any reason.
- Stand on the platform floor. Standing or sitting on the railing is prohibited (any exception to this must be approved by the Competent Person listed on the PTSP).
- Always look in the direction the machine is moving.
- Do not rest the boom or basket on any steel structure.
- If necessary to exit the basket at elevated heights, 100% fall protection methods are required during the transfer from the basket to an approved anchorage location.
- Load capacities should never be exceeded. Material, tools, and personnel should be factored into the load weight.
- Erect barricading or use a spotter on the ground when operating in high-traffic areas to keep personnel 6 feet from the lift.
- Keep hands off the external portion of the basket when raising or lowering the basket.
- A tagline must be used to raise tools/materials when the basket is in a work position.
- Secure all tools in the lift so they will not fall out.
- Lifts are not to be used as a crane.
- Remove key when not in use.
- Aerial lifts must be 12 inches or closer to a structure before exiting.

Hazard Recognition:

Tip Over

Lifts are intended to be operated/elevated only on firm, level surfaces unless equipped with outriggers that are designed for use on sloped surfaces. All lifts will tip over if elevated on a slope that exceeds the manufacturer's recommendations or if they are driven on uneven terrain, including drop-offs or holes.

Falls

A full body harness and lanyard are required for all boom lifts. Do not operate the lift until the entry is secured (chain or gate). Never sit, stand, or climb on the guardrails or try to climb down from the platform. Fall protection is not required in all scissor or vertical lifts but is required if employees cannot maintain contact with the platform floor.

Collision

Collisions can happen at ground level or overhead. Be sure to always check for overhead obstructions or hazards. Limit travel speed according to condition of ground surface, congestion, slope, etc.

Electrocution

The possibility of electrocution is a serious consideration when working near overhead power lines. Clearance distances of 10 feet should be maintained to avoid the possibility of the scaffold touching the power lines or being in too close proximity where the electricity can "jump" or arc to the scaffold.

Lifts are NOT insulated and provide little or no protection from electrocution. A decal should be attached to the lift that will identify the Minimum Safe Approach Distance (MSAD) of 20 feet.

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Training:
Operators – Aerial lift operators are required to be certified
Operators are also required to be qualified for each specific piece of equipment.

Inspection:
Anytime aerial lifts are operated, a documented, daily inspection must be completed. This form will guide the Competent Person, the crew using the aerial lift, and the operator through the required components of inspection.

OSHA REFERENCE
1926.453 Subpart L Scaffolds, Aerial Lifts

RELATED SECTIONS
Scaffolding (Section 32)
Rigging, Hoisting & Signalman (Section 37)

APPLICABLE FORMS (APPENDIX B)
Aerial Work Platform Daily Inspection Log

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PURPOSE & APPLICATION

Prior to working at any height, every effort will be made to eliminate or reduce the hazard of falling. Tarlton's fall protection policy is designed to prevent a fall while working from any height (even as low as 1 foot) and reduce the potential fall distance. Engineering controls must be exhausted prior to the use of Personal Fall Arrest System (PFAS). Tarlton's fall protection policy is 100% tie-off when using a PFAS; all PFAS are to be designed to limit the fall distance to less than 6 feet and prevent contact with a lower level.

This applies to all work exposure of working at heights, such as scaffolds, ladders, roof work, steel erection, aerial lifts, concrete formwork, and installation of reinforcing steel.

Competent Person: *one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.*

Qualified Persons Responsibilities

Only the Qualified Person shall develop site-specific fall plans and assessments of work place fall hazards at any height; any work at elevation from a floor or the ground.

Selection of fall protection system in accordance with the Tarlton Fall Protection Identification Protection Table.

Fall protection and training shall be provided to employees exposed to falls equal to or greater than 6 feet per industry requirement. Tarlton reserves the right to require training for fall protection for any height of fall.

Development and coordination of prompt rescue services.

Continued familiarity with all applicable regulations and industrial standards.

Continued observational safety checks of work operations.

Correct any unsafe acts or conditions immediately.

Enforcement of corporate policy and federal regulations.

Employee responsibilities

Do not work at areas of fall exposure unless trained to use fall protection systems.

Use fall protection system provided by the Competent Person.

If selected fall protection system exposes employee to a greater hazard the employee is to notify the Foreman and the concern is to be addressed before proceeding.

Understand and adhere to the procedures of this plan and follow the instructions of the Competent Person.

Bring to management's attention any unsafe or hazardous condition or act that may cause injury to themselves or any other employees.

PROCEDURE

Fall protection development by the Qualified Person

Preplans or performs workplace assessment for fall hazards.

Selects fall protection system by the following priority:

- Guardrails
- Positioning devices
- Personal fall arrest system
- Safety net system
- Warning line system

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- Controlled access zones
- Safety monitoring system
- Documents reason for using fall protection system identified.
- If, none of the above systems are utilized, 100% tie off is required.

Ensures that all personal fall arrest or protection systems meet or exceed all applicable requirements of the OSHA CFR 1926, Subpart M regulations, which states that systems are to be designed to prevent a free fall of more than 6 feet or contact with a lower level.
Self-Retracting Devices (SRDs) must be leading edge rated.
No rigging shall be used for fall protection. All fall protection equipment must be designed for fall protection use.
Periodically reassesses operations to determine the need for revising fall protection plans.
Adequately responds to any concerns of fall protection on site.
Ensure proper rescue provisions if a fall does occur. Any fall protection plan shall detail both on-site and outside rescue services to provide prompt rescue of any employee involved in a fall.
Participates in required incident investigations in the event of a fall (with or without injuries) or a near miss.

If construction barricades are used, that are not capable of supporting 200 lbs., as part of the fall protection system. The barricades must be placed at least 15' away from the fall hazard and complete surround the hazard. Any employees who go beyond the barricade system must have the appropriate PFAS installed and attached.

All supervisors and management employees are required to attend OSHA Fall Protection training prior to starting any work requiring a fall protection system. This training shall be renewed every 3 years.

Each employee will receive documented training in fall protection procedures and strictly adhere to them. Under no circumstances shall an employee work in areas where they might be exposed to fall hazards, do work requiring fall protection devices, or use fall protection devices until they have successfully completed an OSHA compliant fall protection training program. The training program shall include recognition of fall hazards, awareness, inspection, assembly, and use of personal fall protection systems, warning systems, and guardrails or barrier systems used to prevent falls. Retraining shall be required for employees if deficiencies in training or fall protection awareness are noted, if the workplace changes, or if the fall protection system or equipment changes making previous training obsolete.

<u>Floor Hole Covers</u>

- Each contractor shall be responsible for covering floor openings it has created for its use. Covers will be provided, installed, and maintained by the contractor. The following guidelines shall be followed.
- All floor holes, 2 or more inches in its least dimension in which an employee can trip into, step into, or step through must be covered, all covers must be conspicuously marked, be secured from movement, and designed to withstand 2 times the maximum intended load.
- Floor holes used for access and/or material hoisting.
    - If the holes are to be used for access or to pass material through, they should be barricaded with a guardrail, complete with gates, removable handrail/guardrails, or chains.
    - All holes used for access or material handling shall be designated and locations disseminated to all individuals working on the Project Site, including contractors.

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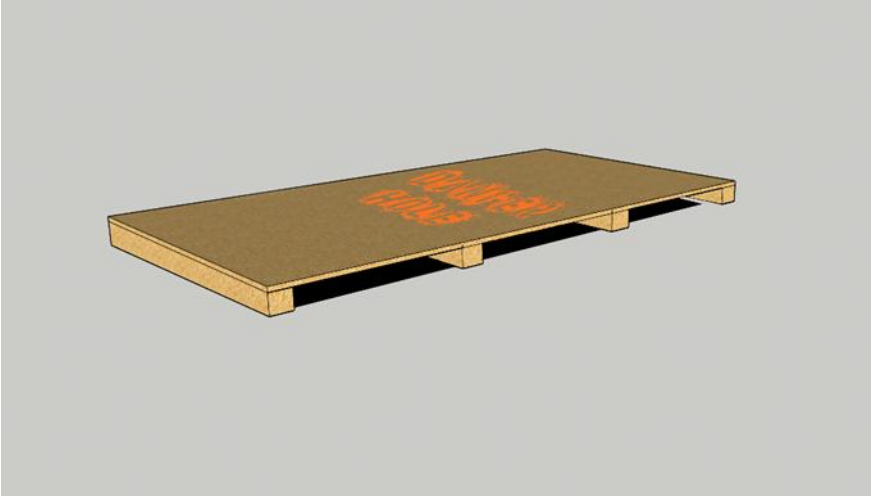
  - Holes that are used for access or material handling shall always be recovered and/or handrail/guardrail reinstalled and secured when unattended.
- If a floor hole(s) is unable to have a floor hole cover installed on them, for any reason, they should be barricaded with a standard guardrail system.
- All floor hole cover shall bear on solid surface around the hole at least 1' on each side.
- If any MEWPS are operated on the same level as a floor hole cover and there is a possibility a MEWP can drive on top of a cover, the cover must be designed to withstand 2 times the weight of the lift or designed to prevent the lift from driving onto it.
  - Two pieces of plywood secured together or 4" X 4"s (wood or aluminum) with plywood installed on top can be used to accomplish the MEWP restriction.
- Commercially available floor hole covers can be used, as long as they are designed to withstand 2 times the maximum allowable load.
- All holes must have the appropriate covers secured when left unattended for any reason.
- All employees, when lifting plywood, especially plywood marked "Hole", shall look underneath before walking forward.



The picture to the right is an example of how a floor hole cover should be constructed if the option of using aluminum joist, 4"X4" timber or equivalent is used. This is not a design drawing and if this method is used it should be designed and installed to support two times the maximum allowable load.

OSHA REFERENCE
This plan is based on the OSHA CFR 1926, Subpart M, Fall Protection requirements.

RELATED SECTION
SIFs (Serious Injury and Fatality)

APPLICABLE FORMS (APPENDIX B)
NA

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PURPOSE & APPLICATION

The purpose of this policy is to inform employees of any required training and safe work practices for working with a heat source.

This policy applies to work such as grinding, cutting, welding, or any other work that consists of using a flame or creating sparks.

PROCEDURE

Safe Work Practices:

HOT WORK

- Hot work requires a hot work permit be filled out.
- Hydrant water supply is available in general proximity of the site.
- A 10# ABC fire extinguisher will be maintained within 25 feet of the hot work.
- Proper hazard specific PPE must be worn while performing hot work in addition to the minimum required PPE. This PPE should be identified on the daily PTSP.
- A fire watch must be assigned during hot work with the sole responsibility of monitoring fires.
- More than one fire watch may be needed depending on the configuration of the job site and work area.
- Typical hot work operations will cease a minimum of **1 hour** prior to the end of each shift. A fire watch walk-through will be conducted prior to leaving the site. Note: Duration of fire watch following work operations may vary depending on Owner requirements and occupancy of building.
- Daily cleanup of dust/debris at building penetration is required.
- Ensure adequate ventilation or air monitoring in the work area.
- Operators inspect all equipment (hoses, gauges, leads, etc) prior to each use. If any equipment is damaged or defective, equipment shall be tagged and removed from service until repaired by qualified personnel.
- Torch sets should have a back flash arrestor.
- Torch sets should only be hoisted if contained in a cart that is designed to be hoisted.
- Torch sets must be broken down and bottles capped when not in use or at the end of each shift.
- Combustibles are to be removed if within a 35 feet radius of hot work.
- If fire hazards cannot be removed from the vicinity of hot work, shields, screens, and guards shall be used to protect combustible items from slag, sparks, and heat.
- Avoid wearing oily, greasy, or dirty gloves when performing hot work.
- Shields/Screens should be used to avoid exposure to arc flash.
- All employees engaged in or supervising hot work shall be trained in the safe use of their tools and equipment and in the identification of associated hazards of performing hot work tasks. Training shall be documented prior to the start of tasks involving hot work, cutting, or welding.
- If hot work, cutting, or welding cannot be done safely, it shall not be done.

FIRE PREVENTION

- There will be no unmanned open flame heaters.
- All gas cylinders will be stored and transported upright, secured, and capped off. Fuel gas cylinders will be stored separately from other dissimilar gases by a distance of 20 feet or proper fire rated material.
- Flammable materials must be stored in a UL approved flammable liquids storage cabinet when not in immediate use.

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- Extinguishers at fuel points and flammable storage areas must be no closer than 25 feet and no further than 75 feet from the entrance to the area.
- Flammable liquids must be properly labeled and stored. No more than 25 gallons may be stored outside of flammable cabinets.
- All flammable liquids must be stored in UL approved safety cans.
- Fire extinguishers shall be conspicuously located.
- Inside a building, fire extinguishers shall be located at least every 3,000 sq ft.
- Minimum of one fire extinguisher located on each floor.
- Multi-story buildings shall have a fire extinguisher on every floor located near the stairway.
- Use of a fire extinguisher constitutes an incident and must be reported to the Superintendent.
- All employees must know emergency procedures in the event of a fire. Extinguishers and emergency egress paths must be identified.

Hot Work Permit Procedures:

- Hot work area will be inspected and Hot Work Permits will be issued by authorized Tarlton or Owner/Client representative. Permits will only be valid for one work shift.
- Hot work will require a full-time dedicated fire watch with 10# ABC extinguisher present.
- A trained fire watch is required under the following 5 conditions:
  i. If hot work is in a location where other than a minor fire might occur
  ii. If combustible material is within 35 feet radius of the hot work
  iii. If combustible materials outside 35 feet radius of hot work are easily ignited
  iv. If walls, floor, or ceiling near hot work are metal and behind and adjacent to those surfaces are combustible materials
  v. If wall or floor openings with 35 feet radius of hot work expose combustible materials
- Dedicated fire watch must monitor area for **1 hour** after heat source is eliminated.
- Project area must be staffed with labor or management personnel for **an additional 1 hour** after hot work has stopped; must have fire extinguisher available in area.

Hazard Recognition:

Fire Hazards

Employees should be vigilant to any situation that would contradict the safe work practices listed above. This would include:

- Seeing hot work performed without an extinguisher nearby.
- Smoking near flammable storage areas.
- Oily or greasy rags near hot work.

Training:

- Employees engaged in various types of hot work, including Welders, Cutters, Hot work Supervisors, and Fire Watch Attendants shall receive training on the P.A.S.S. method of using a fire extinguisher. Training shall be offered prior to initial assignment and renewal training offered annually.
- At each jobsite, each employee should receive a Site-Specific Orientation which will inform them of fire extinguisher locations, smoking areas, and the hot work permit procedures.

Inspection:

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- Every fire extinguisher should be serviced at least annually and tagged and dated to document.
- All extinguishers should be inspected monthly on jobsites and the inspection documented on its tag.

OSHA REFERENCE
29 CFR 1926 Subpart F Fire Protection and Prevention
29 CFR 1926 Subpart J Welding and Cutting

RELATED SECTIONS
NA

APPLICABLE FORMS (APPENDIX B)
Hot Work Permit

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PURPOSE & APPLICATION

This policy is applicable when Tarlton Corporation is self-performing the work or acting as the Construction Manager. When acting as a Construction Manager, this policy shall be distributed to the appropriate contractors for their assurance that these procedures will be followed.

In the event that Tarlton Corporation does not hold the contracts and is acting as a Program Manager, these procedures will be recommended to the client for inclusion in the various contracts.

This policy is to assure that loads are handled properly, safely, and with greatest efficiency.

PROCEDURE

- Identify Tarlton Corporation or subcontractor has a qualified Competent Person / operator to operate the crane.
- Determine load and type of crane to be used for operation.
- Plan critical lifts: crane exceeds 75% of lifting capacity, hoisting manbaskets or personnel, hoisting of equipment onto/into an existing structure, or hoisting irreplaceable items/long-lead items/items with a high-dollar value.
- All overhead lines shall be considered to be energized unless and until the person owning the line or utility company provides Tarlton the necessary documentation indicating it has been de-energized.
- A PTSP prior to the start of the job shall be performed by a Competent Person to determine any jobsite hazards; some hazards include electrical or powerlines within 20 feet of the crane or inside the swing radius, weather conditions, soft soil conditions, safety related or pedestrian/vehicle related. Any hazards within the identified crane/hoisting work zone should be identified and addressed.
- Minimum clearance between overhead power lines and any part of the crane or load must not be less than 20 feet. If
- Determine if any part of the equipment, load line or load (including rigging and lifting accessories), if operated up to the equipment's maximum working radius in the work zone, could get closer than 20 feet to a power line. If so, one of the following options must be performed:
    - Option (1)--Deenergize and ground. Confirm from the utility owner/operator that the power line has been deenergized and visibly grounded at the worksite.
    - Option (2)--20 foot clearance. Ensure that no part of the equipment, load line, or load gets closer than 20 feet to the power line.
    - Option (3)-- Determine the line's voltage and the minimum approach distance permitted. Determine if any part of the equipment, load line or load, while operating up to the equipment's maximum working radius in the work zone, could get closer than the minimum approach distance of the power line permitted. If so, then the employer must ensure that no part of the equipment, load line, or load (including rigging and lifting accessories), gets closer to the line than the minimum approach distance.
- If work must be performed closer than 20’ to an overhead powerline, the Minimum Approach Distance Work Permit must be completed.
- Determine safe placement of crane to protect workers and general public.
- Establish that ground conditions are able to support the crane and equipment safely per manufacturer’s specifications.
- Competent Person determines lift requirements and fills out critical lift form as necessary.

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- Competent Person must direct the assembly/disassembly of crane and hoisting equipment.
- Operator / Competent Person inspects crane according to manufacturer's inspection list.
- Operator performs lift.

Critical Lift Procedure

- Superintendent or Competent Person performs Critical Lift Calculation.
- Competent Person completes Critical Lift Plan/Rigging Plan.
- Originals of both documents will be forwarded to the Corporate Safety Director.
- Copies of documents will be maintained on site until all lifting operations are complete.

Authorized Operators

- Designated operators who have been certified by an approved agency (e.g. NCCCO) or union.
- Trainees who are under the direct supervision of the designated operator.
- Inspectors certified for crane inspection.
- Test and maintenance personnel when necessary.
- No one other than the above personnel shall be in or on the crane during operations.*
  * Exceptions are oilers or supervisors whose duties may require their presence.

Operator Responsibilities

- Ensure that manufacturer's instructions and prohibitions are followed to operate, assemble, disassemble, and inspect cranes and rigging/hoisting equipment.
- Proper placement of crane in relationship to load handled and landing area to obtain best-rated capacity.
- Leveling crane to within one (1) degree of level and rechecking level a minimum of three (3) times during the 8 hour work shift.
- Proper placement and use of outriggers for all lifts.
- Determination of stable or unstable ground or footing. (Should additional floats, cribbing, timbers, or other structural members be needed, they shall be of proper design and sufficient to uniformly distribute load.)
- Standoff distance from excavations is 1.5 feet for every 1 foot of depth unless other engineering data is provided.
- Installation and maintenance of crane swing radius protection by marking the area using barriers, railings, or warning lines.
- Conduct inspections and log findings in the crane log or inspection form.
- Notify supervisor of any needed adjustments or repairs.
- Determine that all safety devices are in working order before crane operations begin.
- Do not permit trainees to make initial lifts. The operator shall perform the first lift to determine lift stability, crane function, and safety, in general.
- Maintain familiarity with crane, its care, operator's manual, load charts, and wind velocity limits.
- Ensure that a crane manual with applicable operating procedures is in the cab at all times.
- Ensure that a fully competent signalman is assigned to work with the crane operator if views are obstructed, site specific safety concerns require it, or if the operator believes a signalman is needed.
- Upon request, demonstrate ability to determine total load weight and its relationship to crane load charts.

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- Follow proper shut-down procedures for unattended machine.
- Insure security of crane and cab when shut down.
- Have final responsibility and control over the crane operations. Whenever there is any doubt as to safety, the operator shall have the authority to stop and refuse to handle loads until safety has been assured.

Operator shall not:

- Engage in any practice which may divert his attention while engaged in crane operations.
- Operate his crane if physically or mentally unfit, or if taking prescription drugs which may affect judgment.
- Respond to any signal which is unclear or is given by anyone other than appointed signalman. EXCEPTION: The Operator shall respond to “stop” signal given by anyone.
- Swing loads over personnel.
- Permit side loading of booms. Lifts shall be limited to freely suspended loads. Cranes shall not be used to drag loads sideways.

Crane Inspection

Crane inspection shall be conducted by a qualified Competent Person. Inspections shall occur:

- After setup and prior to initial lift.
- Before each shift.
- After any malfunction or warning device activation.
- Monthly.
- Periodic / Annual Record (third party).

If, during any safety inspection, the operator or supervisor cannot produce the required crane inspection sheets, the crane shall be immediately shut down and inspected.

All inspections will be in accordance with manufacturer’s operator’s manual.

Tarlton Corporation will have an independent third-party conduct documented annual inspections and maintenance of all cranes. Documented monthly inspections shall be done by a qualified Competent Person.

Daily records pertaining to crane inspections shall be kept on site with the crane or in the Tarlton Corporation field office.

Daily records will be sent to the main office on a weekly basis.

TEAM Facility will maintain all crane maintenance and inspection records.

Load Ratings

Weight of all auxiliary handling devices (hoist block, headache balls, hooks, rigging, and cable) shall be considered as part of total load.

Weight of items attached to load at the site must be added to total weight.

On board computers or bills of lading will be used to determine total load weight.

Modifications or additions to the crane or hoisting equipment may not be made without written prior approval of the crane manufacturer or approval from a registered professional engineer.

Crane Set-Up

- Four basic elements to consider:
- Total imposed load.

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- Supporting surface area.
- Pounds per square foot.
- Soil stability (bearing pressure determined by engineering report or local building code departments.)

To calculate the psf, divide the load by the bearing areas.

Sample:

Crane and load	=	150 tons
Four 2' X 2' floats	=	16 sq. ft.
Therefore 150 T/ 16 SF =		9.38 tons /sq. ft.

Note: Moving the load over the corner outrigger concentrates a greater percentage of the load on that outrigger. The load percentage on each "corner" will vary depending on the type of crane and operating radius. A good rule to follow is to assume each corner is carrying 85% of the total load. Thus,

150 T x 0.85 = 127 T per float or 127 T / 4 sq. ft. = 31.75 T / sq ft

Cribbing Requirements:

- Strong enough to withstand weight of crane without major deflection.
- Bolted or secured together to prevent slippage and collapsing.
- Complete contact with soil, no voids, unsupported areas, etc.
- Large enough to accommodate total imposed load for allowable soil bearing pressure.

Outrigger Pads

OSHA 29 CFR 1926.1402(b) states that the controlling entity is responsible for the below:

The equipment must not be assembled or used unless ground conditions are firm, drained, and graded to a sufficient extent so that, in conjunction (if necessary) with the use of supporting materials, the equipment manufacturer's specifications for adequate support and degree of level of the equipment are met.

There are currently three options for determining the size of outrigger pads to use for construction vehicles that are equipped with and required to use outrigger while performing their function. (not including construction cranes) The options are listed from top preference to least preferred. One of these options must be used to determine the size of outrigger pads, every time one of these vehicles are setup. The below described outrigger pads will be used in conjunction with any pads that accompany the vehicle.

- Option #1 - Determine where the vehicle will be required to setup on the jobsite and remediate the soil with compacted rock. The area should be large enough to encompass the entire vehicle including the outriggers fully extended. Outrigger pads will still be required. The outriggers pads will be 4"X4" oak timbers, with 7 ply Form Ply Plywood secured to top and bottom, or 4 sheets of ¾" Ply-Form plywood secured together, alternating sheets to create cross grain. See attached for dimensions and design plan for both outrigger matts options.

- Option #2 - Steel road plates can be used on all 4 outriggers with dimensions of 4' X 8' X 1" or 6' X 6' X 1". The road plates must be placed so that the outrigger pads set flat without any angle. Steel road plates can be used on all types of soils.

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- Option #3 - A calculation can be conducted to determine the size of outrigger pads needed. First, determine all locations where the vehicle will be required to setup on the jobsite. The load-bearing capacity of the soil must be determined for each area. Once the load-bearing capacity for the soil has been determined, the maximum force that will be exerted on the area can be divided by the load-bearing capacity of the soil to give you the dimension of the outrigger pad, that will be required, in square inches. Force/Load-Bearing Capacity = Outrigger Pad sq. in. 4”X4” oak timber material will be used in length to achieve the proper square footage of outrigger pad needed according to the calculation. Pre-manufactured crane mats that meet the dimension criteria can also be used.

Tarlton currently has two options for determining the size of outrigger pads for cranes that are equipped with and required to use outrigger while performing their function on our jobsites. The options are listed below from most preferred to least. One of these options must be used to determine the size of outrigger pads, every time a crane is setup. Where applicable, the below described outrigger pads will be used in conjunction with any pads that accompany the crane.

- Option #1 - Determine where the crane will be required to setup on the jobsite and remediate the soil with compacted rock. The area should be large enough to encompass the entire crane, including the outriggers fully extended. Outrigger pads will still be required, the outrigger pads will be 4”X4” oak timbers, with a ¾” sheet of Form Ply plywood on top and bottom, or 4 sheets of ¾” Ply-Form plywood secured together, alternating sheets to create cross grain (See attached for design plan for both outrigger matts), or premanufactured crane matts that meet the dimension support criteria. To determine the size of the outrigger pads the following calculations must be performed. Crane capacity / 5 = square ft per outrigger pad.

- Option #2 - A calculation can be conducted to determine the size of outrigger pads needed. First, determine all locations where the vehicle will be required to setup on the jobsite. The load-bearing capacity of the soil will need to be determined for each area. After the load bearing capacity is determined the force must be calculated. To calculate the force, the sum of the crane weight, load weight, accessory weight and rigging weight will be determined. The force divided by the load-bearing capacity of the soil equals the crane pads size in square inches. Take the square root of the size to determine the dimensions of the crane pads.

Example:

47,800 – Crane weight
30,000 – Load weight
850 – Accessory weight
+ 175 – Rigging weight
78,825 LBS. = Force

Load-Bearing Capacity = 40 psi

78,825 lbs/40psi = 1,970.6 square inches

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The square root of 1,970.6 = 44.4 inches
Crane Pad Dimensions = Approximately 4’ X 4’

Tower Cranes

- The Competent Person will be someone with extensive training and knowledge in the use, application, installation, shoring, climbing, and removal of the machine.
- A competent, registered engineer must perform design related to crane placement (base, supports, guys, climbing arrangement, floor supports, shoring, etc.).
- The Competent Person must check installation against design detail for complete accuracy.
- A competent independent party must perform inspection after installation.
- Any components or structural sections designed and manufactured or altered by anyone other than the original equipment manufacturer, or his agent, must have a certificate of a qualified, Registered Engineer attesting to the structural integrity.
- An identification number should be clearly marked on all basic, removable, or altered components and attachments of the machine to show they belong to the system.
- All tower cranes of every configuration must be equipped with built inches limit switches which operate automatically to prevent damage to the machine should the operator make an error.
- Every brake on the crane must be fail-safe. These brakes must not release until power has been restored and when deliberately released. The application of the brake must have direct effect on the hoisting drum; no belts or chains are allowed between the brake and the drum.

Assembly/Disassembly

Conventional Crane Assembly/Disassembly

- Preassmebly
  1. Determine size/model of the crane and configuration
  2. Determine location of the crane on the site
  3. Check the crane site for overhead obstructions and underground utilities, overhead electric or voids existing and future.
  4. Procure crane reaction forces for the correct configuration from the crane supplier.
  5. Submit soil samples to soils engineer, if needed
  6. Determine if crane mats will be needed.
  7. Check FAA regulations for the area to assure compliance.

- Assembly/Disassembly
  1. Complete critical lift calculation permit for all lifts performed by the assembly/disassembly support crane(s) and maintain in plan file.
  2. Keep a list of all crew members; their names, company name and phone numbers.
  3. Retain assembly/disassembly support crane’s annual inspection certificates and copies of the operator’s COO cards and/or qualifications.
  4. Retain rigging and signal person certifications for all employees rigging and/or signaling the crane.
  5. Maintain an organizational chart showing who is responsible for each aspect of the plan.
  6. All information should be compiled into an Assembly/Disassembly plan and submitted to the Safety Department.

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7. A meeting shall be held with the all parties involved in the assembly/disassembly to review the assembly/disassembly plan prior to work beginning.
8. Train crew on the safety plan then post copy of the safety plan including the following:
    a. Weather parameters; wind speed and precipitation limitations
    b. Fall protection; plan specific to this crane assembly/disassembly
    c. Fall object protection plan
    d. Rigging inspection of all slings, chokers, shackles, ect.
    e. PTSP; got through assembly/disassembly sequence with crew.
9. Perform post assembly inspection per manufacturer's written instructions.
10. Maintain minutes of all the crane related meetings, including the meetings for planning of size and location and planning assembly/disassembly.

Tower Crane Assembly/Disassembly

- Preassembly
    1. Determine size/model of the tower crane and configuration
    2. Determine location of the tower crane on the site
    3. Check the tower crane site for overhead obstructions and underground utilities, overhead electric or voids existing and future.
    4. Procure tower crane reaction forces for the correct configuration from the crane supplier.
    5. Submit soil samples to soils engineer
    6. Submit soils report and reaction forces to structural engineer for foundation design.
    7. Construct foundation per engineered foundation drawing, including plumb tolerance considerations.
    8. Verify concrete foundation has achieved the appropriate strength via test cylinder breaks.
    9. Check FAA regulations for the area to assure compliance.

- Assembly/Disassembly
    1. Complete critical lift calculation permit for all lifts performed by the assembly/disassembly support crane(s) and maintain in plan file.
    2. Keep a list of all crew members; their names, company name and phone numbers.
    3. Retain assembly/disassembly support crane's annual inspection certificates and copies of the operator's COO cards and/or qualifications.
    4. Retain rigging and signal person certifications for all employees rigging and/or signaling the crane.
    5. Maintain an organizational chart showing who is responsible for each aspect of the plan.
    6. An electrician shall be present on assembly/disassembly days for power connection/disconnection and connecting ground wire.
    7. All information should be compiled into an Assembly/Disassembly plan and submitted to the Safety Department.
    8. A meeting shall be held with the all parties involved in the assembly/disassembly to review the assembly/disassembly plan prior to work beginning.
    9. Train crew on the safety plan then post copy of the safety plan including the following:
        a. Weather parameters; wind speed and precipitation limitations
        b. Fall protection; plan specific to this crane assembly/disassembly
        c. Fall object protection plan

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d. Rigging inspection of all slings, chokers, shackles, ect.
e. PTSP; got through assembly/disassembly sequence with crew.

10. After assembly re-torque all bolts as per manufacturer's written instructions
11. Perform post assembly inspections per manufacturer's written instructions.
12. Staff members shall watch operator climb up and down daily.
13. Maintain minutes of all the crane related meetings, including the meetings for planning of size and location and planning assembly/disassembly.

OSHA REFERENCE
29 CFR 1926 Subpart N.
29 CFR 1926.550.

RELATED SECTIONS
Aerial Lifts (Section 33)
SIFs (Serious Injury and Fatality)

APPLICABLE FORMS (APPENDIX B)
Critical Lifting Worksheet

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PURPOSE & APPLICATION

These procedures are provided to ensure proper rigging and control of hoisted loads and to prevent unintended release of loads and limit hazardous conditions associated with unstable loads.

This section applies to slings, picking beams, and other connecting devices used in conjunction with other material handling equipment for the movement of material by hoisting. The types of slings covered are those made from alloy steel chain, wire rope, metal mesh, natural or synthetic fiber rope (conventional three-strand construction), and synthetic web (nylon, polyester, and polypropylene).

PROCESS

Safe Work Practices:

- Identify Tarlton Corporation or subcontractor Competent Person.
- Determine load and type of rigging to be used.
- Competent Person plans and inspects rigging according to manufacturer's specifications (rigging guide).
- Weights of all loads must be known by both the operator and the rigger.
- Both the signalperson and the competent rigger should be identified prior to the pick.
- Method of communication should be established and maintained.
- Competent Person approves lift or makes adjustments.
- Certified operator performs lift.
- Competent Person selects rigging materials in accordance with Tables H-1 through H-20 of the OSHA standard or according to manufacturer's selection guide.
- Plan critical lifts. Critical lifts include:
    - use of more than one crane for pick
    - hoisting personnel
    - pick exceeds 75% of the crane's rated capacity
    - hoisting of equipment onto/into an existing structure
    - hoisting irreplaceable items/long-lead items or items with a high-dollar value

Critical Lift Procedure

- Both the lift plan and the rigging plan will be forwarded to the Corporate Safety Director.
- A documented pre-lift meeting will be conducted.
- Copies of all documents will be maintained on site until all lifting operations are complete and will be used as a noted reference in the daily PTSP.

Rigger Insurance

- Rigger insurance must be verified for any subcontractor involved in a critical lift of high dollar value.
- Rigger insurance must be obtained for items with value over $250,000 and hoisted with Tarlton equipment. Contact the Safety Department regarding Rigger Insurance.

Attaching the Load

- The load shall be attached to the hook by means of slings or other approved devices.
- No open hooks shall be used for lifts higher than 2 feet.
- Hooks used for lifts in excess of 2 feet shall have operational hook safety latches to prevent slings from jumping off the hook.

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- Loads shall not exceed manufacturer's rated capacity for rigging.

General Safe Rigging Practice

- All rigging equipment shall be inspected prior to and during each shift and as necessary to ensure safety.
- Damaged or defective slings shall be immediately removed from service.
- Loads may only be hoisted in approved, load-tested, or certified picking boxes or pans.
- All rigging devices including slings shall have permanently affixed identification stating size, grade, rated capacity, and manufacturer.
- Rigging not in use shall be removed from the immediate work area; slings shall not be left lying on the ground or otherwise exposed to dirt and the elements.
- Rigging shall be hung on a rigging frame so that bends and kinks do not set in.
- Wire rope slings shall be lubricated as necessary during use. Slings shall be lubricated no less than every 4 months when in storage.
- "Shop-made" grabs, hooks, clamps, or other lifting devices shall not be used unless proof-tested to 125 percent of their rated load by an approved-testing agency. Approval devices shall have the capacity permanently affixed.
- Tag lines should be used on all loads unless use poses additional hazards.
- Sling angles should never be less than 30 degrees; preferred angle is 60 degrees.
- Wire clips or knots shall not form eyes in wire rope bridles, slings, or bull wires.
- Protruding ends of strand in splices on slings or bridles shall be covered or blunted.
- All rigging equipment in use shall have a safety factor of 5.
- Slings in use shall not be shortened by knots, bolts, or other makeshift devices.
- Wire rope slings shall be padded or softeners used to protect from damage due to sharp corners.
- Slings used in a basket hitch shall have the loads balanced to prevent slippage.
- Loads handled by slings shall be landed on cribbing or dunnage, so slings need not be pulled from under load.
- Slings subjected to shock loading shall be immediately removed from use and destroyed.
- When U-bolt wire rope clips are used, Table H-20 of the OSHA Rigging Standard shall be used to determine number and spacing of clips.
- Operational safety latches are required on all hooks.
- Hoisting beams shall be engineered, certified, and marked with load capacity.
- Only qualified riggers are authorized to be in the rigging area and perform any rigging activities.
- 55 gallon drums should only be picked using a drum picker.
- Manbaskets – considered a critical pick, baskets should be inspected and certified annually, baskets should be inspected prior to each use, a test pick performed (documented inspection to be maintained on basket) and personnel should be tied-off at all times while in the basket.
- Only qualified signal persons are authorized to perform any signaling activities.

Replacement Criteria

Alloy steel chains shall be removed from service when:

- Master links, coupling links, or other components are cracked or deformed.
- Sling hooks have opened more than 15% of the normal throat opening or twisted more than 10 degrees off center.

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- Stretch exceeds 5% of the original reach.
- They have been exposed to temperatures in excess of 600° F or heated above 1,000° F.
- Only the manufacturer or an equivalent entity shall repair or recondition slings covered in this section and then only in accordance with ANSI G.61.1 - 1968.
- Mechanical coupling links or "cold sheets," bolts, or clevis pins shall not be used for chain repairs.

Wire rope slings shall be removed from service when:

- Two randomly distributed broken wires are in one rope lay, or five broken wires are in one strand in one rope lay.
- Wear or scraping of one-third the original diameter of outside individual wires.
- Kinking, crushing, bird caging, or similar damage results.
- End attachments are cracked, deformed or worn.
- Exposure to temperature in excess of 200° F. (fiber core) or 400° F (non-fiber core).
- Corrosion of the rope or end attachment occurs.

Natural and synthetic fiber rope slings / synthetic web slings shall be removed from service when:

- Abnormal wear is observed.
- Powdered fibers are found between strands.
- Fibers are cut or broken.
- There are variations in the size or roundness of strands.
- There is discoloration or rotting.
- There is distortion of sling hardware.
- Exposed to temperatures in excess of 180° F.
- Red indicator thread is exposed.
- Subjected to acid or caustic burns.
- Melting or charring of any part of the sling surface occurs.
- Snags, punctures, tears, or cuts are observed.
- Stitches are worn or broken.
- Fittings are distorted.
- Exposed to temperatures in excess of 180° F (Synthetic web) or 200° F (polypropylene web).

The manufacturer or any equivalent entity must perform sling repairs. Once repaired, each sling will be permanently marked or tagged and a record of the repair maintained.

Hazard Recognition:

Electrocution

The possibility of electrocution is a serious consideration when working near overhead power lines. Clearance distances of 10 feet should be maintained to avoid the possibility of the crane touching the power lines or being in too close proximity where the electricity can "jump" or arc flash to the crane.

Line of Fire

With multiple moving parts, heavy equipment, and just the nature of hoisting, a pick can present many line of fire hazards. Be sure to be aware of any harm that might come from flying debris,

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moving equipment, hazards presented by gravity, sudden release of tension, and point-of-operation hazards.

Suspended Loads
No employees shall work or cross under suspended loads.

Training:

Signalman

Qualification is obtained through a written or oral test and a practical test, and the qualification must be documented. A signalman will be qualified in one of the following ways:

- By an employer's qualified evaluator
- By a third party qualified

Rigger

Qualification is obtained either by possession of a recognized degree, certificate or professional standing.

Operator

Operators will be certified in one of the following ways:

- By an accredited crane operator testing organization (e.g. NCCCO)
- Through an audited employer program

Inspection:
Thorough inspection of slings in use shall be made on a regular basis as determined by:

- Manbasket inspection shall follow the Manbasket Testing/Inspection Log (see Appendix B)
- Severity of service conditions.
- Frequency of sling use.
- Nature of lifts being made.
- Experience gained on the service life of slings used in similar cases.
- Inspection periods shall not be less than once every 12 months.

OSHA Reference:
Subpart CC, Std 1926.1419 Signals—general requirements
Subpart CC, Std 1926.1428 Signal person qualifications
Subpart H, Std 1926.251 Rigging equipment for material handling
Subpart N, Std 1926.552 Material hoists, personnel hoists and elevators
Subpart R, Std 1926.753 Hoisting and rigging

Related Sections:
Crane Safety (Section 36)
SIFs (Serious Injury and Fatality)

Applicable forms found in Appendix B:
Critical Lifting Worksheet
Overhead Power Line Protocol
Critical Pick Planning Agenda

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PURPOSE & APPLICATION

The control of traffic through work areas is an essential part of highway construction and maintenance operations and may also include building construction or large equipment operations near traffic zones. Construction and maintenance areas can present unexpected or unusual situations to the motorist. Because of this, special care should be taken in applying traffic control techniques.

The primary function of traffic control procedures is to move traffic safely and expeditiously through or around work areas.

Traffic control must be a planned activity. Traffic control plans may utilize some or all of the following methods:

- Flaggers
- Hand Signaling Devices
- Barricades
- Information Signage
- Traffic Control Signals
- Lane Restrictions
- One-way Traffic Control
- Road Blocks
- Detours

Maintaining good public relations is necessary. The cooperation of the various news media in publicizing the existence of and reasons for work sites can be of great assistance in keeping the motoring public well informed.

Whenever practicable, the flagger should advise the motorist of the reason for the delay and the approximate period that traffic will be halted. Flaggers and operators of construction machinery or trucks should be made to understand that every reasonable effort must be made to allow the driving public the right-of-way and prevent excessive delays.

Procedure for developing a Temporary Traffic Control (TTC) Plan

The Superintendent or Project Manager will:

1. Identify the need for work zone traffic control (anytime work is in immediate proximity of traffic and/or impeding traffic for any reason)
2. Survey area to consider need for:
    a. Flagmen
    b. Safe placement of flagmen
    c. Barricading & location
    d. Detour routes (drive route to determine signage location)
    e. Signage (to include standing and mobile sign boards)
    f. Additional lighting
    g. Reduced speed limit zones
    h. Law enforcement options
3. Develop traffic control plan in accordance with The Department of Transportation regulations and the Manual of Uniform Traffic Control Devices and communicate to Project Team.

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4. Contact outside resources (as needed) for:
    a. Signage
    b. Law enforcement
    c. Barricading
    d. A complete Traffic Control Plan
5. Communicate plan to all employees within the zone.
6. Identify specific training needs, i.e. flagmen.
7. Conduct training.
8. Execute work.
9. Conduct daily reassessment of work zone controls.

<u>Determination Process (JSA / Risk Assessment)</u>

A Risk Assessment should be performed to determine the need for a Flagger and/or Spotter. This includes:

1. A pre-job hazard analysis to identify exposure to moving vehicles and heavy equipment.
2. Documentation of control measures, including the assignment of Flaggers/Spotters, where applicable.
3. Approval by competent person prior to job start.

<u>Items to consider for selection of work zone controls:</u>

1. Flagmen
    a. Average intelligence.
    b. Has completed formal flagman training.
    c. Good physical condition, including site and hearing.
    d. Mental alertness.
    e. Courteous but firm manner.
    f. Neat appearance.
    g. Sense of responsibility for safety of public and crew.
    h. All required site PPE.
    i. High visibility clothing (Class 1 vest at a minimum)
        i. Class I – (217 sq in of background and 155 sq in of reflective material) for vehicular speeds < 25 mph.
        ii. Class II – (775 sq in of background and 201 sq in of reflective material) for vehicular traffic speeds of 25-50 mph.
        iii. Class III – Night time traffic control – any speed.
2. Flagging Stations
    a. Predetermined escape route(s).
    b. Minimum 50’ stand off from work area.
    c. No other workers present.
    d. High visibility or lighted area.
    e. Adequately protected or completely barricaded if possible.
3. Hand Signaling Devices
    a. Red Flags (min 24” x 24”).
    b. Flashlight beacons.
    c. Reflectorized stop/slow signs (paddles).
4. Barricades

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   a. Complete prevention of entering (jersey barriers).
   b. Reflectorized barriers / cones.
   c. Equal spacing to not allow entering zone.
5. Information Signage
   a. Sign boards.
   b. Reduced speed limits.
   c. Construction work ahead.
   d. Lane closure/restriction ahead.
6. Traffic Control Signals
   a. Temporary automated signals.
   b. May be used for intersections, one-way traffic, or construction entrance.
   c. May require time delay for all red interval to allow traffic to clear.
7. Lane Restrictions
   a. Must include adequate taper distance for posted speed limit.
   b. Must separate vehicle traffic from opposite direction by means of barricades.
   c. Lane openings must be clearly past work zone.
8. Road Blocks
   a. Highly visible.
   b. Adequate signage (approximately 300 feet standoff).
9. Detours
   a. Preplanned route.
   b. Proper arrow signage.
   c. Media announcements as necessary (TV, newspaper, radio).

<u>Requirement for Flaggers and/or Spotters</u>

A Flagger and/or Spotter must be provided under the following conditions:

1. When personnel or equipment are exposed to vehicle or equipment traffic in an active work zones.
2. During operations where visibility is restricted or when equipment is backing or maneuvering in tight spaces.
3. When public or construction traffic needs to be directed around or through a worksite.
4. When lifting, hoisting, or moving materials near personnel or occupied areas.

<u>PPE for Flaggers and/or Spotters</u>

All Flaggers and Spotters are provided with the appropriate Personal Protective Equipment (PPE) and gear, including:

1. High-visibility garments compliant with ANSI Class 2 or Class 3 standards.
   - Daytime Requirements
     - Apparel must have background material and retroreflective material that provides 360-degree visibility (Class 2)
     - Vest or shirt with reflective stripes
     - ANSI-compliant safety pants (optional, but often required on high-speed roads)
   - Nighttime or Low-Light Requirements
     - Must wear Class 3 garments to maximize visibility.
     - Required features:
       - Sleeved garments with more retroreflective material for better visibility.

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- Supplemental items like reflective pants, hard hat bands, and lighted batons may also be required.
- The clothing must be visible from at least 1,000 feet and clearly distinguishable as a person.

2. Hard hats, safety boots, and gloves.
3. Two-way radios and/or signal flags/paddles were required.
4. Flashlights or lighted batons for low-visibility conditions.

<u>Training Requirements</u>

Mandatory training for all assigned Flaggers and Spotters, includes:

1. Site-specific training covering roles, responsibilities, and communication protocols.
2. Formal Flagger certification training from a recognized provider.
3. Spotter safety training includes hand signals, blind-spot awareness, and coordination with equipment operators.
4. Refresher training annually or following any safety incident.

OSHA REFERENCE

OSHA does not reference work zones directly; they are governed by the Department of Transportation regulations and the Manual of Uniform Traffic Control Devices. Construction traffic control can also be mandated by the municipality of which you are working. Contact the city, county, or state departments for exact construction zone requirements.

RELATED SECTIONS

SIFs (Serious Injury and Fatality)

APPLICABLE FORMS (APPENDIX B)

NA

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PURPOSE & APPLICATION

Hearing conservation / protection is an important part of the construction process and should be implemented in all cases where an 8-hour time weighted average exposure exceeds 90dB or higher ranges for shorter durations are exceeded according to Table D-2 of OSHA reference 1926.52.

This program illustrates procedures for identifying hazard areas, evaluating engineering and administrative controls, and selecting required personal protection equipment (PPE) for any task producing high noise exposure.

Implementation of this hearing conservation program requires complete cooperation by the project teams and all employees. Where employee noise exposures cannot be reduced to within recommended health limits, hearing protection will be required of all employees working in the area. It shall be the responsibility of the immediate supervisor to identify these areas and to require hearing protection when necessary.

PROCEDURE

Supervisor Responsibility

- Identify areas of concern.
- Contact Corporate Safety to help determine noise levels if necessary.
- Corporate safety may conduct personnel or area sampling if no historical data exists.
    a. Monitoring will be done as necessary.
- Select PPE (typically properly fitting plugs, ear muffs, or both).
- Provide selected PPE to all employees affected by high noise exposure.
- Ensure employees are wearing PPE.

Hearing Conservation Monitoring

- Monitoring shall be conducted when information indicates that an employee's exposure may equal or exceed an 8-hour time weighted average of 85 decibels. Monitoring will include all continuous, intermittent, and impulsive sound levels from 80 to 130 decibels.
- Monitoring shall be repeated whenever a change in production, processes, or controls increase noise exposures that may expose employees to noise at or above the action level or that the attenuation of the hearing protection provided may be inadequate.
- Employees shall be notified when monitoring results indicate that they were exposed at or above the 8-hour time weighted average of 85 decibels.
- All affected employees shall be given the opportunity to observe any monitoring conducted and the results of the monitoring.
- Hearing protection will be provided to employees who are exposed to noise at or above an 8-hour time weighted average of 85 decibels at no cost to the employee.
- Audiometric Testing shall be implemented for those employees with exposure levels that equal or exceed an 8-hour time weighted average of 85 decibels.

Instruction, Training, and Fitting

Each employee exposed to excessive noise shall be issued hearing protection and individually instructed in the proper use and fit of these devices. Hearing protection training will be repeated annually as part of the Tool Box Talk (TBT) program or as often as deemed necessary. If work noise conditions or PPE change, employees shall be retrained in hearing conservation and PPE shall be re-evaluated. Hearing protection shall

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be evaluated for specific noise environments to ensure proper protection levels. Training shall include the effects of noise on hearing, the purpose of hearing protectors (the advantages, disadvantages and attenuation of various types), and instructions on selection, fitting, use, and care of protection.

Personnel Sampling

1. All record sampling will be conducted by a certified industrial hygienist
2. Sampling methods will be in accordance with OSHA and NIOSH approved methods
3. Each affected employee will be notified of sampling results

Audiometric Testing

Baseline Testing: this audiogram will be conducted within 6 months of the employee's first exposure at or above the action level of 85 decibels. This will allow all subsequent audiograms a baseline with which to be compared. Baseline audiograms must be preceded by 14 hours without workplace noise. Employees will be notified prior to baseline testing to avoid high levels of noise. Hearing protection may be used to meet this requirement.

If a mobile test van is used to meet the audiometric testing requirement, the baseline audiogram shall be conducted within 12 months. If this baseline audiogram is obtained more than 6 months after the employee's first exposure at or above the action level hearing protection must be worn until the baseline audiogram is obtained.

Annual testing: this audiogram will be conducted at least annually after the baseline audiogram has been conducted. This test will allow a comparison against the baseline audiogram. If the audiogram shows that an employee has suffered a loss (standard threshold shift) a re-test may be done within 30 days and those results are considered the annual audiogram.

If a standard threshold shift has occurred, the following steps shall be taken:

- The employee shall be notified in writing within 21 days.
- Employee shall be fitted with hearing protection.
- Employee shall be trained in the use, care, and cleaning of the hearing protection.
- If the employee is already utilizing hearing protection, he/she will be refitted and retrained in the use of hearing protection. The employee may be referred for audiological evaluation or an otological examination.

Recordkeeping

All audiogram test records will be kept on file for the duration of an employee's employment at Tarlton. These records will be on file at the Tarlton corporate office and are available upon request.

Records will include the following information:

- Name and job classification of employee.
- Date of audiogram examiner's name.
- Date of audiometer calibration.
- Employee's most recent noise exposure assessment.
- Measurements of the background sound pressure levels in test rooms.

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Noise exposure measurement records must be kept on file for at least 2 years.

OSHA REFERENCE
1926 Subpart D, 1926.52 Occupational Noise Exposure

RELATED SECTIONS
NA

APPLICABLE FORMS (APPENDIX B)
NA

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PURPOSE & APPLICATION

Tarlton Corporation does perform work that exposes employees to bloodborne pathogens. The only potential exposure to bloodborne pathogens is through first aid treatment of an injured employee. Bloodborne pathogens training is provided on an annual basis and before initial assignment. Training records shall be kept no less than 3 years. Medical records involving exposure to bloodborne pathogens shall be kept for 30 years after the termination of the exposed employee's employment with Tarlton.

Tarlton Corporation's goal is to eliminate or minimize employee occupational exposure to blood or certain other body fluids by using universal precautions when treating all employees for work-related injuries or any bystanders in emergency situations. Under circumstances that prevent you from distinguishing between body fluids, employees will assume all body fluids are potentially infectious and take necessary precautions.

Tarlton Corporation's exposure determination consists of *Project Superintendents* and *Project Engineers*. These employees may incur occupational exposure to blood or other potentially infectious materials through administration of first aid. This exposure determination was made without regard to the use of PPE (i.e. employees are considered to be exposed even if they wear PPE). All first aid and associated PPE used (including gloves, bandages, foot covers, and gowns) will be made available to the employee at no cost.

PROCEDURE

To prevent exposure to bloodborne pathogens, employees must follow the written exposure control plan below:

1. Use universal precautions in order to prevent contact with blood or other potentially infectious materials.
2. Utilize the *Body Fluid Disposal Kit* as the engineering control to decontaminate equipment and surfaces after exposure to bodily fluids. All items exposed to body fluids, blood, or infectious material will be cleaned and decontaminated.
3. Wash hands and other affected areas as soon as possible after taking off gloves/clothes that are exposed to bodily fluids.
4. Report bodily fluid exposure on Post-Exposure Evaluation Form.

At the jobsite trailer, employees will have ready access to this Tarlton Corporate Safety, Health & Environmental Manual addressing the bloodborne pathogens exposure control procedure and the emergency action plan.

Any employee exposed to another employee's blood will be given a mandatory post-exposure Hepatitis B vaccination at no cost to the employee.

Hand washing facilities are available to employees who incur exposure to blood or other potentially infectious materials. Hand washing facilities are generally located at:

Johnny on the Spot
Project Site Trailer
Hand Cleaning Towelettes
Client Facilities

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At jobsites unequipped with hand-washing facilities, antiseptic Hand Cleaning Towelettes are made available to employees.

The Body Fluid Disposal Kit will be maintained by the TEAM Facility while in storage and shall be inspected each week as part of the job safety audit program while on the project.

Project Superintendents and Project Engineers may have Hepatitis B vaccinations as a preventative measure. See Hepatitis Vaccination Confirmation/Declination Form.

OSHA REFERENCE
29 CFR 1910.1030

RELATED SECTIONS
NA

APPLICABLE FORMS (APPENDIX B)
Post-Exposure Evaluation
Hepatitis Vaccination Confirmation/Declination

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PURPOSE & APPLICATION

The Emergency Action Plan is in place to ensure employee safety from fire, natural disaster, national security, or other types of emergencies. It provides a written document detailing the actions and procedures to be followed in case of an emergency.

At the time of an emergency, employees should know what type of evacuation is necessary and what their role is in carrying out the plan. This plan discusses procedures for Tarlton Corporation's corporate office at 5500 West Park Avenue in St. Louis, Missouri, and outlines requirements of a site-specific emergency action plan.

This Emergency Action Plan will be available for all Tarlton Corporate Office employees. Site-Specific Emergency Action Plans must also be available to all employees on the jobsite.

Contact information will be provided to employees who need additional information pertaining to the plan or to their respective duties.

Types of Emergencies:

- Fire
- Toxic Chemical Release
- Terrorist Event / Bomb Threat
- Natural Disaster (Severe Weather, Tornado, Earthquake, Flood)

Types of evacuations:

- Total and immediate evacuation.
- Partial evacuation of nonessential employees.
- Delayed evacuation of essential employees for continued work site operation.
- Local immediate evacuation (only those employees in the immediate area of a fire).

Fire, Toxic Chemical Release, Earthquake, Terrorist Event

1. Use stairwells, if upstairs, to evacuate building in orderly fashion.
2. Find the nearest exit and evacuate the building.
3. Evacuate to Ahern Fire Protection parking lot as soon as possible. Except in a toxic chemical release situation, immediately outside the building.
4. If operating equipment, tools, or machinery, stop machinery as soon as possible, place it in safe a location, proceed to assigned evacuation area.
5. Company executive or safety representative conducts head count of evacuees.
6. Company first aid responders provide medical assistance within their capabilities.
7. Do not reenter building unless advised by local authorities or executive of the company.
8. Professional emergency response personnel will help with and direct all rescue and medical duty assignments upon their arrival.

Tornado, Severe Weather – When tornado warning is issued and local sirens are sounded:

1. Cease work immediately.
2. Proceed to interior room away from windows if possible (bathrooms, stairwells, closets, imaging room), see Emergency action plan for your designated evacuation area..

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3. Get under desk or table or sit on the floor near a wall and place head between knees.

Site Specific Plans
Site specific emergency action plans will address:

- Potential types of emergencies.
- Potential types of evacuations.
- Evacuation routes.
- Evacuation points.
- Accountability of evacuees.
- Procedures for essential personnel to remain.
- Rescue and medical duties of lead individuals.
- Report procedures.

Project Team must:

1. Discuss procedures for reporting a fire, bomb threat, or other emergency, the location of fire exits, and/or evacuation routes/points to each employee.
2. Satisfy all local fire codes and regulations as specified.
3. Train designated employees in the use of fire extinguishers.
4. Keep key management telephone numbers in a safe place in the project office.
5. Distribute a copy of the list to key people, to be retained in their homes, for use in communicating an emergency during non-work hours.

Critical Site Operations
Some personnel may be selected to remain behind to care for essential site operations. These personnel will remain until their evacuation becomes absolutely necessary. Their responsibilities may include:

1. Monitoring of site power and water supplies and/or essential services that may not be able to be shut down for every emergency alarm.
2. Processes which must be shut down in stages or steps where certain employees must be present to assure that safe shut down procedures are completed.

Superintendent Responsibilities

- Immediately notify local fire/police department and the building/site owner representative.
- Decide to remain in or evacuate the project site.
- Ensure all employees are notified and a head count is taken.
- Check rooms and other enclosed spaces at the project site for employees who may be trapped or otherwise unable to evacuate the area (ONLY IF SAFE TO DO SO).
- Coordinate security protection.
- Meet fire department to assist them in responding to emergency.

Tornado
When a tornado watch has been issued by the National Weather Service, the Superintendent or his designee will turn on the radio to monitor the National Weather Service reports or contact the corporate office.

The Superintendent will use radios or vocal commands to alert employees to tornadoes.

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It is Tarlton Corporation policy to cease activity to allow employees to seek emergency warning and shelter in the event of a tornado/hurricane. At the time the tornado warning is given to employees, it is their responsibility to evacuate to a safe sheltered area.

TRAINING

Tarlton shall ensure training for Emergency Action Plan is delivered, documented, and prepares the staff and facility for emergency conditions. Tarlton will designate and train employees to assist in a safe and orderly evacuation of other employees. Requirements include:

- All employees must be given adequate instruction in the fire prevention and emergency evacuation procedures applicable to their workplace.
- The designated site representative shall provide the Emergency Action Plan orientation to all new/transferred personnel before they begin work.
- All personnel shall receive a review/update orientation at least annually, or whenever any new/revised information is to be provided.
- The Emergency Action Plan Orientation Check List shall be completed after orientation and the record maintained in the individual's training records.
- Tarlton management shall ensure that contractors/consultants working in areas under the supervision of Tarlton also receive the Emergency Action Plan orientation upon arrival to the area.
- Employees expected to perform duties under the Emergency Action Plan will be trained prior to assuming their roles. This will include simulated rescue or evacuation exercises and regular retraining, appropriate to the type of rescue or evacuation being provided, and training records must be kept.
- A list of trained staff responders shall be posted and maintained indicating their name, response function, their work location, and what type of equipment they have been trained for.

OSHA REFERENCE

Subpart C of 29 CFR paragraph 1926.35.

RELATED SECTIONS

NA

APPLICABLE FORMS (APPENDIX B)

NA

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PURPOSE & APPLICATION

Whenever possible, Tarlton Corporation will try to accommodate an injured/ill employee with modified duty and an early return-to-work program.

Employees are Tarlton Corporation's most important asset; the company strives to ensure the best possible safety, health, and performance for every employee. The Return-to-Work program helps to enable health recovery and resumption of full capabilities by injured or ill employees whose injury or illness initially restricts their ability to perform their normal job duties.

Statistics show that early Return-to-Work programs help to keep morale high, speed up the recovery process, and help keep workers' compensation costs down.

PROCEDURE

Initial Return-to-Work

After receiving work restriction from a treating physician, for a work related injury, the Corporate Safety Director will take the following steps:

1. Request diagnosing physician to submit exact medical restrictions on the patient.
2. Send copy of written restriction summary to insurance carrier and employee's supervisor.
3. Determine an alternate duty assignment based on the written restrictions.
4. Contact employee and inform them of the alternate duty assignment within their capability based on medical restrictions. Explain the Return-to-Work Program to the employee and how they will benefit by participating in it.
    a. In workers' compensation cases, inform the employee they are required to return to work and begin these alternate duties.
5. If workers' compensation case employee does not return as requested, the Corporate Safety Director will repeat contact and reiterate request.
6. In the case of personal injury or illness, unrelated to work, a full duty release from the treating physician is required to be submitted to the Workforce Coordinator/HR prior to the employee returning to work.

Periodic Reassessments

1. Once employee is situated in an alternate duty assignment, the diagnosing doctor will make periodic written reassessments as to employee's restrictions to be sent to the Corporate Safety Director.
2. As the reassessments indicate increased health, the supervisor will be informed that the employee should assume more duties of their original job.

Return to Original Job

When written assessments indicate the employee is able to resume normal duties of their original job, the Corporate Safety Director/Workforce Coordinator shall inform the Superintendent and return the employee back to work with no restrictions.

OSHA REFERENCE

NA

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RELATED SECTIONS
NA

APPLICABLE FORMS (APPENDIX B)
Light Duty Offer Letter (sample)

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PURPOSE & APPLICATION

As a driver of a company vehicle, the authorized driver has been given certain privileges. The employee assumes the duty of obeying all motor vehicle laws, maintaining the vehicle properly at all times, and otherwise following the policies and procedures outlined in the following policy. All employees must sign the Driver Acknowledgement of Policies, complete an approved driver application, and receive a company driver orientation prior to operating a company vehicle.

Failure to comply with any part of this policy may result in disciplinary action or forfeiture of company driving privileges.

This policy outlines methods for determining driver eligibility. It also outlines driver rules, responsibilities, maintenance and inspection requirements, training requirements, accident management, reporting procedures, and emergency information.

PROCEDURE

Company Drivers will be determined by the following methods:

1. Identified by Superintendent for specific project duties – must be an "Approved Driver".
2. Identified by Executive Management for specific position or job title.
3. Identified by TEAM Facility for specific position or job title.

Once identified, the process is as follows:

1. Identifying authority (Superintendent, Executive, or TEAM Facility Manager) notifies Corporate Safety.
2. Corporate Safety initiates motor vehicle record check and/or background check and other administrative procedures (orientation check list, insurance request, database update, Driver application, etc., as necessary.)
3. Corporate Safety will enroll the approved driver into a continuous MVR monitoring platform.
4. Corporate Safety coordinates with individual employee and TEAM Facility Director to set up orientation and training.
5. The Safety Department conducts orientation and training and then forwards documentation to HR. Employee is approved for driving privileges, provided they meet all requirements for Driver Qualifications.

Company vehicles are provided to support business activities and are to be used only by qualified and authorized employees. In all cases, these vehicles are to be operated in strict compliance with motor vehicle laws of the jurisdiction in which they are driven and with the utmost regard for their care and cost-efficient use.

Driver Qualifications

- Authorized employee of company.
- At least 21 years of age.
- Minimum one-year of experience in class of vehicle operated.
- Valid driver's license in state of residence and for proper class of vehicle.
- During the last 36 months, the driver had not:
    - Been convicted of a felony.

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- Been convicted of sale, handling, or use of drugs.
- Had automobile insurance canceled, declined, or renewed by a carrier.

Criteria for Declination, Termination, or Reassignment to a Non-Driving Position:

- One or more Type A Violations in the last 36 months.
- Two or more Type B Violations in the last 36 months.
- Three or more Type C Violations in the last 36 months.
- One Type B Violation and two Type C Violations in the last 36 months.

Categories of Motor Vehicle Violations

Type A Violation

Includes (but is not limited to) DWI/DUI/OWI/OUI, Refusing Substance Test, Reckless Driving, Manslaughter, Hit & Run, eluding a Police Officer, any Felony, Drag Racing, License Suspension, and Driving with a Suspended License. *Any driver with these types of violations is a major concern.*

[DWI – Driving While Intoxicated, DUI- Driving While Under the Influence, OWI - Operating While Intoxicated, OUI- Operating While Under the Influence]

Type B Violation

Includes all vehicle accidents, regardless of fault. (See Accident Review in this policy regarding Preventable & Non-Preventable Classifications)

Type C Violation

Includes all moving violations not classified as Type A or Type B. (Speeding, Improper Lane Change, Failure to Yield, running Red Lights or Stop Lights)

Type D Violation

Includes all non-moving violations (Illegal Parking, Vehicle Defects– 3 in a 36-month period constitutes suspension)

Driver Responsibilities

Each driver is responsible for the actual condition, care, and use of the company vehicle in their possession. Therefore, the driver's responsibilities include but are not limited to the following:

1. Operate vehicle consistent with reasonable practices that avoid abuse, theft, neglect, or disrespect of the equipment.
2. Obey all traffic laws.
3. Seat belts are mandatory for driver and passengers.
4. Adhering to manufacturer's recommendations or corporate policy regarding service, maintenance, and inspection. Vehicles should not be operated with any defect that would prevent safe operation.
5. Practice safe driving techniques.
6. Restricting the use of vehicles to authorized driver only.
7. Securing the vehicle when not in use. Employees are expected to ensure "reasonable care" of company property such as computers, work papers, and equipment under their control. The company will not reimburse the employee for the theft of personal property from company vehicles.

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8. Immediate reporting of all accidents, moving violations, and thefts to the Corporate Safety Director and the Corporate Risk Manager/Vice President of Finance.
9. Drivers must cooperate with law enforcement agencies and company officials in matters such as accident investigations, violation of the law, and violation of company policies.
10. All cargo/loads shall be secured and within manufacturers' legal limits before any vehicle begins to travel.

Prohibited Actions

The following actions are prohibited and may result in the immediate revocation of driving privileges:

- Driving while impaired: including influenced by alcohol, illegal drugs, prescribed or over-the-counter medication, illness, fatigue, or injury.
    - Any "Approved Driver" receiving a traffic violation or related offense for drug/alcohol (first offense) must participate in EAP drug/alcohol counseling.
    - Any "Approved Driver" receiving a subsequent traffic violation or related offense for drug/alcohol (second offense) will be assessed under the Tarlton Drug and Alcohol Policy as having a "Failed Test"; employee will be suspended for 30 days and eligible for re-hire pending successful completion of drug/alcohol counseling and passing a drug/alcohol screening.
    - Consistent with the Tarlton Drug and Alcohol Policy any further offenses will result in a possible 1-year suspension or indefinite termination.
    - Tarlton reserves the right to terminate employment at any time for acts that do not promote a safe work environment.
    - Employee must communicate EAP compliance requirements/assessment with the Human Resources (HR) Manager. The HR Manager has the right to verify compliance with all EAP Drug/Alcohol Assessment, Counseling, and Treatment requirements.
- Transporting hitchhikers and unauthorized passengers.
- Receiving payment for carrying passengers or materials.
- Radar detectors.
- Email or texting while driving.
- Using a mobile phone in any other way other than hands free while vehicle is moving.
- Towing: Unless authorized, drivers of company vehicles must not tow, push, or pull another vehicle or trailer.
- Transporting Hazardous Materials (unless authorized.)
- Using company vehicles for business activities of other companies or personal income.
- Driving to Mexico.
- Using a radio/iPod earphones or similar device while operating a motor vehicle.
- Employees are prohibited from operating motorcycles, motor scooters, or motorbikes when traveling or conducting company business.

Reporting

Accurate reporting of any of the following items must be forwarded to the Corporate Safety Director and the Corporate Risk Manager:

- Accidents: Reported immediately.
- Moving violations: Reported within three business days of conviction.

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- License suspension or revocation of driving privileges: Reported the next business day and/or prior to further operation of company vehicle.
- Serious moving/other violations: Reported the next business day and/or prior to further operation of company vehicle. Serious moving violations include but are not limited to:
  - Driving while impaired/intoxicated – DUI/DWI etc.
  - Reckless driving.
  - Leaving the scene of an accident.
  - Speeding that is equal to or greater than 15mph over the posted speed limit.

Accident Management

IF YOU ARE INVOLVED IN AN ACCIDENT:

1. Stop at once! Check for personal injuries and send for emergency services, if needed.
2. Do not leave the scene; ask for the assistance of bystanders.
3. Protect the scene. Set emergency warning devices to prevent further injury or damage. Secure your vehicle and its contents from theft. Avoid obstructing traffic or creating other hazards.
4. Aid the injured. Check on the other party to determine if they need medical attention. As a reminder, general company policy on "offering assistance" is:
   "Drivers of company vehicles must not assist disabled motorist or accident victims beyond their level of medical expertise. If the driver is unable to provide the proper medical care, they must restrict their assistance to the notification of proper authorities."
5. Secure assistance of police unless it is absolutely impossible. Record names and badge numbers.
6. Make no statements.
   - Do not argue and make no statements except to the proper authorities.
   - Sign only official police reports.
   - Do not make statements regarding the operating condition of your vehicle.
   - Do not admit fault.
   - Do not talk about what you think happened until the police or company official arrive on the scene.
   - If witnesses talk to you, that is fine, but do not provide your information to them about the facts of the accident.
7. Collect information. Complete Driver's Accident Report Form at the scene as thoroughly as possible. Exchange insurance information only with the other involved driver(s). Take pictures if safe to do so.
8. Report the incident. Report to your supervisor and to the Corporate Safety Director immediately after first aid has been given, authorities have been notified, and the scene has been protected.
9. If you strike an unattended vehicle and cannot locate the owner, leave a note with your name and the company's address and phone number, get the vehicle description, *VIN number*, and license plate number.

Important driver's note: Please maintain an Accident Report Form and pen/pencil in the glove compartment of your vehicle.

Accident Review

The Corporate Safety Director and the Safety Committee will review all accidents. The review will be based on the driver's report, police reports, and available witness accounts. The purpose of the review is to collect the

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necessary information to defend Tarlton Corporation in any litigation proceedings, to determine accident preventability, and to consider improvements to avoid future such occurrences.

Accident Classifications
Non-preventable accidents:
Accidents that occurred despite the fact that the driver exercised every reasonable precaution to avoid the incident. Examples of non-preventable accidents include, but are not limited to:

- Animal strikes.
- Struck while legally parked.
- Struck by other vehicle while stopped in traffic.

Preventable accidents*:*
An accident, as ruled by the Corporate Safety Director and accident review committee, where the driver failed to exercise every reasonable precaution to avoid the incident.
A preventable accident is defined as "*any accident involving a company vehicle - whether being used for company or personal use; or any vehicle while being used on company business that results in property damage and/or personal injury, in which the driver involved failed to exercise every reasonable precaution to prevent the accident."*

Preventable accidents can include but are not limited to:

- Following too close
- Driving too fast for conditions
- Failure to observe clearances
- Failure to obey signs
- Improper turns
- Failure to observe signals from other drivers
- Failure to reduce speed
- Improper park
- Improper passing
- Failure to yield
- Improper backing
- Failure to obey traffic signals or directions
- Exceeding the posted speed limit
- Driving While Impaired (DWI)
- Driving Under the Influence (DUI)
- Accidents involving Prohibited Actions in this policy

Discipline Policy
A driver involved in a preventable accident, moving violation, found to be out of compliance with company expectation in the driver monitoring system, or pedestrian complaint will be subject to the following:

1. Counseling by Corporate Safety Director and/or Company Executive.
2. Mandatory completion of a defensive driver training course and/or other similar programs.
3. Suspension/probation or revocation of driving privileges.

Suspension/Probation (6 months) or Revocation of Company Driving Privileges:

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◊ One Type B Violation in the last 36 months.
◊ Two Type C Violations in the last 36 months.
◊ One Type C Violations and two Type D Violations in the last 36 months.
◊ Three Type D Violations in the last 36 months.

Emergencies
In case of maintenance emergency:

1. Get completely off the traveled roadway; avoid curves, hills, or obstructed views.
2. Set parking brake to prevent movement.
3. Use hazard lights.
4. Set reflective triangles near vehicle at 10 feet and 100 feet to warn approaching traffic.
5. Contact TEAM Facility Director for assistance/guidance.

Maintenance and Inspection
Unless it is the functional responsibility of an employee, drivers are not expected to perform maintenance. However, it is the responsibility of drivers to become familiar with established vehicle maintenance garaging practices.

Drivers must:

- Ensure vehicle is well maintained and safe to operate.
- Be cognitively aware of the vehicle, including the condition of the upholstery, body, paint, decals, windows, overall general condition, and cleanliness.
- Ensure that applicable state vehicle inspection and registration is current and valid.
- Have vehicle serviced at the appropriate intervals. Enterprise Fleet Maintenance manages the maintenance of all leased vehicles. The TEAM facility does not do maintenance on any vehicle unless it is owned by Tarlton.
- Conduct routine inspections of assigned vehicle.

Routine inspections should include:

- Fluid levels and scheduled changes (oil level, brake fluid, transmission fluid, window washer fluid and cooling system fluid).
- Oil or grease leaks in, around, or under the vehicle.
- Tires (inflation and tread wear).
- Wheels, rims, and fasteners.
- Lights, reflectors, and mirrors.
- Wipers and washers, A/C, heater, and defroster(s).
- Breaks (service, parking and emergency).

In the event of a defect:

1. Driver reports defect to TEAM Facility and follows further instructions.
2. TEAM Facility must authorize repairs outside the scope of routine maintenance.
3. Repairs must take place at an approved Enterprise Fleet Maintenance facility.

Garaging and storage

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Employees not able to provide overnight off-street parking will provide a written description of the planned parking practices to the TEAM Facility Manager who will review and authorize the proposed plan. Parking violations will be the responsibility of the authorized driver.

Emergency Kit:
All company vehicles will be equipped with an emergency kit. The vehicle operator is responsible for all contents of the kit. The emergency kit will be inspected on an annual basis as part of the winter services. Any use of the kit must be reported to the TEAM Facility or Corporate Safety Director. The emergency kit will consist of the following:

- First Aid Kit
- Emergency Blanket (optional)
- Warning Triangles
- Fire Extinguisher
- Accident Report Form

Offering Assistance
Drivers of company vehicles must not assist disabled motorist or accident victims beyond their level of medical expertise. If a driver is unable to provide the proper medical care, they must restrict their assistance to the notification of proper authorities.

Training
Tarlton Corporation will conduct the following training for company vehicle drivers as needed:

- Driver Orientation, to include Distracted Driver Awareness.
- Defensive Driver Course – as needed on individual basis.
- Winter Driving - covered annually as a Tool Box Talk (TBT).
- Annual Approved driver refresher training.

Driver Compliance
Tarlton will utilize the GPS monitoring system installed in all Tarlton logoed vehicles to monitor the driving behaviors of all drivers.
If driver is found to have three coaching events in a 30-day period for the same type of violation the following criteria applies:

1. The 1st offense will be a meeting to discuss the violations and the parameters of the monitoring system.

If a driver has three more coaching events in a 30-days period for the same type of violation, within a rolling 6-month period from the previous offense, the below criteria applies:

2. The 2nd offense the driver will be required to take additional driver training.
3. The 3rd offense the driver will lose their privilege to drive a company vehicle for 6 months.

The parameters of violations the GPS monitoring system tracks are as follows:

1. Distracted Driving – Detected at 25 MPH
    a. Inattentive driving
    b. Mobile phone usage
    c. Drowsiness

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2. Speeding
   a. Heavy Speeding – Detected at 10 MPH over posted speed limit
   b. Severe Speeding – Detected at 15 MPH over posted speed limit
   c. Max Speeding – Detected at 85 MPH

3. Crash

4. Collision Risk
   a. Following distance
   b. Late Response
   c. Near Collision

5. Harsh Driving
   a. Harsh Acceleration
   b. Harsh Braking
   c. Harsh Turning

6. Policy Violations – Detected at 5 MPH
   a. Seatbelt usage
   b. Camera obstructed

7. Traffic Sings & signals
   a. Rolling Stops – Detected at 5 MPH
   b. Did not yield
   c. Ran red light
   d. Lane departure

Training:
Drivers of company vehicles will be required to complete an initial approved driver training. Approved driver will be required to complete annual approved driver training to remain an approved driver of company vehicles.

OSHA REFERENCE
OSHA does not regulate occupational driving specifically but Subpart C of 29 CFR 1926.21(b)(2) and 1926.32(f) requires that "all employees be trained in the recognition and avoidance of unsafe conditions and…to control or eliminate any hazards or other exposure to illness or injury."

Commercial driver requirements are specifically regulated by the Department of Transportation and can be found at http://www.fmcsa.dot.gov/rules-regulations/rules-regulations.htm and www.modot.org/mcs.

RELATED SECTIONS
NA
APPLICABLE FORMS (APPENDIX B)
Driver Acknowledgment of Policies
Driver Accident Report

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PURPOSE & APPLICATION

This policy governs corporate and personal cell phone use while on the project or conducting company business and while driving a company vehicle or personal vehicle on company business.

These procedures will limit risk associated with cell phone use while performing other activities.

Tarlton Corporation understands employees do not want to miss important business calls or family emergencies. Employees must always be aware of the situation and make a calculated decision on whether it is safe to make or take a call.

Employees are required to follow all relevant laws, rules, and regulations for cell phone use at all times.

PROCEDURE

Personal Phones:

- Limited to emergencies or break times only in a safe and secure area to avoid hazards.
- Emergency calls should not hinder the operation or task the employee is performing.
- Email and texting while driving is prohibited.
- The vehicle's hands-free function must be used for any cell phone operation while the vehicle is in motion.
- If the vehicle is not equipped with a hands-free option, cell phone usage is prohibited, while the vehicle is in motion.

Company Phones:

- Call should not hinder or create distraction from operation or task employee is performing.
- Employees taking phone calls should assess particular situation prior to answering.
- Operators of vehicles or equipment shall stop operating or pull vehicles over to make or receive phone calls unless equipped with a hands-free device.
- Give the receiver an opportunity to call back if hazards exist for them.
- Personal use should be on a limited basis.
- Email and texting while operating vehicles or equipment is prohibited.
- The vehicle's hands-free function must be used for any cell phone operation while the vehicle is in motion.
- If the vehicle is not equipped with a hands-free option, cell phone usage is prohibited, while the vehicle is in motion.
-

Disciplinary Action for violation of the cell phone use policy may include termination of employment.

OSHA REFERENCE

NA

RELATED SECTIONS

NA

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APPLICABLE FORMS (APPENDIX B)

NA

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PURPOSE & APPLICATION:
This section illustrates guidelines for First Aid Kits, toilet facilities, ice, cups, water, and changing areas.
Good hygiene can limit the risk of all work-related illnesses. This section provides best practices for hygiene and to establish the minimum first aid supplies, equipment and actions to properly respond to an injury.

Part of a quality safety program is ensuring good hygiene with regards to everyday work activities. This program is applicable to all Tarlton Corporation employees while engaged in work at Tarlton Corporation facilities and/or facilities operated by others and all Tarlton Corporation jobsites.

RESPONSIBILITIES:
It is the responsibility of the Project Superintendent to ensure that first aid kits are provided and maintained. First aid supplies must be readily available at each jobsite.
All employees are responsible for using first aid materials in a safe and responsible manner.
All first aid providers must have a valid first aid certificate from American Red Cross or equivalent first aid providing agency.
The Corporate Safety Manager is responsible for corresponding with the Red Cross or an equivalent program to keep employee training levels current.

REQUIREMENTS:
Planning
The Project Team along with the Manpower Coordinator will:

- Ensure that a minimum of one employee, with a valid certificate, shall be present to render first aid at all times work is being performed if medical assistance is not available within 3-4 minutes.
- Ensure that provisions shall have been made prior to commencement of a project for prompt medical attention, including transportation, in case of serious injury.
- Ensure adequate first aid supplies and equipment are easily accessible when required.
- Ensure that in areas where 911 is not available, the telephone numbers of the physicians, hospitals, or ambulances to be used shall be conspicuously posted.

Medical Response
Report all incidents and injuries to the Tarlton Safety Team as soon as possible.

All minor first aid is to be self-rendered, when possible, because of the risks presented by certain bloodborne pathogens.

In the absence of an infirmary, clinic, hospital, or physician, that is reasonably accessible in terms of time and distance to the worksite, which is available for the treatment of injured employees, a person who has a valid certificate in first-aid shall be available at the worksite to render first aid. A valid certificate in first-aid training must be obtained from the U.S. Bureau of Mines, the American Red Cross or equivalent training that can be verified by documentary evidence.

Employees authorized to render first aid will always observe universal precautions. (Universal Precautions means that the aid giver treats all bodily fluids as if they were contaminated).

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If 911 is not available refer to the list of posted phone numbers for prearranged medical response providers. All Tarlton authorized first responders shall have a cell phone as a means of communications; otherwise hand held radios or telephones shall be used as a means of communication.

SUPPLIES AND EQUIPMENT:

First Aid Kits

All project sites will have at least one first aid kit located in the project office. First Aid Kits shall be supplied with materials determined to be adequate by the Project Superintendent for the jobsite and job activities anticipated on the project. First Aid kits must be inspected on a regular basis to ensure they are adequately stocked.

First Aid Kits shall be readily accessible. Employees are free to use first aid over-the-counter medications at their own discretion.

At no time will a Tarlton Corporation employee physically give or hand medications to another employee.

First Aid Kits shall be inspected prior to the job startup and weekly thereafter to ensure the availability of necessary contents.

Where the eyes or body of any person may be exposed to injurious corrosive materials, a safety shower and/or eye wash (suitable facilities) or other suitable facilities shall be provided within the work area. Ensure expiration dates are checked and water used in storage devices is sanitized.

An assessment of the material or materials used shall be performed to determine the type flushing/drenching equipment required. At client job sites, portable or temporary stations must be established prior to the use of corrosive materials.

TRANSPORTATION:

Based on the first responder's assessment of the injuries involved, decide whether the injured requires to be taken directly to a hospital's emergency room, occupational medicine provider or administer first aid on location.

Examples of serious injuries that result in the injured being transported to a medical provider are those resulting in severe blood loss, possible permanent disfigurement, head trauma, spinal injuries, internal injuries and loss of consciousness. Keep in mind that the needs and wellbeing of the injured are the first priority.

Proper equipment for prompt transportation of the injured person to a physician or hospital or a communication system for contacting necessary ambulance service shall be provided.

Choices to consider include: private automobile, company vehicle, helicopter, crew boat, EMS vehicles including medi-vac helicopters, or any other transportation that can provide safe transportation to the hospital or doctor's office in order to provide medical attention to the injured in the quickest manner without any additional complications or injuries to the injured employee.

Transportation needs must be preplanned and coordinated with the transportation provider prior to an incident requiring such service.

ON-SITE MEDICAL SERVICES:

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Tarlton has two options for on-site medical services (Corporate Safety will determine which service suits the situation best):

1. Telehealth (Dr. Webb) – Dr. Webb will use telephone or other virtual/technologies options to diagnose and provide medical care/opinion
2. On-Site Health & Safety – a team of EMTs will report to the project site to provide first-aid care for employees.

TRAINING:

Volunteers or selected employees are trained by the American Red Cross or equivalent in CPR and first aid. Each of these trained and certified employees are equipped with protective gloves and other required paraphernalia.

TOILET FACILITIES:

Use owner furnished toilet facilities at permission of owner or;
Provide 1 portable toilet per 40 employees.
Provide hand sanitizer or other means of hand washing.
Provide water and cups as necessary for employees.
All break areas must be kept clean and free of job site chemicals, dust, or dirt contamination.
Do not allow changing of over clothes in eating areas.

OSHA REFERENCE

Sanitation is referenced in subpart D 29 CFR 1926.51; Medical Services and First Aid are referenced Subpart D, paragraph 1926.

RELATED SECTIONS

NA

APPLICABLE FORMS (APPENDIX B)

NA

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PURPOSE & APPLICATION

Industrial hygiene is the science of anticipating, recognizing, evaluating, and controlling workplace conditions that may cause injury or illness caused by environmental health hazards.

This section will touch on environmental health hazard recognition (workplace analysis) and control methods.

PROCEDURE

Safe Work Practices:

Workplace Analysis

- Before beginning work, it should be determined if any of the job tasks or work areas may be a source of potential environmental health risks (dust, lead, asbestos, silica, noise, etc). This is decided by measuring and identifying exposures (baseline testing), tasks, and risks. If any environmental health hazards are discovered, appropriate actions must be taken.

Potential Hazards

- Air Contaminants
  Forms – particulate, gas, vapor
  Most common – dust, fumes, mist, aerosols, fibers
- Chemical
  Contact via – inhalation (breathing), absorption (skin contact), ingestion (eating/drinking)
- Biological
  Forms – bacteria, viruses, fungi, living organisms
  Exposure – Possible exposure when dealing with plants, animals (or their food and food processing), working in laboratories or medical settings (bodily fluids), or working with waste water
  Direct Exposure Treatment – includes Tetanus, Diphtheria, & Hepatitis A vaccinations
- Physical
  Forms – radiation (ionizing and non-ionizing), noise, vibration, illumination, temperature
- Ergonomic
  Forms – excessive vibration and noise, eye strain, repetitive motion, heavy lifting, excessive force

Control Methods (in order of preference)

- Engineering Controls – Reduce or remove the hazard at the source or isolate the worker from the hazard.
- Work Practice Controls – Alter the way a task is performed.
- Administrative Controls – Limit workers' exposure, or duration of exposure, to the hazard.
- Personal Protective Equipment (PPE) – PPE is only to be used as a last resort. PPE is equipment used to provide worker safety where the hazard could not be engineered out or minimized. The major drawback of PPE is that it does nothing to reduce or eliminate a hazard.
- Control of Biological Hazards – shots and hygiene.

General Control Methods

- Use wet methods to reduce dust production.
- Local or general exhaust/ventilation at points of contaminant generation.
  As per CFR 1926.55, operations requiring ventilation include:
  - during gasoline, diesel, or propane-fueled machine or equipment operation
  - grinding, polishing, or buffing

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- spray finishing
- surface coating

- good housekeeping, waste disposal, adequate washing and eating facilities, healthy drinking water, control of insects and rodents

Hazard Recognition:

- Illness
- Skin irritation
- Irritation of eyes
- Irritation of mucous membranes
- Hearing loss or reduction
- Cumulative Trauma Disorder
- Acute exposures
- Chronic exposures

Training:

- General construction hazard training in OSHA 10 and 30-hour training, daily JSA, and weekly TBT topics.

Inspection:
Workplace Analysis

- Before beginning work, it should be determined if any of the job tasks or work areas may be a source of potential environmental health hazards. This is decided by measuring and identifying exposures, tasks, and risks. If any hazards are discovered, appropriate actions must be taken.

NOTE: Tarlton is not an abatement contractor. Removal of lead, asbestos, and similar hazardous materials will be subcontracted to others.

<u>Emergency Response and Hazardous Waste Operations</u>

- Hulcher Services 1-800-637-5471 Sauget, IL
- Veolia ES Special Services 1-800-688-4005 Sauget, IL
- REACT Environmental Eng 1-800-325-1398 St Louis, MO
- Clean Harbors 1-800-645-8265 Alton, IL

OSHA REFERENCE
OSHA Publication 3143
1926.51 Subpart D Sanitation
1926.55 Subpart D Gases, vapors, fumes, dusts, and mists
ANSI/AIHA Z88 Respiratory Protection
American Industrial Hygiene Association (AIHA)

RELATED SECTIONS
NA
APPLICABLE FORMS (APPENDIX B)
NA

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PURPOSE & APPLICATION

Automated External Defibrillators (AEDs) are becoming increasingly important as a primary mean of response by certified first responders (First Aid, CPR, and AED trained personnel). This policy shall be effective for using Tarlton Corporation supplied AEDs in the corporate office, TEAM Facility, and selected project sites. Owner furnished AEDs may be available and may be used by anyone trained in general AED use.

An AED is used to treat victims who experience sudden cardiac arrest. It is only to be applied to victims who are unconscious, not breathing normally, and show no signs of circulation such as normal breathing, coughing, or movement. The AED will analyze the heart rhythm and advise the operator if a shockable rhythm is detected. If a shockable rhythm is detected, the AED will charge to the appropriate energy level and deliver a shock

Tarlton Corporation's goal is for every employee to be trained in First Aid, CPR, and AED use. This training is available through the Corporate Safety Department and the American Red Cross or similar program.

PROCEDURE

All Tarlton Corporation AED units are registered with the City of St. Louis Fire Department and under medical direction. The medical director is responsible for reviewing and approving the AED policy and procedure and evaluation of the AED Event Review forms and digital files downloaded from the AED unit. It is important to document the use of an AED unit and to include all patient information generated during the AED use. The AED Event Review form should be turned into the Corporate Safety Manger immediately.

It is the responsibility of the Corporate Safety Director to conduct and document a system readiness review. This review shall include the following elements:

- Training records
- AED unit operation records and maintenance
- Medical Supervision

Tarlton Corporation currently has three AED units:

Unit 1 - Main office, first floor imaging room;
Unit 2 - TEAM Facility next to the elevator;
Unit 3 - Designated project site.

In an emergency, the first person on the scene is responsible for the following:

1. Access scene for safety.
2. Determine unresponsiveness.
3. Call 9-1-1 (or your specified emergency services number)
4. Open airway, check for breathing.
5. Check for signs of circulation, such as pulse, coughing, or moving.
6. Page/call for a "First Responder" (A "First Responder" is any employee who is trained/certified in First Aid, CPR, and AED).
7. If there is no pulse or signs of circulation, call/page for an AED unit and direct the next available person to contact Emergency Medical Response Team (9-1-1).
8. Continue with CPR and use AED when ready.

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NOTE: If victim is less than 8 years old or under 55lbs, remove pre-connected adult defibrillation electrodes. Connect the Infant/Child Reduced Energy Defibrillation Electrodes to the AED unit and proceed.

If NO pulse:

- Call 9-1-1 (or your specified emergency services number)
- Turn on AED and follow voice prompts; do not touch victim unless prompted to do so.
- Apply electrodes to bare chest, shave chest if needed for good contact with electrodes. If chest is dirty or wet, wipe the chest dry/clean.
- Stand clear of victim while AED unit analyses rhythm.
- If another team member is present have them record the event on the AED Event Form (located inside the AED cabinet with the AED unit).

If Shock is Advised:

- Clear area making sure no one is touching the victim.
- The AED unit will analyze and shock up to three times.
- After three shocks, AED will prompt to check for pulse and breathing. If absent, start CPR.
- The AED unit will count one minute of CPR, then prompt rescuers to stop CPR and get clear of victim so device can analyze rhythm again.
- Continue cycles of analysis, shocks, and CPR until EMS arrives and disconnects the AED unit.

If No Shock Advised:

- AED will prompt to check pulse and breathing. If absent, start CPR.
- After one minute of CPR, AED will prompt rescuer to stop CPR and get clear of victim so rhythm can be analyzed.
- Continue cycles of CPR and analysis, following AED prompts until EMS arrives and relieves rescuers.

After Use:

- First Responder will complete an AED Event Review Report and forward to corporate safety department.
- AED will be downloaded by the corporate safety department within 24 hours and a copy will be sent to the medical director.
- Corporate Safety will clean, disinfect, and restock the supplies in the AED unit. Supplies can be obtained from the Corporate Safety Director.
- Corporate Safety will replace Charge-Pak battery.

OSHA REFEENCE

AED requirements are not specifically referenced by OSHA. First Aid is referenced in paragraph 1926.50(c) of Subpart D of 29 CFR 1926.

RELATED SECTIONS

NA

APPLICABLE FORMS (APPENDIX B)

NA

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PURPOSE & APPLICATION

Environmental hazards are caused by the unplanned release of chemicals or toxins into the air, soil, or waterways. Although some chemicals can have serious environmental impacts when released in large enough quantities, the most common pollutants in the construction industry are petroleum, oil, and lubricants (POLs.) Asbestos and lead are covered separately in this manual.

Proper transportation, storage, and general knowledge of the chemicals you are working with are the best means for preventing environmental contamination. Maintaining good housekeeping in storage areas is critical to spill prevention and quick response in the event of a spill. This section will cover transportation and storage requirements and emergency containment or spill notification procedures. These procedures must be in place while transporting or storing more than 45 gallons of POLs.

Drivers, material handlers, and others engaged in handling chemicals shall have training on proper spill prevention to include the following:

- Storage requirements
- Spill response procedures
- Spill kits and clean up materials
- Proper waste disposal
- Communication procedures in the event of a spill

Transportation/Driver Responsibilities:

- All chemicals shall have secondary containment.
- Vehicles transporting chemicals shall have either a 50 lb bag of dry sweep compound or a P.I.G. Spill Kit (45 Gal containment).
- Maintain list of chemicals and quantities in transport.
- Report vehicle accidents or spills immediately to Corporate Safety Director or an officer of the company.

Site Superintendent/Foreman Responsibilities:

- Ensure chemicals are stored properly in appropriate containers and in a safe location according to manufacturer guidelines; ensure proper containment, storage, access, and material handling to minimize the risk of spills.
- Maintain list of all chemicals and SDS for each chemical on site.
- Create diagram for spill exposure.
- Illustrate where chemicals and POLs are stored, used, and transferred.
- Survey drainage areas; identify routes of travel if spill occurs.
- Keep in safety file or SDS Book for immediate access when needed.
- Store containers, tanks, etc. in secondary containment.
- Use spill trays for all on-site fueling points.
- Use spill trays, buckets, etc. to collect small quantities when transferring chemicals or petroleum from one container to another.
- Immediately clean up small spills, drips, etc., including spills collected by spill trays and containers.
- Make certain containers, spill trays, and transfer equipment (e.g. hoses, pumps) are compatible with the materials they contain.
- Inspect spill trays weekly for cracks, holes, leaks, or over flow.

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- Have adequate equipment and materials on hand to control a spill for materials/chemicals in use.
- Keep spill control equipment/materials where chemicals or petroleum are stored and transferred for quick response.

Sample spill control equipment/materials:

- Backhoe/shovels (protective berm)
- Drip pans/spill trays
- Dry sweep / P.I.G. Spill Kit
- High absorption rags/towels
- Waterway float containment
- Safety storage cabinets (liquid storage cabinets)
- Spill pallets
- Bladder tanks
- Storm water hydrocarbon filters

PROCEDURE

Spill Control Procedure:

1. Obtain PPE as necessary (respirators, rubber gloves, rubber boots, tyvek suits, etc.).
2. Contain spill immediately if safe to do so.
3. Position containment and collection equipment at critical flow points according to drainage area survey.
4. Contact the Corporate Safety Director or Officer of the company.
5. Corporate Safety Director or Superintendent will determine level of contamination.
6. Under corporate direction, contact local emergency spill response contractor or Fire Department.
7. Corporate Safety Director will contact appropriate local and federal agencies.
8. Superintendent will notify Owner.
9. Implement Crisis Communication Plan if necessary.

Spill / Hazmat Contractors:

- Hulcher Services 1-888-503-3383 Sauget, IL
- Veolia ES Special Services 1-800-688-4005 Sauget, IL
- REACT Environmental Eng 1-314-678-1398 St Louis, MO
- Clean Harbors 1-800-645-8265 Alton, IL
- MSD 24 Hour Emergency 314-768-6260

OSHA REFERENCE

NA

RELATED SECTIONS

Project Minimum Safety Requirements
Incident Management – Reporting / Investigations
Hazard Communication Policy (HAZCOM)
Lead / Asbestos

APPLICABLE FORMS (APPENDIX B)

Incident Investigation Report - Standard

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PURPOSE & APPLICATION

Property damage, power/communication outages, and injuries are caused by unforeseen utility lines either underground or hidden within a structure/concrete slab. The majority of utility lines (i.e. communication, electrical, and gas lines) are documented. However, there can be serious impacts when contact is made with private or public utility lines.

Proper locating procedures and general knowledge of the utility lines are the best means for preventing injuries, property damage, and communication loss. This section will cover steps and procedures for locating utilities. This process is to be used for excavations, demolitions, or penetrations of concrete slabs or walls.

Superintendent/Foreman Responsibilities:

- Locate 'known' utility lines:
  1. Contact Missouri One Call, J.U.L.I.E. (in Illinois), or National One-call service (811).
  2. Reference as-builts and talk with maintenance personnel.
  3. If a project installed utility needs to be backfilled and the backfill is temporary or the location of the utility will need to be known during future phases of the project, the utility must be marked with a 2X4 or utility marking sign/device noting the depth of the utility and/or backfill utility with sand and place marking tape 1' above utility, identifying the proximity of the known utility.
  4. NEVER use a steel probe to locate underground utilities. Only nonconductive probes, such as fiberglass probes with a steel tip, shall be used.

- Locate 'unknown' utility lines:
  1. Request utility line information from property Owner.
  2. Reference as-builts and talk with maintenance personnel.
  3. Look for suspect indicators:
     - Transformers
     - Stub ups
     - Abandoned equipment pads
     - Equipment in locations not shown on drawings
     - Non-homogeneous concrete/concrete repairs
     - Lighting/switching runs
     - Electrical man-holes
     - Gas lines
  4. Contact private utility locate service or use Tarlton locate equipment.
  5. Train on correct use of utility locate equipment (Amprobe 3000).
  6. Survey area with utility location equipment.

PROCEDURE

1. Contact "one-call" service.
2. If private property, send RFI to Owner to request utility line information.
3. If private property, contact maintenance department for utility line information.
4. Look for suspect indicators (as listed above).
5. Use private utility locate service.
6. Employ use of Tarlton equipment (as verification or extra precaution).
7. Verify all utilities are shut down (locked out/tagged out) prior to start of work.
8. Hydro-Excavation is required to daylight or pothole any excavation within a 24" Tolerance Zone on either side of located utilities.

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RELATED SECTIONS
Minimum Safety Requirements
Lock Out/Tag Out Safety Procedures
Excavation Procedures

APPLICABLE FORMS (APPENDIX B)
Lock Out / Tag Out Permit

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Waste Material

Construction necessarily generates a variety of waste products that need disposal. Waste products include, but are not limited to, scrap wood, scrap metal, plaster, tiles, dust, trash, oil and grease, paper boxes and shipping materials, general debris, and soil. Disposal and clean up procedures are part of every job and shall be taken into account during project planning and pre-task planning. Employees shall be given instructions on how to dispose of any potential wastes they are likely to encounter on the jobsite prior to beginning work. Project Managers and employees have a responsibility to maintain safe, clean, and orderly jobsites in an effort to minimize tripping, combustion, exposure, and environmental contamination hazards.

The elimination of combustible material is a major part of any fire prevention program. Special effort is needed on construction sites due to the large amounts of material being generated. Scrap lumber, temporary hole covers, and rags used for cleaning of oil, grease, etc., are all examples of material that are easily ignited by welding sparks or other relatively small ignition sources.

Housekeeping Audits

At the discretion of the Project Manager, Tarlton may utilize a housekeeping audit form on many projects. Housekeeping program must provide for the following:

1) A sufficient number of containers to accommodate the amount of debris generated.
2) Prompt, regularly scheduled removal of debris.
3) Proper placement of containers. Avoid placing containers in the immediate proximity of materials and equipment, especially those susceptible to fires. Careful evaluation of the placement of the containers must also be given in order to provide adequate service and removal of the container.
4) Identification of containers. Containers shall be properly identified for trash, hazardous material disposal, and/or recyclable materials. When possible, items such as scrap metal or paper shall be segregated out and recycled.
5) Debris piles shall be kept neat and orderly out of walkways. Debris piles should be barricaded and stored away from work areas when possible as to avoid tripping and exposure hazards.
6) Proper storage and regular pick up and disposal will occur to reduce the possibility of environmental contamination.
7) All loose debris shall be picked up immediately to avoid tripping hazards and damaging equipment.
8) Prior to the beginning of work, schedules for pickup and directions for disposal of various types of debris or material shall be communicated to employees by posting, labeling containers, and pre-task planning.
9) The amount of waste and debris that will be generated by the work being done by Tarlton is estimated prior to the beginning of the project and steps taken to provide the appropriate number and type of disposal containers to accommodate the amount of waste/debris expected.

General Guidelines for Hazardous Waste

The generation of hazardous wastes or the exposure of Tarlton employees to hazardous waste during Tarlton projects **is not anticipated**.

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Any hazardous wastes or debris shall be abated or removed by the Owner/client prior to the beginning of work. Certificates of abatement and/or the necessary required permits for the presence of hazardous wastes on Owner/client jobsites shall be provided to Tarlton by the Owner/client.

In the event that a Tarlton employee should encounter hazardous waste or materials in the course of their work, employees are instructed to avoid those materials and immediately contact the Tarlton Site Supervisor. If hazardous wastes or materials are identified, the Site Supervisor will get instructions from the Safety Officer for management and disposal procedures prior to commencing work.

OSHA REFERENCE

NA

RELATED SECTIONS

NA

APPLICABLE FORMS (APPENDIX B)

NA

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PURPOSE & APPLICATION

Tarlton's Respiratory Protection Program is committed to the protection of employees from hazardous atmospheres. Respiratory protection shall be provided to Tarlton employees exposed to hazardous or harmful dusts, vapor, gases, mists, or oxygen deficient atmospheres.

Tarlton's Safety Team shall be fully trained in using respirators and effectively managing the Respiratory Protection Program including, but not limited to, the following:

- Determining the appropriate equipment to be used in a given situation.
- Identification of hazardous atmospheres.
- Medical evaluations for fit testing.
- Fit testing.
- Proper cleaning, sanitation, maintenance, and storage requirements for respiratory equipment.
- Records and documentation of training.
- Storage and maintenance of Respiratory Protection Program related medical records.
- Proper inspection methods.

Training

Documented training shall be provided to employees required to wear respiratory protection. Training shall be required prior to the start of the job and shall include the inspection, maintenance, fit, and use of respiratory equipment. Retraining will be done annually. Medical evaluations and fit tests will be given to assure each employee is properly protected using the respirator. Required respiratory protection, training, and medical evaluations shall be provided at no cost to the employee. Training shall cover the following:

- The nature, extent, and effect of respiratory hazards to which the employee may be exposed.
- Identification of the chemicals involved, what exposure levels would be if no respiratory protection were being used, and the potential health effects of exposure if the respirator is not worn properly.
- An explanation of the operation, limitations, and capabilities of the respirators selected for the employees to wear.
- An explanation of how the respirator provides protection by either filtering the air, absorbing the vapor, or providing breathing air from an uncontaminated source.
- Specific instructions regarding the type and frequency of respirator inspections so that the employee is capable of recognizing any problems that may threaten the continued protective capabilities of the respirator. The training will include the steps the employee is to follow if any problems are discovered during inspection, such as to whom they should report and where replacement equipment can be obtained if necessary.
- Procedures for donning and removing the respirator, checking the fit and seals, and actually wearing the respirator.
- Employees must be clean-shaven to effectively wear a respirator and ensure a protective seal.
- An explanation of the procedure for maintenance including cleaning, disinfecting, and storage of respirators. Respirators shall be sanitized and stored in a clean, dry area;

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inspections shall be done before use and during cleaning to ensure respirators are neither contaminated nor damaged.

- A discussion of the possibility of respirator malfunction or a change in situation which may require the use of a different respirator for the exposure levels involved and the procedure for dealing with these situations.
- Employees will be instructed to leave the area to wash, change cartridges, or if they detect break-through or resistance when using respirators.
- In addition to training prior to work assignments in Respiratory Areas, employees required to work in these areas shall receive *annual refresher training* which includes the above-listed topics. An employee will also be retrained if the employee's use of the respirator indicates the employee's knowledge is inadequate.

Employees shall be required to demonstrate understanding of the training provided by means of a written test or oral test and/ or observation by the trainer. The trainer may be an employee or owner of Tarlton or may be a consulting firm. All trainers must have extensive knowledge of this policy and of respiratory equipment.

Respiratory Hazard Areas

A Respiratory Hazard area is an area or job assignment where the atmosphere may expose employees to the risk of injury or illness from one or more of the following causes and as further defined in the OSHA standards:

- **Confined Space:** A confined space may have flammable gas, vapors, or mist. *If the atmosphere exceeds 10 percent of its lower explosive limit (LEL), the employee must stop work and exit the area until the LEL is reduced.* There is no personal protective equipment available that will protect the employee from this potential fire/explosion hazard.
- **Oxygen levels:** Atmospheric oxygen concentration below 19.5 percent (Oxygen Deficient) or above 23.5 percent (Oxygen Enriched). If either condition is found, the employee is to stop work and leave the area immediately.
- **Airborne hazards:** Concentrations of any airborne substance at such levels which could result in employee exposure in excess of the permissible exposure limit (PEL) published in 29 CFR 1910.Subpart G, Occupational Health and Environment Control, or in Subpart Z, Toxic and Hazardous Substances. *In the absence of a PEL for a particular substance, the National Institute for Occupational Safety and Health (NIOSH) or the American Conference of Governmental Industrial Hygienists (ACGIH) may have published a Recommended Exposure Limit (REL) or a Threshold Limit Value (TLV), respectively. These limits are based on a time-weighted average over a work day.*

Tarlton will conduct atmospheric testing prior to any entry into a confined space for oxygen levels, LEL and toxic vapors. The client will identify the potential contaminants prior to the start of work. The client will supply the Tarlton Safety Department with an MSDS for all contaminants that are potentially in the work area with which employees may come into contact.

Procedures for Medical Evaluations and Fit Tests

Respiratory hazards require the wearing of respirators. Respiratory equipment will be provided in areas deemed respiratory hazard areas. However, due to the potential physiological stress (demand) on an

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employee's breathing, a medical evaluation is required to determine if the employee is capable of wearing respiratory protection.

- All employees, prior to wearing respiratory equipment, must be examined by a professional licensed health care provider, at no cost to the employee, to determine pulmonary function and be examined for other conditions that may be provided by the employee through the medical questionnaire.
- If an employee will be exposed to silica more than 30 days out of the calendar year they must receive a medical exam including the following every three years. Chest X-ray/b read, tuberculosis test, silica examination, and pulmonary function test at no cost to them.
- After successfully completing the medical evaluation (copies of the medical findings are retained by the Safety Department), the employee is then given a qualitative fit test for the respirator he will be assigned.
- Medical evaluations for the respiratory program will be kept by the Safety Department as confidential.
- Employees shall be given the option of discussing the results with the physician or licensed health care professional doing the evaluation.
- Evaluations shall be done during normal working hours.
- Forms for assessment shall be available for convenient processing. Should the employee require assistance with filling out these forms, the safety officer in charge of the Respiratory Protection Program shall be able to provide direction and/or clarification.

RESPIRATORS

The choices of respiratory protection are based on the level or concentration of airborne substances and the level of oxygen in the atmosphere. There are basically two types of respirators: Air-Purifying and Air-Supplying Respirators.

Air Purifying Respirators (APR)

Air Purifying Respirators (APR) are used to remove (purify) Particulates, Vapors and Gases. Employees are required to wear a particulate respirator to reduce lead, heavy metals, cadmium, asbestos fibers, dust, fumes, mists, and NORM.

- **Particulates** are finely divided airborne materials; e.g. Dusts, Mists, Fumes and Fibers.
- **Dusts** can be from various mechanical disturbances of soil and other materials; they vary from nuisance to extremely harmful; e.g. Lead and NORM and enter the blood stream through inhalation.
- **Mists** are typically generated when liquids are atomized by spraying and they too vary from harmless to extremely harmful; e.g. paints and attach themselves to the cilia in the bronchial area of the lungs or the alveoli inside the lungs.
- **Fumes** are the by-product of melting metal (welding) or grinding. The welding fume may contain harmful levels of metals or chemicals from the flux or shielding gases and enter the blood stream through inhalation. Some of these chemicals are now presumed to cause chronic diseases such as Parkinson's.

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- **Fibers** are generated through the mechanical reduction of certain materials in manufacturing and abatement. These are cotton and fiberglass in manufacturing and asbestos when disturbed by the process of removal in abatement projects.
- **Vapors** are released from liquids at varying temperatures based on their vapor pressure. These are further defined as Organic Vapor and all have exposure limits that should not be exceeded. Over exposure can cause a very broad list of acute and chronic illnesses.
- **Gases** also are released from liquids. The gases of concern in this regulation are generated or released from corrosive liquids; some under pressure to remain liquid. These are called Acid Gases and all have exposure limits that if exceeded cause extremely harmful acute effects.

NOTE: *AIR PURIFYING RESPIRATOR*

1) *An employee is instructed that all particulate APRs are to be replaced if breathing becomes difficult. The particulate APR is only an air filter and therefore, if working properly, will become clogged or plugged; similar to the air cleaner in their vehicle.*

2) *All employees are instructed to replace the APR Organic Vapor Chemical or Acid Gas Cartridges if they detect the odor or taste of the contaminant. These Chemical Cartridges should be replaced on a daily basis if used for 8-hours or more.*

Air-Supplying Respirators (ASR or SAR)

Air-Supplying Respirators (ASR or SAR) are used to provide breathing air to the employee. Because ASRs supply breathing air, the use of purifying cartridge type respirators to control contaminants is unnecessary.

- Atmospheres that contain particulates, vapors, and gases above the PEL/REL/TLV are sometimes significantly above these limits, and the employee cannot be protected by just filtering. The use of ASRs then becomes mandatory for these inhalation hazards.
- Atmospheres that, by monitoring, are oxygen deficient (>19.5%) require the mandatory use of ASRs to supply the necessary level of oxygen to the employee. The use of ASRs is also mandatory in Immediately Dangerous to Life and Health (IDLH) atmospheres.
- All IDLH entries require a full body harness, a retrieval system, and a qualified attendant. The attendant shall have constant visual contact and communication with the qualified entrant.
- Some activities are short-term and/or may require the employee some mobility. In these instances, the use of Self-Contained ASR (SCBA) is preferred. This is usually a 30-minute air supply inside a bottle and worn on the back of the employee.
- Some activities are of longer duration and the use of SCBA would require the employee to continually leave the area of work to have this bottle replaced. Other times, the wearing of the SCBA is prohibited due to the configuration or limitations of the area in which the employee is working. In these instances, the other ASR is supplied by an air-line (ALR or SAL) from a source outside of the contaminated area. This source may be from one or several large bottles or it could be from a “breathing air” compressor certified for use with proper and current breathing air filters and a 10 PPM Carbon Monoxide (CO) alarm. The breathing air fittings must be incompatible with all other gases.

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- When using an air line respirator system, the employee's activities may require a separate and portable backup supply of breathing air. This is true in confined spaces and/or if there is a possibility for exposure from process piping that was not completely depressurized or has the potential to contain an IDLH atmosphere. This backup supply is known as a 5-minute egress (escape) bottle. If the ALR fails, or the employee requires immediate removal, then the 5-min egress bottle shall be turned on and the employee immediately leaves the area. This bottle is only to be used for escape.

Qualified Equipment

Respiratory equipment used by Tarlton is NIOSH and MSHA approved.

- Scott, North, 3M, Miller, and MSA are the approved APR and ASR used at Tarlton. If any new equipment is added, this procedure will be revised.
- All breathing air equipment supplies Class D Breathing Air to the employee, whether or not it is from bottles supplied by a vendor or a certified Breathing Air Compressor.

Fit Testing

- All employees who are assigned respiratory equipment shall receive (qualitative/quantitative) respirator fit testing prior to first wearing any respirator with a negative or positive pressure tight-fitting face piece.
- In addition to fit testing prior to initial use of the respirator, fit testing will also be performed whenever a different respirator face piece (size, style, model, or make) is used, or if the following conditions change that may affect respirator fits.
- Weight gain or loss of 10 or more pounds.
- Oral surgery or the removal of 3 or more teeth.
- Facial surgery.
- All employees will be fit tested using the same make, model, style, and size of respirator that they will be using.
- Qualitative/Quantitative fit testing shall be performed by qualified personnel in accordance with OSHA Standard 29 CFR 1910.134.

<u>No employee will be allowed to wear a tight-fitting respirator, APR, or ASR if any facial hair interferes with the sealing area</u>. Employees who wear corrective eye wear shall not be allowed to wear full-face APR or ASR unless they can see adequately (medical evaluation) without the corrective eyewear or supplement the eyewear with "hard" contact lenses.

Maintenance and Custody of Respirator

All respirators shall be cleaned and disinfected outside the affected area at the following points in time:

- Respirators issued for the exclusive use of an employee shall be cleaned and disinfected as often as necessary to be maintained in a sanitary condition; at a minimum, prior to wearing and at the end of each worked shift.
- Respirators issued to more than 1 employee shall be cleaned and disinfected after each usage by the employee provided with the respiratory equipment.

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- Respirators used in fit test testing and training shall be cleaned and disinfected after each use by the employee to assure proficiency.
- All respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals.
- All respirators shall be packed or stored to prevent damage to the face piece and exhalation valve.
- All respirators shall be inspected before each use and during cleaning. The applicable items to be inspected include:
    - Check of respirator function; tightness of connections and of the various parts including, but not limited to, the face piece; head straps; valves; connecting tube; cartridges; canisters; or filters.
    - Check of elastomeric parts for pliability and signs of deterioration.
- Respirators that fail an inspection or are otherwise found to be defective shall be removed from service, rendered unusable, and discarded.
- Disposable respirators (dust masks) are to be worn by 1 person only and for 1 shift only.

OSHA REFERENCE
CFR 1910.134, Respiratory Protection

RELATED SECTIONS
PPE

APPLICABLE FORMS (APPENDIX B)
Respirator Medical Evaluation (Fit Test) Form Q

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Purpose

The purpose of this procedure is to ensure right of access to relevant exposure and medical records to employees and/or their designated representatives.

Key Responsibilities

Tarlton Safety Manager

- Develops local medical records practices for all worksites in accordance with this procedure and ensures employees are aware of the requirements of this procedure.
- Responsible for the review, implementation, and maintenance of the local worksite medical records procedure.

Project Manager

- Responsible for the implementation and maintenance of the medical records procedure for their facility and ensuring all assets are made available for compliance with the procedure.

Employees

- All shall be familiar with this procedure and have access to their records.

Overview

This section applies to all employee exposure and medical records, and analysis thereof, made or maintained in any manner, including on an in-house or contractual (e.g., fee-for-service) basis.

- Trade secret information disclosure must follow requirements as stated in 29 CFR 1910.1020 (f) (8).
- Recognized collective bargaining agents who have statutory authority to represent the interests of the employees within the bargaining unit are automatically considered designated representatives. While these representatives do not have the right to secure individual medical records without written consent of the employee, they have the right of access to employee exposure records and analysis without employee consent.

Definitions

Access means the right and opportunity to examine and copy.

Analysis of exposure or medical records means any compilation of data and research or other studies based, at least in part, on information collected from individual employee exposure or medical records or other sources including information from health insurance claim forms provided that either the analysis must have been reported to the employer or no further work is being done by the person responsible for preparing the analysis.

Designated representative will mean any individual or organization to which an employee gives written authorization to exercise a right of access. For the purposes of access to employee exposure records and analyses using exposure or medical records, a recognized or certified collective bargaining agent shall be treated automatically as a designated representative without regard to written employee authorization.

Employee exposure records could include any of the types of information listed below:

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- Environmental (workplace) monitoring or measuring of a toxic substance or harmful physical agent, including personal, area, grab, wipe, or other form of sampling, as well as related collection and analytical methodologies, calculations, and other background data relevant to interpretation of the results obtained;
- Biological monitoring results which directly assess the absorption of a toxic substance or harmful physical agent by body systems (e.g., the level of a chemical in the blood, urine, breath, hair, fingernails, etc.) but not including results which assess the biological effect of a substance or agent or which assess an employee's use of alcohol or drugs;
- Material safety data sheets indicating that the material may pose a hazard to human health; or in the absence of the above, a chemical inventory or any other record which reveals where and when used and the identity (e.g., chemical, common, or trade name) of a toxic substance or harmful physical agent.

Employee medical records are records that concern the health status of an employee and are made or maintained by a physician, nurse, or other health care personnel or technician. "Employee Medical Record" means a record concerning the health status of an employee which is made or maintained by a physician, nurse, or other health care personnel, or technician.

NOTE: The following will not be considered a medical record:

- Physical specimens, such as blood or urine samples, which are routinely discarded.
- Health insurance claims, accident investigation reports, and other non-medical correspondence if maintained separately from the medical file.
- The record of any voluntary employee assistance program (alcohol, drug, etc.) if maintained separately.
- Records created solely in preparation for litigation which are privileged from discovery under applicable rules of procedure or evidence.

Specific Written Consent means a written authorization containing the following:

- The name and signature of the employee authorizing the release of medical information.
- The date of the written authorization.
- The name of the individual or organization that is authorized to release the medical information.
- The name of the designated representative (individual or organization) that is authorized to receive the released information.
- A general description of the medical information that is authorized to be released.
- A general description of the purpose for release of the medical information.
- A date or condition upon which the written authorization will expire (if less than one year).

A toxic substance or harmful physical agent is defined as any chemical substance, biological agent (bacteria, fungus, virus, etc.), or physical stress (noise, heat, cold, ionizing radiation or non-ionizing radiation, hypo or hyperbaric pressure, etc.) which:

- Is regulated under federal law or rule due to a hazard to health.
- Is listed in the National Institute of Occupational Safety and Health (NIOSH) Registry of Toxic Effects of Chemical Substances (RTECS).
- Shows positive evidence of acute or chronic health hazard in human, animal, or other biological test by or known to the employer.
- Has a Material Safety Data Sheet indicating that the substance may pose hazard to human health.

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Procedure

The Human Resource Department will maintain applicable medical and exposure records for all employees. All requests to access medical and exposure records and analysis based on those records must be submitted to using the forms provided for that purpose.

Access to records is provided in a reasonable time, place, and manner. Access to records must be provided in a reasonable time, place and manner. If access to records cannot reasonably be provided within fifteen (15) working days, Tarlton shall within the fifteen (15) working days apprise the employee or designated representative requesting the record of the reason for the delay and the earliest date when the record can be made available.

Personal identifiers (name, address, social security number, payroll number, etc.) are removed from records before access is granted. Whenever access is requested to an analysis which reports the contents of employee medical records by either direct identifier (name, address, social security number, payroll number, etc.) or by information which could reasonably be used under the circumstances indirectly to identify specific employees (exact age, height, weight, race, sex, date of initial employment, job title, etc.), personal identifiers must be removed before access is provided.

Tarlton, upon request, will assure the prompt access of representatives of the Assistant Secretary of Labor for Occupational Safety and Health to employee exposure and medical records and to analyses using exposure or medical records.

Except for a recognized collective bargaining agent, any designated representative must have the employee's written permission for access to exposure records and analyses. It is necessary however, for the union representative to specify the occupational need for access to records absent the employee’s consent. Union representatives must have the employee's written permission to access medical records.

Copies of medical records are provided at no cost to employees. Whenever an employee or designated representative requests a copy of a record, that record must be provided at no cost.

Any review of medical or exposure records by an employee or union representative shall be done on his or her own time, outside of normal working hours, at a time mutually agreeable to the parties. The review will be conducted in person with the individual requesting access to the records.

The employee is entitled access to his or her medical records except when a physician determines that this knowledge would be detrimental to the employee's health as in such cases of terminal illness or psychological conditions. However, if the employee provides a designated representative with specific written consent, access to medical records must be provided even if the physician has denied the employee access to the records.

The authorized physician, nurse, or other responsible health care personnel maintaining employee’s medical records may delete the identity of anyone who has provided confidential information concerning the employee's health status but cannot withhold the information itself.

When an analysis of medical records identifies the employee, a physician may remove direct or indirect personal identification. If this cannot be done, the personally identifiable portions need not be provided to the person seeking such information.

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Employees and their designated representatives will be permitted, upon request, access to past and present exposure data to toxic substances or harmful physical agents.

Copies of exposure records of other employees with past or present job duties or working conditions like or similar to those of the employee will also be provided upon request.

Any employee or designated representative is also permitted access to any record of exposure information which pertains to a new workplace or condition(s) to which the employee is being assigned or transferred.

Records Retention

- Medical records must be preserved and retained for the duration of employment plus 30 years.
- Employee exposure records must be retained for 30 years.

Transfer of Records should Tarlton Cease to do Business

Whenever Tarlton ceases to do business it shall transfer all records subject to this section to the successor employer. Whenever Tarlton is either ceasing to do business and there is no successor employer to receive and maintain the records, or intends to dispose of any records required to be preserved for at least thirty (30) years, Tarlton shall transfer the records to the Director of the National Institute for Occupational Safety and Health (NIOSH) if so required by a specific occupational safety and health standard.

Employee Information

Employees are informed of the provision of recordkeeping upon initial assignment and annually thereafter. Upon an employee's first entering into employment, and at least annually thereafter, information must be given to current employees of the existence, location, availability, and the person responsible for maintaining and providing access to records and each employee's rights of access to these records.

The Access to Employee Exposure and Medical Records Standard (29 CFR 1910.1020) will be readily available for review by employees upon request.

A copy of the employee notice that will be used to comply with the employee information requirements is included with the policy. This notice will be posted on those bulletin boards where other notices normally appear.

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AUTHORIZATION LETTER FOR THE RELEASE OF EMPLOYEE MEDICAL RECORDS

I, _____, hereby authorize _____

(Full name of employee) (Name of Organization)

to release to Tarlton the following medical record(s):

_____

(Give specific description of the information to be released)

I give my permission for the medical information to be used for the following purpose(s):

_____

_____

_____ I do not give permission for any other use or reason.

_____ I understand that this authorization expires twelve (12) months from today's date unless I specify a particular date less than twelve months which is _____.

_____ _____

Signature of employee or his/her legal representative

Date of Signature

Reviewed on: _____ with: _____

(Date) (Signature of Organization's Representative)

Copies given: Yes _____ No _____

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ACCESS TO MEDICAL/EXPOSURE RECORDS NOTICE

Federal Regulation 29 CFR 1910.1020 requires us to inform you that TARLTON CORPORATION does keep records designated as Employee Exposure and Employee Medical Records.

The above regulation gives you the right to review those records with certain exceptions.

The records are maintained in the Safety Department and the Safety Manager is responsible for the records.

A copy of CFR 1910.1020 is available for viewing upon request to the Safety Manager.

_____ _____

Signature Date

Note: This notice must be posted annually

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Purpose:

The purpose of this program is to prevent injury from failing or failure of compressed gas cylinders and to establish requirements for handling, lifting, and storing compressed gas cylinders safely.

Scope

This program covers all employees and contractors who handle, transport, and/or use compressed gas cylinders.

Key Responsibilities

Managers/Supervisors

- Shall ensure that all employees are aware of the proper handling, storage, and use requirements for compressed gas cylinders.
- Shall ensure that initial training is conducted for all new employees and that retraining is conducted when employee behaviors suggest that retraining is warranted.

Employees

- Shall follow all requirements regarding the safe handling, storage, and use of compressed gas cylinders.

Procedure

General

Cylinders shall not be accepted, stored or used if evidence of denting, bulging, pitting, cuts, neck, or valve damage is observed. If damage is observed:

- The cylinder must be taken out of service.
- The cylinder's owner shall be notified to remove the cylinder from the premises.
- If owned, the cylinder shall be de-pressured and inspected as required by this program.

Cylinder Identification

Gas identification shall be stenciled or stamped on the cylinder or a label used. No compressed gas cylinder shall be accepted for use that does not legibly identify its content by name.

Handling

Valve caps must be secured onto each cylinder before moving or storage.

Secure the cylinder in a blanket when being lifted by mechanical means. Slings, ropes, or electromagnets are prohibited to be used for lifting compressed gas cylinders.

The preferred means to move compressed gas cylinders is with a cart, carrier, or with a helper.

Compressed gas cylinders must not be allowed to strike each other.

When a cylinder cap cannot be removed by hand, the cylinder shall be tagged "Do Not Use" and returned to the designated storage area for return to vendor.

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Storing
All cylinders must be secured upright in a safe, dry, well-ventilated area that limits corrosion and deterioration.

- Cylinders must be secured by means that will prevent the cylinder from falling.
- When securing the cylinder, the restraints shall not be attached to an electrical conduit or process piping.

Empty and non-empty cylinders shall be stored separately. All stored cylinders shall be capped.

Oxygen cylinders must be stored a minimum of 20 feet from combustible gas cylinders or areas where there may be open flame or arcing. Cylinders may also be stored where the oxygen is separated from combustible gas cylinders by a 5 foot or higher wall with a fire resistance rating of 30 minutes.

Storage areas for full and empty cylinders must be designated and labeled. Cylinders should be stored in definitely assigned places away from elevators, stairs, or gangways.

Use
Cylinders must be equipped with the correct regulators. Regulators and cylinder valves should be inspected for grease, oil, dirt, and solvents. Only tools provided by the supplier should be used to open and close cylinder valves.

Never force or modify connections.

Only regulators and gauges shall be used within their designated ratings.

The use of a pressure-reducing regulator is required at the cylinder unless the total system is designed for the maximum cylinder pressure.

Valves must be closed when cylinders are not in use.

Cylinders shall not be used as rollers or supports.

Cylinders shall not be placed where they can come in contact with electrical circuits.

Cylinders must be protected from sparks, slag, or flame from welding, burning, or cutting operations.

Empty cylinders must be returned to designated storage areas as soon as possible after use.

Inspection of Compressed Gas Cylinders
Tarlton shall determine that compressed gas cylinders under its control are in a safe condition to the extent that this can be determined by visual inspection. Visual and other inspections shall be conducted as prescribed in the Hazardous Materials Regulations of the Department of Transportation (49 CFR parts 171-179 and 14 CFR part 103). Where those regulations are not applicable, visual and other inspections shall be conducted in accordance with Compressed Gas Association Pamphlets C-6-1968 and C-8-1962. Some elements include, but are not limited to:

- Hoses and connections should be inspected regularly for damage. Hoses should be stored in cool areas and protected from damage.

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- These owned cylinders shall be visually inspected prior to charging, before each use, and at least annually.
- All inspections and testing must be documented.

High Pressure Cylinders are those cylinders marked for service pressures of 900 psi and greater.

- High pressure cylinders shall be taken out of service and submitted for re-qualification testing when any of the following conditions are identified by visual inspection:
    - Cuts, dings, gouges, dents bulges, pitting, neck damage, or evidence of exposure to fire.
- The cylinders shall be inspected and retested according to the requirements stated in 49 CFR 180.205 and .209.
- Re-qualification of non-damaged cylinders shall be conducted per the schedule in 49 CFR 180.209.

Low Pressure Cylinders are those cylinders marked for service pressures of less than 900 psi.

- Low pressure cylinders fall into two categories, those requiring requalification and those that do not require re-qualification.
- Low pressure cylinders that do not require re-qualification shall be taken out of service and condemned when any of the following conditions are identified during inspection:
    - The tare weight of the cylinder is less than 90% of the stamped-on weight of the cylinder.
    - Observed pitting, dents, cuts, bulging, gouges, or evidence of exposure to fire.
- Low pressure cylinders subject to re-qualification shall be taken out of service, inspected and retested when visual inspection identifies any of the following conditions:
    - dents, bulges, pitting, or neck damage.
- Re-qualification of non-damaged cylinders shall be conducted per the schedule in 49 CFR 180.209.

Leaking Cylinders
Leaking cylinders should be moved promptly to an isolated, well-ventilated area away from ignition sources. Soapy water should be used to detect leaks. If the leak is at the junction of the cylinder valve and cylinder, do not try to repair it. Contact the supplier and ask for response instructions.

Transportation
Cylinders must be transported in a vertical secured position using a cylinder basket or cart and must not be rolled. Regulators should be removed and cylinders capped before movement. Cylinders should not be dropped or permitted to strike violently and protective caps are not used to lift cylinders.

Empty Cylinder Marking
Cylinders should be marked as "MT" and dated when empty. Never mix gases in a cylinder and only professionals should refill cylinders. Empty cylinders must be handled as carefully as when filled.

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Engineering Controls

Engineering controls such as emergency shutoff switches, gas cabinets, and flow restrictors should be used wherever possible to control hazards. Emergency eyewash facilities should be present where corrosive gases or materials are used.

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Purpose

The purpose of this program is to ensure that we verify our subcontractor's competencies, establish oversight methods, and monitor their work in order to ensure safe and environmentally compliant work is performed at all times.

Scope

This program applies to all Tarlton locations that use subcontractors.

General Requirements

The use of subcontractors must be pre-approved by Tarlton in accordance with our Subcontractor Management Plan and this program. Subcontractors will be pre-qualified by reviewing their safety programs, safety training documents, and safety statistics.
Subcontractor Relations Requirements

Competency Requirements

Subcontractors must be competent and capable to perform their assigned duties in a safe and environmentally sound manner. A verification process must be conducted to ensure that on-site subcontractors are competent and capable of performing their assigned duties in a safe and environmentally sound manner. The Tarlton manager hiring any subcontractor is accountable for verifying the written pre-approval of the subcontractor per the Subcontractor Management Plan prior to any work being performed by the subcontractor. This includes a review of the subcontractor's safety history, safety program, insurance, etc.

Subcontractors must have the appropriate licenses, registrations, and insurance to complete their work. A verification process must be completed to ensure that on-site subcontractors have the appropriate licenses, registrations, and insurance to complete their work. The scope of work for the subcontractor will include a list of documentation required to meet regulatory and client requirements appropriate to the subcontracted work. The Tarlton manager hiring any subcontractor is accountable for obtaining, verifying, and keeping copies of all required and appropriate documentation prior to any work being allowed to start by the subcontractor.

Communications Requirements

Prior to the start of work Tarlton and any subcontractor will establish clear lines of communication that includes an effective reporting relationship. The aim of this process is to improve HSE performance by facilitating the interface of Tarlton activities with those of the client, other contractors, and subcontractors. Pre-work or project kickoff meetings shall be held before work starts and be documented to ensure the subcontractor is completely aware of the reporting and communications requirements between Tarlton, its client, and the subcontractor.

Prior to the start of work Tarlton and any subcontractor must and will define clear roles and responsibilities. Aligning the various interests and areas of responsibility requires good working relationships between the client, contractors, and subcontractors. This is particularly true if the subcontractor activities are difficult to monitor (e.g. distributed work groups, remote locations, transportation). The roles and responsibilities of Tarlton, its client, and the subcontractor will be included and documented in the pre-work meeting held prior to work starting.

Emergency Planning

Prior to the start of work Tarlton and any subcontractor will establish an emergency action plan. Prior to the start of work Tarlton and any subcontractor will communicate the emergency response procedures and capabilities.

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Tarlton should contact all subcontractors to ensure their roles in emergency response plans are known. Subcontractors must follow emergency planning requirements for any Tarlton client location.

Oversight

An appropriate level of oversight and monitoring must and will be put in place to verify subcontractor performance for the life of the contract. Tarlton should periodically review the HSE performance of all subcontractors and verify compliance with regulatory and work-specific requirements, safety key performance indicators, and other agreed upon requirements.

Tarlton and each subcontractor shall meet at the end of the project to formally evaluate the subcontractor's regulatory and work-specific compliance and performance. The meeting shall be documented and if the client wishes to attend, an invitation will be sent to the appropriate client representative.

In addition, subcontractors are required to follow or implement the work practices and systems described below while performing work at Tarlton or client worksites:

- Attend all safety orientations included in any pre-job meeting or kick-off meeting provided by Tarlton or client prior to any work beginning.
- Monitor its employees for substance abuse and report nonconformities to Tarlton.
- Be included in Tarlton Toolbox talk safety meetings, job safety analysis or hazard assessments, and on the job safety inspections.
- Perform a pre-job safety inspection that includes equipment.
- Report all injuries, spills, property damage incidents, and near misses.
- Comply with Tarlton and client safety and environment rules, policies, guidelines, or procedures.
- Implement Tarlton safety practices and processes as applicable.
- Clean up and restore the worksite after the job is over.
- Ensure compliance with regulations at all times.
- Complete all applicable permits prior to work.

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Purpose

Tarlton full and part-time staff are expected to report for work fit for duty, which means able to perform their job duties in a safe, appropriate, and an effective manner free from the adverse effects of physical, mental, emotional, and personal problems.

Scope

This program applies to all Tarlton projects and operations.

Fitness for Duty Process

It is the goal of Tarlton to provide a safe workplace for all employees. To accomplish this goal, we have adopted the following Fitness for Duty policy requirements. Supervisors will work with the Human Resources department when they have a concern about an employee's Fitness for Duty.

All requirements will be verified through documentation.

Pre-Employment Testing (Physical/Medical Suitability)

Employees are physically capable of performing their job function. Pre-employment physicals (medical exams) and physical evaluations are required to be included in the hiring process, and also when changing into certain job functions, transfers and different environments, or in a post-injury returning to work situation (based on the severity of the injury).

Training and Safe Work Requirements (Skills and Knowledge)

Employees must have the required skills to perform their assigned tasks. This is evaluated and documented by any or all of the following for evaluation of the employee's required skills:

- Prior employment reference checks
- Certifications, licenses, or other documentation verification
- Task testing
- On the job monitoring
- Performance evaluations
- Training and training retention

Employees are properly trained for their assigned tasks. Employees must receive training specific to their assigned task. Examples might be welding, instrumentation, scaffold building, equipment operator qualifications, respirator fit test, etc., based on a training matrix that reflects the job description and/or tasks being performed. All training is to be documented.

Safe work practices and procedures must be followed. Safe work procedures must be in place prior to work beginning. Employees shall follow our and our client's safety requirements. Examples may include, hot work permitting, confined space, lockout tagout, process safety management, electrical safety, operator safety, and other standard work practices, safety rules, or procedures.

Personal Medical Reporting Requirements

Employees must report all medications they are taking to their supervisor that could impair their ability to work safely. Over-the-counter medications such as allergy or cold and flu medications could also impair one's ability to

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perform safely and must also be reported to their supervisor. The reporting must occur before the employee arrives for work or arranges for transportation to a remote site.

Client Drug and Alcohol Testing Requirements
Drug and alcohol testing for pre-employment, post-accident, or random as prescribed by the host facility shall be implemented. Procedures must include and be implemented for drug and alcohol testing as prescribed by DOT or the host client facilities.

Employee Activity and Behavior
Tarlton will monitor employee activities and behaviors to determine if employees should be removed from the work site based on the drug and alcohol program requirements. Employee's activities and behaviors will be monitored to determine if an employee should be removed from the work site if their ability to perform their duties safely is questioned.

Fit for Duty Examination

Confidentiality
Medical Records and other related records are protected by state and federal confidentiality laws and Tarlton policy. The medical record of Fitness for Duty examination will be maintained in the Human Resources office. Employee medical records will not be released to unauthorized personnel without the employee's written consent or subpoena in accordance with state and federal laws.

Self-Referrals
Employees are responsible for notifying their supervisor if they are fatigued to the point of not being able to perform their duties safely. Employees must be responsible for ensuring they are physically and mentally fit to perform their job functions safely. Employees must take responsibility for their own safety as well as not reporting to work in a condition as to endanger the safety of their fellow workers.

Disciplinary action may occur for an employee reporting to work in a condition which could endanger their safety or the safety of any other person(s). See below for Management Referral in case there is a question of the employee's ability to work safely.

Management Referral
<u>Management Personnel Responsibility</u>
Management personnel are responsible for monitoring the attendance, performance, and behavior of their employees. When an employee's performance and/or behavior (including the odor of alcohol or possible use of any illegal substance) appears to be unsafe, ineffective, and/or inappropriate, it is every manager's responsibility to challenge the employee's behavior and the ability to function, remove the employee from the job, refer the employee for a Fitness for Duty exam immediately, and conduct appropriate follow up.

Due to the safety issues involved, supervisors have a special responsibility to implement this policy in a consistent and fair manner.

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Procedure

- When any manager or their designee observes an employee who is not performing his/her job safely, appropriately, and effectively, or an odor of alcohol is present, or whose behavior is inappropriate, that manager is to remove the employee from her/his duty immediately and call Human Resources to continue the Fitness for Duty procedure. The employee will be referred to a medical provider for a Fitness for Duty exam.
- The Fitness for Duty evaluation may include testing for chemical (e.g. alcohol and drug) levels, referral for psychiatric evaluation, or any other evaluation or follow-up deemed necessary.
- The manager or designee must document the reasons for the Fitness for Duty request by recording the employee's behavior and noting the names of any witnesses who observed that behavior. Documentation must be submitted to Human Resources by the next business day.
- The employee is required to cooperate fully with the manager and medical personnel. The employee must sign consent forms for both the fitness examination and communication of its results in confidence to Human Resources. Refusal to cooperate will be considered insubordination and will be grounds for disciplinary action. The employee should be suspended pending investigation, which could result in termination.
- Medical personnel will advise Human Resources if the employee is fit or not fit for duty. The medical results of the Fitness for Duty exam will be communicated to Human Resources.
- If medical personnel determine that the employee is FIT FOR DUTY, the employee must contact Human Resources on the next general business day and the manager in consultation with Human Resources will determine discipline in situations where misconduct may have occurred.
- If medical personnel determine that the employee is NOT FIT FOR DUTY:
    - The manager makes every effort to arrange for safe transportation home for the employee.
    - The employee must contact Human Resources on the next general business day.
    - The manager, in consultation with Human Resources, will determine discipline in situations where misconduct has occurred.

Subsequent Fitness for Duty Exams

Dependent upon the reason for the fitness exam, employees who violate this policy a second time may be subject to progressive discipline, up to and including termination of employment.

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Purpose

Business continuity means ensuring that essential business functions can survive a natural disaster, technological failure, human error, or other disruption. Many existing business continuity plans anticipate disruptions such as fires, earthquakes, and floods. These events are restricted to certain geographic areas and the time frames are fairly well defined and limited. Pandemic disease, however, demands a different set of continuity assumptions since it will be widely dispersed geographically and potentially arrives in waves that could last several months at a time.

Development of a Pandemic Disease Plan and the Appointment of a Coordinator

A pandemic disease plan or disease containment plan will be developed for TARLTON CORPORATION and a coordinator appointed. There will be a workplace coordinator who will be responsible for dealing with disease issues and their impact at the workplace. This may include contacting local health departments and health care providers in advance and developing and implementing protocols for response to ill individuals.

Assumptions

A pandemic disease will spread rapidly and easily from person to person, affecting all businesses due to absenteeism. Businesses that are relied upon by other businesses will be facing the same massive absentee rates and will be unable to provide essential components to maintain the daily operations.

Risk assessments to identify the essential/critical components of Tarlton's business operation need to be conducted.
Recognize that a pandemic includes:

- Healthcare services not being available (they are already full at present with the usual ailments).
- Schools, churches and other public places not being open.
- Borders are partially or fully closed, especially airports, leaving people (our families, employees, business partners, customers and suppliers) "stranded".
- Essential materials and supplies may be limited due to distribution chains that are affected by the travel restrictions or absentee workers supporting those transportation means.
- Essential services around utilities, food distribution/access, and banking systems may not be at "normal levels"; access to cash flow could be tight.
- People may not be willing to or able to come to work.

Communications

Communication during a pandemic involves both internal communications and external communications. Internal communication will be provided to employees to educate them about pandemic diseases and measures they can take to be prepared.

Key contacts, a chain of communications, and contact numbers for employees and processes for tracking business and employees' status have been developed as described in this section.

Risk communication is critical to inform employees regarding changes in the pandemic status. The following is one method for providing such information.

Alert: conveys the highest level of importance; warrants immediate action or attention.

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Advisory: provides key information for a specific incident or situation; might not require immediate action.
Update: provides updated information regarding an incident or situation; unlikely to require immediate action.

Provide continuous updates through internal & external communications when a pandemic is imminent:

- Notification to employees of operational changes
- Provide frequent updates about the pandemic status
- Provide advisories and alerts as conditions change
- Ensure vendors and suppliers have available a dedicated communications contact
- Monitor local, state, and federal pandemic updates

Tarlton will notify key contacts including both customers and suppliers in the event an outbreak has impacted TARLTON CORPORATION's ability to perform services. This procedure also includes notification to customers and suppliers when operations resume.

Tarlton will use its phone system that can perform automatic dialing from a database with each employee's contact number to send notifications and messages about alerts. The use of the TARLTON CORPORATION website also will serve as a portal for sharing information with employees and vendors.

Business Continuity Planning
During an emergency, employees look to management to provide leadership for TARLTON CORPORATION. If a large percentage of personnel become ill, our business continuity plans will be initiated so that if significant absenteeism or changes in business practices are required, business operations can be effectively maintained.

COMMAND STAFF:

Incident Commander (President/CEO)	Organizes and directs all aspects of the incident response.
Public Information Officer (Media/Public Relations)	Creates and releases upon approval from the Incident Commander all information to the staff, media, and public.
Liaison Officer (Vice President)	Establishes and maintains relationships with outside organizations.
Safety Officer (Safety Manager)	Ensures the safety of all persons involved with the pandemic.

OPERATIONS SECTION:

Operations Section Chief (Director of Operations)	Initiates and manages ongoing operations throughout a pandemic.

LOGISTICS SECTION:

Logistics Section Chief (Purchasing/Inventory Manager)	Meets the goods, services, and staffing needs of the operation during the pandemic.

PLANNING SECTION:

Planning Section Chief	Collects information and resources potentially relevant to the

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(Lead Administrator)	pandemic and TARLTON CORPORATION operations.

FINANCE SECTION:

Finance Section Chief (Purchasing/Accounting Manager)	Monitors all expenditures and ensures fiscal resource availability during the pandemic.

Pandemic Response by Pandemic Phase

Currently the WHO has created various phases for a pandemic but does not always relate to events locally.

Level 0 (WHO Phase 3) - Novel virus alert- not human-to-human transmission.
Level 1 (WHO Phase 4) - Confirmed cases of human-to-human transmission of novel disease virus.
Level 2 (WHO Phase 5) - Suspected/confirmed cases in the Tulsa area.
Level 3 (WHO Phase 5) - Numerous suspected/confirmed cases in the Tulsa area.

Work-at-Home Considerations

There is a work-at-home and stay-at-home policy when employees are ill or are caring for others. Flexible work policies will be developed as much as possible. Employees are encouraged to stay at home when ill, when having to care for ill family members, or when caring for children when schools close, without fear of reprisal. Tele-commuting or other work-at-home strategies will be developed.

Infection Control Measures

Guidelines for infection control are important to clarify the routes of transmission and the ways to interrupt transmission through measures of hygiene. Infection control is an essential component of pandemic management and a component of public health measures. Essential measures include:

- Hand washing and use of hand sanitizers shall be encouraged by TARLTON CORPORATION supervision. Hand washing facilities, hand sanitizers, tissues, no touch trash cans, hand soap, and disposable towels shall be provided by TARLTON CORPORATION.

- Workers are encouraged to obtain appropriate immunizations to help avoid disease. Granting time off work to obtain the vaccine is considered when vaccines become available in the community.

- Social distancing including increasing the space between employee work areas and decreasing the possibility of contact by limiting large or close contact gatherings will be considered.

- We will clean all areas that are likely to have frequent hand contact (like doorknobs, faucets, handrails) routinely and when visibly soiled. Work surfaces will also be cleaned frequently using normal cleaning products.

Additional examples of infection control measures include:

- Stay at home when you are sick. If possible, stay away from work, school, and from running errands. You will help others from catching your illness.
- Cover your coughs and sneeze into tissue, or cough into your shirt sleeve.
- Enhance existing housekeeping service by wiping down and disinfecting work areas (i.e. keyboards, telephones, desks, etc.) frequently.

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- Enhance housekeeping services for general public use areas several times throughout the work period.
- Use personal protective equipment where appropriate to minimize exposure (i.e. gloves- for handling money, masks- for ill employees)

Implementation, Testing, and Revision of the Plan
The plan and emergency communication strategies will be periodically tested (at least annually) to ensure it is effective and workable.

Testing the plan will be accomplished by conducting exercises. Exercises range from low stress to full scale, hands on drills. A tabletop exercise is the easiest way to begin testing the plan. This type of exercise involves having discussions regarding a scenario that challenges the plan and the decision makers during an emergency. Functional exercises take on an additional level of complexity, in that they actually require participants to conduct functional components of the plan. This usually involves planning specific scenarios, creating pretend data, and present issues that target an area within the plan to be tested.

Each of these methods of testing the plan require extensive planning for the exercise and the evaluation. The evaluation is critical to revising the plan by capturing actual responses during the exercise or drill objectively. Once this data is captured, an after-action report with recommendations to revising the plan should be completed within a few weeks of the exercise.

Lessons Learned
After any exercise is conducted, the after-action report should be used to make improvements to this plan. Any lesson learned and/or areas of improvement during the exercises should be included in the after-action report to create a list of items that will be incorporated within the plan to improve the overall effectiveness of the plan.

After any pandemic has been official declared over, where this plan has been implemented, a lesson learned evaluation should be conducted and an action items list created. The action items list should be used to updated/revise this plan to better prepare the company for the possibility of another pandemic.
Following a pandemic event, the person responsible for implementation of the plan should identify learning opportunities and take action to implement any corrective actions.

Training
Employees will be trained on health issues of the pertinent disease to include prevention of illness, initial disease symptoms, preventing the spread of the disease, and when it is appropriate to return to work after illness. Disease containment plans and expectations should be shared with employees. Communicating information with non-English speaking employees or those with disabilities must be considered.

Documentation of all training is required.

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The purpose of Process Safety Management is to prevent or minimize consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals in various industries such as refineries, etc.

Tarlton is required to recognize and participate as a contract employer at client locations with PSM Programs in place. Tarlton, as a contractor, has certain obligations to fulfill in order to comply with established PSM programs. Contract employer responsibilities are as follows:

- Tarlton has a responsibility (as the contractor) to train all employees necessary to perform their job. Tarlton shall assure that each contract employee is trained in the work practices necessary to safely perform his/her job.
- Tarlton (the contract employer) shall assure that each contract employee is instructed in the known potential fire, explosion, or toxic release hazards related to his/her job and the process and the applicable provisions of the emergency action plan. Tarlton shall assure that each contract employee is instructed in the known potential fire, explosion, or toxic release hazards related to his/her job and the process, and the applicable provisions of the emergency action plan.
- Training shall be documented. Records which contain the identity of the contract employee, the date of training and the means used to verify that the employee understood the training must be maintained.
- Employee Evaluation Program – all employees will be evaluated to ensure required training, participation, and knowledge of the client's PSM requirements are completed and documented.
- Tarlton shall assure that each contract employee follows the safety rules of the facility including the safe work practices required with 1910.119(f)(4).
- Tarlton (the contract employer) shall advise the host employer of any hazards found or unique hazards presented by the contract employer's work. Tarlton shall advise the host employer of any unique hazards presented by the contract employer's work, or of any hazards found by the contract employer's work.
- Trade secret information and confidentiality of trade secret information - all contract employers must respect the confidentiality of trade secret information when the process safety information is released to them.

Process Safety Information

Tarlton employees shall participate in all, as directed, client PSM requirements, including:

- Employee Participation
- Process Hazards Analysis (PHA)
- Training /Employee Evaluation
- Pre-Startup Safety Review (PSSR)
- Hot Work Permits
- Incident Investigation
- Compliance Audits

Process Safety Information (PSI)
Operating Procedures
Contractors
Mechanical Integrity
Management of Change (MOC)
Emergency Planning and Response
Trade Secrets

Tarlton Duties

The host employer's safe work practices must be followed during operation such as lockout/tagout, confined space entry, opening process equipment or piping, and control over entrance to facility. Tarlton employees shall abide by the host employer's safe work practices during operations such as lockout/tagout, confined space entry, opening process equipment or piping, and controls over entrance to facility.

To comply with 1910.119(f)(4), Tarlton employees are required to complete all required documentation for any

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permit-required activities.

Hot work permits and hot work shall not be performed until a hot work permit is obtained from the employer. Contract employees shall not perform hot work until a hot work permit is obtained from host employer. The permit shall document that the fire prevention and protection requirements in have been implemented prior to beginning the hot work operations.

In the event Tarlton becomes the sole operator of a facility, the existing PSM Program for that facility may be amended and adopted or, in the absence of a PSM Program, an assessment will be required prior to assuming operating responsibilities.

Reporting Incidents and Near Misses

Tarlton employees must immediately report all accidents, injuries, and near misses. An incident investigation shall be initiated within 48 hours. Resolutions and corrective actions must be documented and maintained for 5 years.

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Purpose

The Short Service (SSE) Management Program applies to employees or subcontractors who have less than six months experience in the area of working which they were hired. The purpose of the program is to prevent work related injuries and illnesses to new hire, temporary workers, and subcontractors.

General Requirements

All Tarlton Corporation short service employees and subcontractors are to be managed in accordance with this program to ensure that they have an initial orientation of Tarlton's health and safety requirements prior to performing work.

- An SSE may only work under the direct on-site supervision of a designated employee who, as one of his duties, serves as a mentor/trainer in safety for the SSE. The mentor/trainer assigned to an SSE must be knowledgeable, experienced employee who can provide guidance and development for the SSE.

- An exception to the mentor/trainer requirement may be granted to employees who have a high level of previous work experience in the same job functions.

- An SSE must be easily identified while on a job site. All new employees to Tarlton, whether new to the industry or just new to Tarlton, will receive an orange name label on their hardhat. Apprentices will have the orange name label on their hardhats until they have completed their apprenticeship, and it has been determined they have the skills, both safety and craft to change to a white name label. Journeyman, new to Tarlton, will have the orange name label for at least 6 months or until it has been determined they have the skills, both safety and craft, to change to a white name label. The review will be conducted between the Workforce Manager and the employee's supervisor.

- The orange name label isn't meant to be derogatory or to single out employee and it should not be used for this purpose. The different color name label is actually meant to help identify employees who may need extra instruction to perform a task correctly, efficiently, and/or safely. Some employees may know how to perform their tasks but may not know how to perform the tasks up to Tarlton's expectations. If you are an experienced Tarlton employee, please pay extra attention to the new employees and help when you can. Together we can safely and productively build.

- A single person crew cannot be an SSE

- Two SSE and/or Apprentices should not be working alone together.

Policy

General

Supervisor Responsibilities to SSE:

- Assure they have been through the Tarlton Corporation Safety Orientation

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- Assure they are aware of and understand the contents in Tarlton Corporation's Accident Prevention Program and Emergency Action and Response Plan
- Assure they have completed all mandatory training
- Assign a mentor/trainer to each SSE
- Discuss the job expectations and procedures prior to the job to provide a clear understanding of what is expected
- Notify a customer if a SSE will be working at their facility
- Provide customer with a proper identifier so the SSE is easily recognizable

Mentor/Trainer Responsibilities to SSE:

- Set the proper safety example
- Assure they have a complete knowledge of their job functions
- Converse frequently with those assigned to them to discuss any questions or concerns

SSE Responsibilities:

- Shall consult with and listen to mentor and supervisor
- Shall perform work as directed
- Shall speak up when and if work is deemed unsafe
- Shall wear identifier PPE as instructed

Monitoring

Supervisors will monitor its employees, including SSE personnel and subcontractors, for awareness of the health and safety policies and procedures.

If at the end of the six month period, the SSE has worked safely, adhered to the Tarlton's health and safety policies and has no incidents attributable to him/her, the SSE identifier may be removed at the discretion of their Supervisor and the Workforce Manager.

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TARLTON
SAFETY BUILDS SUCCESS

Short Service Employee (SSE) Acknowledgement Form

GENERAL:	The Short Service Employee (SSE) program applies to employees and subcontractors who have less than six months service with the Company or craft. The purpose of the program is to ensure that these contractor employees have an initial orientation of safety requirements prior to performing work under direct on-site supervision of a designated contractor employee who also serves as a mentor/trainer		
SSE Employee Name:		**DATE:**	

This is to certify that I have received a copy of the Company's Accident Prevention Program and Emergency Action and Response Plan. I have read the rules and understand the contents and agree to abide by these rules. I have successfully completed all mandatory training. Also, I agree to visit with my supervisor and understand other applicable safety rules which apply to the specific work I will be performing on Company's job sites and premises. I understand that my safety and the safety of others is my #1 responsibility. I will not take action until I understand the safe way to perform the tasks assigned to me. I agree to speak up and as necessary stop any job I recognize as unsafe.

Short Service Employee (Please Print)	**Title:**	**Date:**
Short Service Employee: (Signature)		
Tarlton Coporation Supervisor: (Please Print)	**Title:**	**Date:**
Tarlton Corporation Supervisor: (Signature)		

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Purpose

The Stop Work Authority (SWA) process involves a stop, notify, correct, and resume approach for the resolution of a perceived unsafe condition, act, error, omission, or lack of understanding that could result in an undesirable event. All Tarlton employees have the authority and obligation to stop any task or operation where concerns or questions regarding the control of health, safety, or environmental risks exist.

Scope

This program applies to all Tarlton projects and operations.

Key Responsibilities

- Employees are responsible to initiate a Stop Work Intervention when warranted and management is responsible to create a culture where SWA is exercised freely.
- Supervisors are responsible to ensure a culture is created where SWA is exercised and honored freely to resolve issues before operations resume and recognize proactive participation.
- Management must establish and support clear expectations to exercise SWA, create a culture where SWA is exercised freely, and hold those accountable that choose not to comply with established SWA policies.

Stop Work Authority Procedure

- When an unsafe condition is identified the Stop Work Intervention will be initiated, coordinated through the supervisor, initiated in a positive manner, and all affected personnel and supervision will be notified of the stop work issue, be required correct the issue and then resume work when safe to do so.
- No work will resume until all stop work issues and concerns have been adequately addressed.
- Any form of retribution or intimidation directed at any individual or Tarlton for exercising their right to issue a Stop Work Authority will not be tolerated by the host nor by Tarlton.

Follow-Up

- All Stop Work Interventions shall be documented for lessons learned and corrective measures to be put into place.
- Stop Work reports shall be reviewed by supervision in order to measure participation, determine quality of interventions and follow-up, trend common issues, identify opportunities for improvement, and facilitate sharing of learning.
- It is the desired outcome of any Stop Work Intervention that the identified safety concern(s) have been addressed to the satisfaction of all involved persons prior to the resumption of work. Most issues can be adequately resolved in a timely manner at the job site, occasionally additional investigation and corrective actions may be required to identify and address root causes.

Training

Employees shall receive Stop Work Authority training before their initial assignment. The training will be documented including the employee's name, the dates of training, and subject matter.

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Purpose
This program is designed to reduce the risk of work-related heat illnesses.

Scope
This procedure applies to all work being performed in hot environments.

Definitions
"Acclimatization" means temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it. Acclimatization peaks in most people within four to fourteen days of regular work for at least two hours per day in the heat.
"Heat Illness" means a serious medical condition resulting from the body's inability to cope with a particular heat load, and includes heat cramps, heat exhaustion, heat syncope and heat stroke.
"Preventative recovery period" means a period of time to recover from the heat in order to prevent heat illness.
"Shade" means blockage of direct sunlight. Canopies, umbrellas and other temporary structures or devices may be used to provide shade. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. Shade is not adequate when heat in the area of shade defeats the purpose of shade, which is to allow the body to cool. For example, a car sitting in the sun does not provide acceptable shade to a person inside it, unless the car is running with air conditioning.

Requirements
All managers and supervisors are responsible for implementing and maintaining the Heat Illness Program in their work areas.
Provision of Water - Employees shall have access to potable drinking water. Employees shall have access to potable drinking water. Where it is not plumbed or otherwise continuously supplied, it shall be provided in sufficient quantity at the beginning of the work shift.
Access to Shade - Employees will be provided with access to shade. Employees suffering from heat illness or believing a preventative recovery period is needed shall be provided access to an area with shade that is either open to the air or provided with ventilation or cooling. Such access to shade shall be permitted at all times. See definition of “Shade”.
Control Measures - Each work location involved in working in hot environments shall implement measures that must be in place to control the effects of environmental factors that can contribute to heat related illnesses. The most common environmental factors are air temperature, humidity, radiant heat sources and air circulation.

Physical factors that can contribute to heat related illness shall be taken into consideration before performing a task. The most common physical factors that can contribute to heat related illness are type of work, level of physical activity and duration, and clothing color, weight and breathability.
Supervisors must ensure personal factors that contribute to heat related illness are taken into consideration before assigning a task where there is the possibility of a heat-related illness occurring. The most common personal factors that can contribute to heat related illness are age, weight/fitness, drug/alcohol use, prior heat related illness, etc.
Each work site shall develop site specific procedure but shall include the minimum:

- Bring at least 2 quarts per employee at the start of the shift and the supervisors/designated persons will monitor water containers every 30 minutes, and employees are encouraged to report to supervisor/designated person low levels or dirty water.

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- Supervisors will provide frequent reminders to employees to drink frequently.
- Every morning there will be short tailgate meetings to remind workers about the importance of frequent consumption of water throughout the shift during hot weather.
- Place water containers as close as possible to the workers.
- When drinking water levels within a container drop below 50%, the water shall be replenished immediately, or water levels should not fall below the point that will allow for adequate water during the time necessary to effect replenishment.
- Disposable/single use drinking cups will be provided to employees or provisions will be made to issue employees their own cups each day.
- Supervisors will set-up an adequate number of umbrellas, canopies or other portable devices at the start of the shift and will relocate them to be closer to the crew, as needed.
- Non-agricultural employers can use other cooling measures if they demonstrate that these methods are as effective as shade.
- Working hours will be modified to work during the cooler hours of the day, when possible.
- When a modified or shorter work-shift is not possible, more water and rest breaks will be provided.
- Supervisors will continuously check all employees and stay alert to the presence of heat related symptoms.
- Supervisors will carry cell phones or other means of communication, to ensure that emergency services can be called and check that these are functional at the worksite prior to each shift.
- Every morning, workers will be reminded about address and directions to the worksite to inform medical responders and emergency procedures.
- All newly hired workers will be assigned a buddy or experienced coworker to ensure that they understood the training and follow the company procedures.

Training

Training in the following topics shall be provided to all supervisory and non-supervisory employees:

- The environmental and personal risk factors for heat illness;
- The importance of frequent consumption of small quantities of water, up to 4 cups per hour, when the work environment is hot and employees are likely to be sweating more than usual in the performance of their duties;
- The importance of acclimatization;
- The different types of heat illness and the common signs and symptoms of heat illness;
- The importance to employees of immediately reporting to the employer, directly or through the employee's supervisor, symptoms or signs of heat illness in themselves, or in co-workers;
- TARLTON procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary;
- TARLTON procedures for contacting emergency medical services, and if necessary, for transporting employees to a point where they can be reached by an emergency medical service provider;
- TARLTON procedures for ensuring that, in the event of an emergency, clear and precise directions to the work site can and will be provided as needed to emergency responders.

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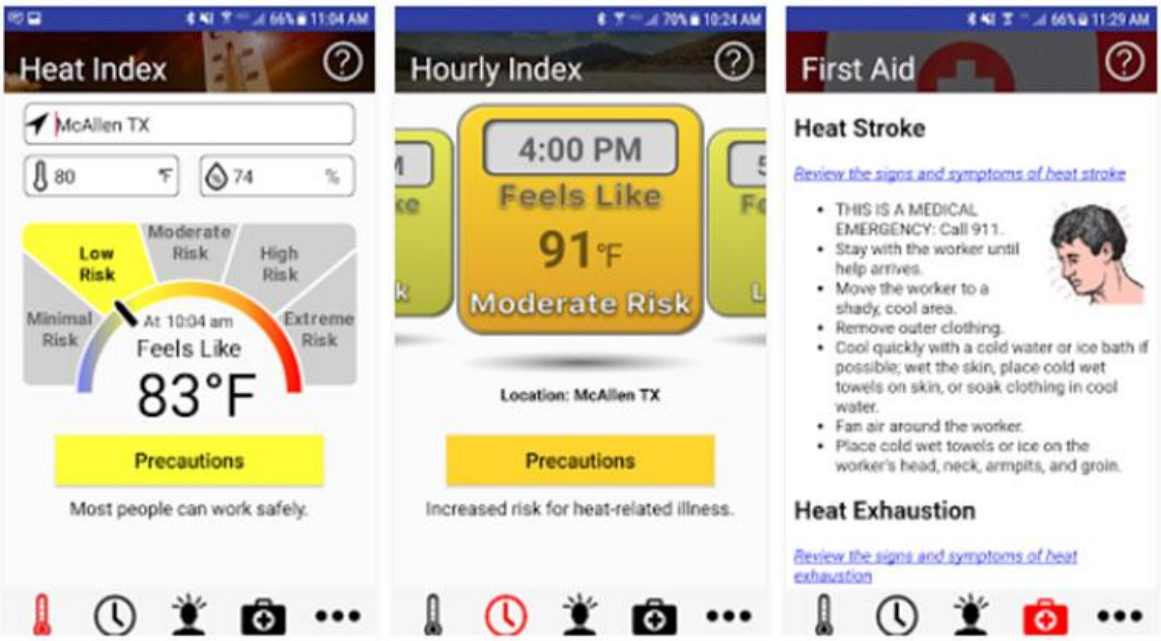
Supervisors must receive training in the prevention of heat related illnesses prior to supervising employees working in heat. Supervisors will be trained in the TARLTON heat illness emergency response procedures to prevent heat illness and procedures to follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures.
Communication for employees shall be in a form readily understandable by all affected employees.
TARLTON shall ensure all contractors, subcontractors, staffing companies, etc. employees (including temporary) working outdoors have been trained in heat illness prevention.
Always Remember: WATER – REST- SHADE

OSHA Heat Stress App

Know the differences between heat exhaustion and a heat stroke.
Download OSHA's heat safety tool on smart phones. This App allows workers and supervisors to:

- Calculate the heat index for their worksite, and, based on the heat index, displays a risk level to outdoor workers.
- Get reminders about the protective measures that should be taken at that risk level to protect workers from heat-related illness
- See reminders about drinking enough fluids, scheduling rest breaks, planning for and knowing what to do in an emergency, adjusting work operations, gradually building up the workload for new workers, training on heat illness signs and symptoms, and
- Monitor each other for signs and symptoms of heat-related illness.



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Heat Stress Prevention Guidelines - When the body is unable to cool itself by sweating, several heat-induced illnesses such as heat stress, heat exhaustion, and the more sever, heat stroke, can occur and may result in death. Tarlton has implemented "Heat Stress Precautions" to address dangers associated with extreme heat. The following guidelines specifically address what actions will be taken onsite when the heat index rises above the thresholds indicated herein. The heat precautions will be classified as levels 1-3, 3 being the most severe.

Level 1 Heat Precautions - Heat Index Between 95 and 100 Degrees Fahrenheit:

- Shaded break areas with mechanical ventilation shall be provided by each employee's respective employer.
- Mandatory five (5) minute water breaks shall be provided every hour.
- Workers shall be required to consume a minimum of 12 ounces of cool water or other non-caffeinated beverage during each break.
- Requirements for orange high visibility vests will be suspended. High visibility t-shirts will still be required.

Level 2 Heat Precautions - Heat Index Between 101 and 105 Degrees Fahrenheit:

- Shaded break areas with mechanical ventilation shall be provided by each employee's respective employer.
- Continuous monitoring of the work area by a Tarlton field staff member.
- Workers performing strenuous activities in direct sun shall be rotated every thirty (30) minutes to non-strenuous activities or to a shaded ventilated work location.
- Mandatory five (5) minute water breaks shall be provided every hour.
- Workers shall be required to consume a minimum of 12 ounces of cool water or other non-caffeinated beverage during each break.
- Requirements for high visibility vests will be suspended. High visibility t-shirts will still be required.

Level 3 Heat Precautions - Heat Index Above 105 Degrees Fahrenheit:

- All non-conditioned/non-emergent work activities will be suspended.
- Any work outdoors requires Tarlton Safety Department and Division Manager approval. A plan must also be developed describing how field employees will be protected from overexposure to the heat.

Heat Stress Tracker

A heat stress tracker is a tool available to the Tarlton Safety Department that can be used for accurate and localized measurement of heat stress conditions.

HEAT INDEX PRECAUTIONS		
Level 1 95-100°F	**Level 2** 101-105°F	**Level 3** >105°F
-Shaded work areas -Monitor workers -5 min. break every hour -Hydrate with 12 oz. cool water every break	In addition to Level 1 requirements: -Rotate workers every 30 minutes to non-strenuous activities -Hydrate with 12 oz. cool water every hour	- **Work limited to essential operations ONLY.** -Any work outdoors requires Safety Dept. approval

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Kestrel 5400 Heat Stress Tracker

A Heat Stress Tracker, such as the Kestrel 5400, can be used to calculate:

- Heat Index - a quantity expressing the discomfort felt as a result of the combined effects of the temperature and humidity of the air.
- Wet Bulb Globe Temperature (WBGT) - a type of apparent temperature used to estimate the effect of temperature, humidity, wind speed (wind chill), and visible and infrared radiation (usually sunlight) on humans.
- Thermal Work Limit (TWL) - the limiting (or maximum) sustainable metabolic rate that well-hydrated, acclimatized individuals can maintain in a specific thermal environment, within a safe body core temperature and sweat rate.

WBGT as a Heat Stress Indicator vs. just using the Heat Index

Wet bulb globe temperature (WBGT) is based on an equation that uses a combination of environmental elements to calculate the reading. The calculation is a measure of the heat stress in direct sunlight, which takes into account: temperature, humidity, wind speed, sun angle and cloud cover (solar radiation).

Heat index takes into consideration temperature and humidity and is calculated for shady areas.

	WBGT	HEAT INDEX
Measured in sun	✓	×
Measured in the shade	×	✓
Measured indoors	×	✓
Uses temperature	✓	✓
Uses relative humidity	✓	✓
Uses wind	✓	×
Uses cloud cover	✓	×
Uses sun angle	✓	×

GUIDANCE FOR SAFETY PROFESSIONALS		
WBGT	**LEVEL OF RISK**	**COMMENTS**
<65°F	**Low**	Risk low but still exist in the basis of risk factors.
65°F -73°F	**Moderate**	Risk level increases as work progresses through the day.
73°F-82°F	**High**	Everyone should be aware of heat illness protentional; individuals at risk should not work.
>82°F	**Extreme**	**Work limited to essential operations ONLY.**

Thermal Work Limit (TWL)

Thermal Work Limit (TWL) is defined as the limiting (or maximum) sustainable metabolic rate that well-hydrated, acclimatized individuals can maintain in a specific thermal environment, within a safe deep body core temperature (< 38.2 °C or 100.8 °F) and sweat rate (< 1.2 kg. or 2.6 lb. per hour).

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TWL is calculated using five environmental parameters – dry bulb, wet bulb and globe temperatures (all used by WBGT), with the addition of wind speed and atmospheric pressure. It also accommodates for clothing factors to arrive at a prediction of a safe maximum continuously sustainable metabolic rate (W m?2) for the conditions. Developed for use in mining operations, it is a reliable metric for measuring heat stress indoors as well as outdoors.

TWL REFERENCE TABLE

>220	140-220	115-140	>115
Unrestricted	**Acclimatization**	**Buffer**	**Withdrawal**
-No Specific precautions apply.	-No added precautions for acclimatized workers. - Unacclimatized* workers must follow buffer zone recommendations. -Cooled hydration must be readily available.	-Cooled hydration must be readily available. -No person to work alone. -No unacclimatized* workers. -Fluid intake of 1 Liter (33.8 us fl oz) per hour required. -Work rest cycle: 40 minutes of work – 20 minutes of rest. -Consider monitoring workers for elevated heart rates (>100 beats per minute).	**Work limited to essential operations ONLY.** -Cooled hydration must be readily available. -No person to work alone. -No unacclimatized* workers. -Fluid intake of 1 Liter (33.8 us fl oz) per every 30 minutes required. -Work rest cycle: 20 minutes of work – 40 minutes of rest. -Monitor workers for elevated heart rates (>100 beats per minute).
*Unacclimatized workers are defined as new workers who have worked less than 14 days on site.			

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Purpose:

The purpose of this program is to prevent injury from hazards associated with concrete and masonry work.

Scope

This program covers all employees involved in concrete and/or masonry work.

Key Responsibilities

Managers/Supervisors

- Shall ensure that all employees are aware of the hazards associated with concrete and masonry during construction and are properly trained prior to their exposure of those hazards.
- Shall ensure that initial training is conducted for all new employees and that retraining is conducted when employee behaviors suggest that retraining is warranted.
- Conduct operations and train employees in accordance with OSHA's CFR 1926 Support Q - Concrete and Masonry Construction.

Employees

- Shall follow all requirements regarding the safe work practices and requirements of this program.
- Report all hazards if not previously made aware of them, especially when changes occur.

Procedure

Hazards Associated with Concrete/Masonry Construction

- Concrete Buckets: Impact injuries due to defective slings/hardware;
- Concrete Pumper Truck: Electrical injuries due to overhead power lines; Impact injuries due to improper operator operations;
- Concrete: Caustic burns to eyes and skin; impact injury due to falling buckets, blocks, bricks, or other objects; respiratory hazards due to concrete dust;
- Cranes: Impact injuries due to defective slings or unbalanced load;
- Electric Saws: Shock injuries due to defective power cords or nongrounded circuit;
- Flagging: Impact injuries for flaggers exposed to traffic;
- Fork Lifts: Impact injuries due to exceeding the lifting capacity or improper operation by operator;
- Form Work: Fall injuries from height, ladders, or open excavation; slips and trips working with footers: cuts and puncture wounds from exposed nails;
- Leading Edge Work: Fall injuries due to height and lack of knowledge - only experienced and authorized workers allowed;
- Rebar: Struck Against injuries due to impalement on end of rebar; slips and trips working with rebar.

Injuries can result from unsafe work practices including:

- premature removal of formwork;
- failure to brace masonry walls;

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- failure to adequately support precast panels;
- inappropriate operation of equipment;
- failure to guard the end of reinforcing steel;
- inadequate shoring, which can lead to formwork collapse.

Safe Work Practices and Requirements

Construction Loads

- TARLTON must not place construction loads on a concrete structure or portion of a concrete structure unless TARLTON determines, based on information received from a person who is qualified in structural design, that the structure or portion of the structure is capable of supporting the intended loads.

Reinforcing Steel

- All protruding reinforcing steel, onto and into which employees could fall, must be guarded to eliminate the hazard of impalement.

Post-Tensioning Operations

- Employees (except those essential to the post-tensioning operations) must not be permitted to be behind the jack during tensioning operations.
- Signs and barriers must be erected to limit employee access to the post-tensioning area during tensioning operations.

Concrete Buckets

- Employees must not be permitted to ride concrete buckets.

Working Under Loads

- Employees must not be permitted to work under concrete buckets while the buckets are being elevated or lowered into position.
- To the extent practicable, elevated concrete buckets must be routed so that no employee or the fewest employees possible are exposed to the hazards associated with falling concrete buckets.

Concrete and Masonry Construction

Personal Protective Equipment

Employees must not be permitted to apply a cement, sand, and water mixture through a pneumatic hose unless they are wearing protective head and face equipment.

General Requirements for Formwork

Formwork must be designed, fabricated, erected, supported, braced, and maintained so that it will be capable of supporting without failure all vertical and lateral loads that might be applied to the formwork. As indicated in the Appendix to the standard, formwork that is designed, fabricated, erected, supported, braced, and maintained in conformance with Sections 6 and 7 of the American National Standard for Construction and Demolition Operations—Concrete and Masonry Work (ANSI) A10.9-1983 shall also meet the requirements of this paragraph.

Drawings or Plans

Drawings and plans, including all revisions for the jack layout, formwork (including shoring equipment), working decks, and scaffolds, must be available at the jobsite.

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Shoring and Reshoring

- All shoring equipment (including equipment used in reshoring operations) must be inspected prior to erection to determine that the equipment meets the requirements specified in the formwork drawings.
- Damaged shoring equipment must not be used for shoring. Erected shoring equipment must be inspected immediately prior to, during, and immediately after concrete placement. Shoring equipment that is found to be damaged or weakened after erection must be immediately reinforced.
- The sills for shoring must be sound, rigid, and capable of carrying the maximum intended load. All base plates, shore heads, extension devices, and adjustment screws must be in firm contact and secured, when necessary, with the foundation and the form.

If single-post shores are used one on top of another (tiered), then additional shoring requirements must be met. The shores must be as follows:

- Designed by a qualified designer and the erected shoring must be inspected by an engineer qualified in structural design;
- Vertically aligned;
- Spliced to prevent misalignment; and
- Adequately braced in two mutually perpendicular directions at the splice level. Each tier also must be diagonally braced in the same two directions.

Adjustment of single-post shores to raise formwork must not be made after the placement of concrete.

Reshoring must be erected, as the original forms and shores are removed, whenever the concrete is required to support loads in excess of its capacity.

Vertical Slip Forms

The steel rods or pipes on which jacks climb or by which the forms are lifted must be specifically designed for that purpose and adequately braced where not encased in concrete.

Forms must be designed to prevent excessive distortion of the structure during the jacking operation. Jacks and vertical supports must be positioned in such a manner that the loads do not exceed the rated capacity of the jacks.

The jacks or other lifting devices must be provided with mechanical dogs or other automatic holding devices to support the slip forms whenever failure of the power supply or lifting mechanisms occurs.

Requirements for Cast-in-Place Concrete

- The form structure must be maintained within all design tolerances specified for plumbness during the jacking operation.
- The predetermined safe rate of lift must not be exceeded. All vertical slip forms must be provided with scaffolds or work platforms where employees are required to work or pass.

Reinforcing Steel

- Reinforcing steel for walls, piers, columns, and similar vertical structures must be adequately supported to prevent overturning and collapse.
- TARLTON must take measures to prevent unrolled wire mesh from recoiling. Such measures may include, but are not limited to, securing each end of the roll or turning over the roll.

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Removal of Formwork

Forms and shores (except those that are used for slabs on grade and slip forms) must not be removed until TARLTON determines that the concrete has gained sufficient strength to support its weight and superimposed loads. Such determination must be based on compliance with one of the following:

- The plans and specifications stipulate conditions for removal of forms and shores and such conditions have been followed, or
- The concrete has been properly tested with an appropriate American Society for Testing and Materials (ASTM) standard test method designed to indicate the concrete compressive strength and the test results indicate that the concrete has gained sufficient strength to support its weight and superimposed loads.

Precast Concrete

- Precast concrete wall units, structural framing, and tilt-up wall panels must be adequately supported to prevent overturning and to prevent collapse until permanent connections are completed.
- Lifting inserts that are embedded or otherwise attached to tilt-up wall panels must be capable of supporting at least two times the maximum intended load applied or transmitted to them. Lifting inserts for other precast members must be capable of supporting four times the load. Lifting hardware shall be capable of supporting at least five times the maximum intended load applied or transmitted to the lifting hardware.
- Only essential employees are permitted under precast concrete that is being lifted or tilted into position.

Lift-Slab Operations

- Lift-slab operations must be designed and planned by a registered professional engineer who has experience in lift-slab construction. Such plans and designs must be implemented by TARLTON and must include detailed instructions and sketches indicating the prescribed method of erection. The plans and designs must also include provisions for ensuring lateral stability of the building/structure during construction.
- Jacking equipment must be marked with the manufacturer's rated capacity and must be capable of supporting at least two and one-half times the load being lifted during jacking operations and the equipment must not be overloaded.
- Jacks/lifting units must be designed and installed so that they will neither lift nor continue to lift when loaded in excess of their rated capacity and jacks/lifting units must have a safety device which will cause the jacks/lifting units to support the load at any position in the event of their malfunction or loss of ability to continue to lift.
- No employee, except those essential to the jacking operation, shall be permitted in the building/structure while any jacking operation is taking place unless the building/structure has been reinforced sufficiently to ensure its integrity during erection.
- Under no circumstances shall any employee who is not essential to the jacking operation be permitted immediately beneath a slab while it is being lifted.

Masonry Construction

Whenever a masonry wall is being constructed, employers must establish a limited access zone prior to the start of construction. The limited access zone must be as follows:

- Equal to the height of the wall to be constructed plus 4 feet and shall run the entire length of the wall;
- On the side of the wall that will be unscaffolded;

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- Restricted to entry only by employees actively engaged in constructing the wall; and
- Kept in place until the wall is adequately supported to prevent overturning and collapse unless the height of the wall is more than 8 feet and unsupported, in which case it must be braced. The bracing must remain in place until permanent supporting elements of the structure are in place.
- Note: Additional Health and Safety requirements to meet the Silica Exposure Standard for the Construction Industry effective 6/23/2017.

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Purpose

The purpose of this program is to address control measures to protect Tarlton employees from stress or injuries when working in cold temperatures.

Scope

Each Tarlton worksite shall implement a site-specific cold weather/cold stress hazard assessment and have the control plan approved by the Corporate Safety Manager.

Responsibilities

Superintendent

- identify and conduct an assessment of tasks and occupations where there is the potential for cold stress.
- implement and/or provide controls (engineering, administrative, or personal protective equipment) to minimize cold stress.
- provide training and education regarding cold stress, including early signs and symptoms of cold-related exposure.

Employee Responsibilities

- adhere to all control measures or work procedures that have been designed and implemented to reduce exposure to conditions that could cause cold stress/cold illness.
- leave cold environments if signs or symptoms of cold-related stress appear.
- wear all required cold temperature clothing and PPE.
- immediately report any signs or symptoms of cold-related stress.

Cold Temperature Procedures

Health Effects of Cold Stress/Illness

Warning signs of hypothermia can include complaints of nausea, fatigue, dizziness, irritability, or euphoria. Workers can also experience pain in their extremities (hands, feet, ears, etc.), and severe shivering. Workers should be moved to a heated shelter and seek medical advice when appropriate.

Hazard Assessment

An assessment will be conducted by the Superintendent to identify the types of jobs or employees who are at risk for cold exposure.

Jobsites

- Regularly used walkways and travel ways shall be sanded, salted, or cleared of snow and ice as soon as practicable.
- Employees will be informed of the dangers associated with working around unstable snow and ice build-ups. All employees will be informed of the dangers and destructive potential caused by unstable snow build-up, sharp icicles, ice dams and know how to prevent incidents caused by them.
- When dangerous overhead build-ups of snow or ice are present, barricades will be used to prevent walking or driving into potential fall zones.

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Clothing, PPE, and Supplies

Proper cold weather protection must be worn by employees when working in cold, wet, and windy conditions. Protective clothing is the most important way to avoid cold stress. The type of fabric also makes a difference.

Cotton loses its insulation value when it becomes wet. Wool, silk, and most synthetics, on the other hand, retain their insulation even when wet. The following are recommendations for working in cold environments:

- Wear at least three layers of clothing. An inner layer of wool, silk, or synthetic to wick moisture away from the body – a middle layer of wool or synthetic to provide Insulation even when hot – an outer wind and rain protection layer that allows some ventilation to prevent overheating.
- Wear a hat or hood. Up to 40% of body heat can be lost when the head is left exposed.
- Keep a change of dry clothing available in case work clothes become wet.
- With the exception of the wicking layer do not wear tight clothing. Loose clothing allows better ventilation of heat away from the body.
- Do not underestimate the wetting effects of perspiration. Oftentimes wicking and venting of the body's sweat and heat are more important than protecting from rain or snow.
- Wear insulated boots or other footwear. Felt-lined, rubber bottomed, leather-topped boots with removable felt insoles are best suited for heavy work in cold since leather is porous, allowing the boots to "breathe" and let perspiration evaporate.
- Liner socks made from polypropylene will help keep feet dry and warmer by wicking sweat away from the skin. Always wear the right thickness of socks for your boots.
- In extremely cold conditions, where face protection is used, eye protection must be separated from the nose and mouth to prevent exhaled moisture from fogging and frosting eye shields or glasses.
- Clothing must be dry. Moisture should be kept off clothes by removing snow prior to entering heated shelters.

Cold weather supplies will be regularly inspected and restocked when necessary.

Preventative Controls to Avoid Cold Induced Injuries

- Workers will be under constant protective observation by a co-worker and/or supervisor. A "Buddy System" will be used to ensure that no employee is working alone in cold work environments.
- Some preventive measures include drinking plenty of liquids and avoiding caffeine and alcohol.
- It is easy to become dehydrated in cold weather. If possible, heavy work should be scheduled during the warmer parts of the day.
- Take breaks out of the cold.
- Avoid fatigue since energy is needed to keep muscles warm.
- Take frequent breaks and consume warm, high calorie food such as pasta to maintain energy reserves.
- If a worker exposed to cold shows signs or reports symptoms of cold stress or injury the worker must be removed from further exposure and treated by an appropriate first aid trained employee, if available, or a physician.
- For continuous work in temperatures below the freezing point, heated warming shelters such as tents, cabins, and/or rest rooms should be available. The work should be paced to avoid excessive sweating. If such work is necessary, proper rest periods in a warm area should be allowed and employees should change into dry clothes when needed.
- New employees should be given enough time to get acclimatized to cold and protective clothing before assuming a full work load.

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- A Cold Weather plan for each project shall be completed and submitted in Tarlton's Project Management platform by November 1st of every year.
- All non-emergent/non-conditions jobsites should suspend work or find alternative work activities at 0°F wind chill, until the wind chill raises above 0°F

Training

Tarlton employees who are required to work in cold weather conditions will receive initial and annual training regarding the health effects of cold exposure and proper rewarming procedures, recognition of and first aid for frostbite and hypothermia, required protective clothing, proper use of warming shelters, the buddy system, maintaining communications, vehicle breakdown procedures, and proper eating and drinking habits for working in the cold.

Health Effects

Where employees are exposed to work conditions that may present a hazard because of excessive cold weather, a competent person will provide training to ensure the employees are familiar with the signs and symptoms of cold weather induced health problems such as hypothermia, frostbite, and trench foot. Training will include:

- Hypothermia occurs when body heat is lost faster than it can be replaced. When the core body temperature drops below the normal 98.6°F to around 95°F the onset of symptoms normally begins. The person may begin to shiver and stomp their feet in order to generate heat. Workers may lose coordination, have slurred speech, and fumble with items in the hand. The skin will likely be pale and cold.

- Frostbite occurs when the skin actually freezes and loses water. In severe cases, amputation of the frostbitten area may be required. While frostbite usually occurs when the temperatures are 30°F or lower, wind chill factors can allow frostbite to occur in above freezing temperatures. Frostbite typically affects the extremities, particularly the feet and hands. The affected body part will be cold, tingling, stinging, or aching followed by numbness. Skin color turns red, then purple, then white and is cold to the touch. There may be blisters in severe cases.

- Trench Foot or immersion foot is caused by having feet immersed in cold water at temperatures above freezing for long periods of time. It is similar to frostbite but considered less severe. Symptoms usually consist of tingling, itching, or a burning sensation. Blisters may be present.

Workers and supervisors involved with work in cold environments should be informed about symptoms of adverse effect exposure to cold, proper clothing habits, safe work practices, physical fitness requirements for work in cold, and emergency procedures in case of cold injury. While working in cold, a buddy system shall be used. Look out for one another and be alert for the symptoms of hypothermia.

First Aid Training

All Superintendents will be trained to administer proper first aid treatment for cold induced injuries or illnesses. All employees who are required to perform work in cold conditions will be knowledgeable on the signs and symptoms of cold weather illness and will be informed of emergency procedures for those illnesses.

All training shall be documented.

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Wind Chill Chart

Wind (mph)	Temperature (°F)																	
Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times: 30 minutes, 10 minutes, 5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T= Air Temperature (°F) V= Wind Speed (mph)

Effective 11/01/01

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Purpose

This Crystalline Silica Exposure Control program will cover the safety procedures and materials that are required to protect both our employees and other workers from silica dust from our operations. The intent of this program is to be in full, continuous compliance with OSHA 1926.1153 standards.

Scope

This program applies specifically to all trained Tarlton employees however, all employees will be provided access to this program, and should become familiar with, and abide by it.

General Statements

Tarlton will ensure that suitable written procedures for controlling the risk of silica exposure are developed. This document/table summarizes the silica control options generally available on Tarlton sites/projects, and will be complimented with project/tasks specific Exposure Control Plans as necessary. This document and any supplemental work procedures/ECPs will be made readily available for review by all affected workers.

Definitions

First Aid: emergency care or treatment given to an ill or injured person before regular advanced care can be obtained.

Action level: concentration of airborne respirable crystalline silica of 25 µg/m3, calculated as an 8-hour TWA.

Competent person: individual who is capable of identifying existing and foreseeable respirable crystalline silica hazards in the workplace and who has authorization to take prompt corrective measures to eliminate or minimize them. The competent person must have the knowledge and ability necessary to fulfill the responsibilities set forth in paragraph (g) of this Section.

Employee exposure: the exposure to airborne respirable crystalline silica that would occur if the employee were not using a respirator.

High-efficiency particulate air [HEPA] filter: a filter that is at least 99.97 percent efficient in removing mono-dispersed particles of 0.3 micrometers in diameter.

Physician or other licensed health care professional: an individual whose legally permitted scope of practice (i.e., license registration or certification) allows him or her to independently provide or be delegated the responsibility to provide some or all of the particular health care services required by paragraph (h) of this section.

RSC: respirable crystalline silica, means quartz, cristobalite, and/or tridymite contained in airborne particles that are determined to be respirable by a sampling device designed to meet the characteristics for respirable-particle-size-selective samplers specified in the International Organization for Standardization (ISO) 7708:1995: Air Quality – Particle Size Fraction Definitions for Health-Related Sampling.

This Section: means this respirable crystalline silica standard, 29 CFR 1926.1153.

TWA: Time weighted average.

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APF: Assigned Protection Factor (APF) means the workplace level of respiratory protection that a respirator or class of respirators is expected to provide to employees when the employer implements a continuing, effective Respiratory Protection Program.

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

Responsibilities

Safety Manager

- Maintaining applicable records (i.e. exposure sampling, inspections, respirator fit tests, training records, etc.) in accordance with Tarlton's record retention procedures/practices
- Conduct follow up investigations, as necessary, of reported potential Silica exposure incidents that have occurred.
- Ensure scheduling of exposed personnel for medical evaluations and or immunizations as required by licensed physicians.

Managers

- Regularly evaluating new equipment and technologies that become available; as able/appropriate, purchasing the "best available" equipment/technologies. Equipment/technologies with (silica) dust suppression and/or capture technologies will generally be given preference over equipment/technologies that lack such.
- Implementing a suitable respirable silica exposure monitoring program, or otherwise ensuring representative exposure monitoring results are available. The purpose of the program will ensure that (over time) Tarlton has quantifiable silica exposure data available for all regularly occurring, as well as reasonably foreseeable, work activities.
- Ensuring project and/or task specific Exposure Control Plans (ECPs) are developed, communicated, and effectively implemented as appropriate.
- Ensuring that all employees (i.e. managers, supervisors and workers) receive the necessary education and training related to this policy, as well as project/task specific ECPs.

Employees

- Knowing the hazards of silica dust exposure.
- Using the assigned protective equipment in an effective and safe manner.
- Working in accordance with the project/task specific ECP.
- Reporting (immediately) to their supervisor, any hazards (i.e. unsafe conditions, unsafe acts, improperly operating equipment, etc.).
- Adhere to and understand this program.
- Bring up any concerns to your supervisor, Safety Manager and or executive management.

General Requirements

Specified Exposure Control Methods

- For each employee engaged in a task identified on Table 1, the employer shall fully and properly implement the engineering controls, work practices, and respiratory protection specified for the task on Table 1.

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- The following is the list of activities in which employees may be exposed to silica, equipment and materials to be used, controls, crew size, job responsibilities, operating procedures, and maintenance practices.

TABLE 1: SPECIFIED EXPOSURE CONTROL METHODS WHEN WORKING WITH MATERIALS CONTAINING CRYSTALLINE SILICA

TABLE 1: SPECIFIED EXPOSURE CONTROL METHODS WHEN WORKING WITH MATERIALS CONTAINING CRYSTALLINE SILICA†				
Equipment/Task	**Engineering and Work Practice Control Methods**	**Required Respiratory Protection and Minimum Assigned Protection Factor (APF)**		**What does *full and proper* implementation require?***
		≤ 4 hours /shift	**> 4 hours /shift**	
(i) Stationary masonry saws 	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None	Water Controls: ■ An adequate supply of water for dust suppression is used; ■ The spray nozzle is working properly to apply water at the point of dust generation; ■ The spray nozzle is not clogged or damaged; and ■ All hoses and connections are intact.
(ii) Handheld power saws (any blade diameter)[i] 	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. ■ When used outdoors. ■ When used indoors or in an enclosed area.	None APF 10	APF 10 APF 10	Water Controls: ■ An adequate supply of water for dust suppression is used; ■ The spray nozzle is working properly to apply water at the point of dust generation; ■ The spray nozzle is not clogged or damaged; ■ All hoses and connections are intact.

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(iii) Handheld power saws for cutting fiber-cement board (with blade diameter of 8 inches or less) 	For tasks performed outdoors only: ■ Use saw equipped with commercially available dust collection system. ■ Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. ■ Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency.	None	None	Dust Collection Systems: ■ The shroud or cowling is intact and installed in accordance with the manufacturer's instructions; ■ The hose connecting the tool to the vacuum is intact and without kinks or tight bends; ■ The filter(s) on the vacuum are cleaned or changed in accordance with the manufacturer's instructions to prevent clogging; and ■ The dust collection bags are emptied to avoid overfilling.
(iv) Walk-behind saws 	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. ■ When used outdoors. ■ When used indoors or in an enclosed area.	None APF 10	None APF 10	Water Controls: ■ An adequate supply of water for dust suppression is used; ■ The spray nozzles are working properly to apply water at the point of dust generation; ■ The spray nozzles are not clogged or damaged; and ■ All hoses and connections are intact.
(v) Drivable saws 	For tasks performed outdoors only: ■ Use saw equipped with integrated water delivery system that continuously feeds water to the blade. ■ Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None	Water Controls: ■ An adequate supply of water for dust suppression is used; ■ The spray nozzles produce a pattern that applies water at the point of dust generation; ■ The spray nozzles are not clogged or damaged; and ■ All hoses and connections are intact.
(vi) Rig-mounted core saws or drills 	■ Use tool equipped with integrated water delivery system that supplies water to cutting surface. ■ Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None	Water Controls: ■ An adequate supply of water for dust suppression is used; ■ The spray nozzles produce a pattern that applies water at the point of dust generation; ■ The spray nozzles are not clogged or damaged; and ■ All hoses and connections are intact.

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(vii) Handheld and stand-mounted drills (including impact and rotary hammer drills) 	■ Use drill equipped with commercially available shroud or cowling with dust collection system. ■ Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. ■ Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism. ■ Use a HEPA-filtered vacuum when cleaning holes.[2]	None	None	Dust Collection Systems: ■ The shroud or cowling is intact and installed in accordance with the manufacturer's instructions; ■ The hose connecting the tool to the vacuum is intact and without kinks or tight bends; ■ The filter(s) on the vacuum are cleaned or changed in accordance with the manufacturer's instructions; and ■ The dust collection bags are emptied to avoid overfilling.
(viii) Dowel drilling rigs for concrete 	For tasks performed <u>outdoors only</u>: ■ Use shroud around drill bit with a dust collection system. Dust collector must have a filter with 99% or greater efficiency and a filter-cleaning mechanism. ■ Use a HEPA-filtered vacuum when cleaning holes.[3]	APF 10	APF 10	Dust Collection Systems: ■ The shroud is intact and installed in accordance with the manufacturer's instructions; ■ The hose connecting the tool to the vacuum is intact and without kinks or tight bends; ■ The filter(s) on the vacuum are cleaned or changed in accordance with the manufacturer's instructions; and ■ The dust collection bags are emptied to avoid overfilling.
(ix) Vehicle-mounted drilling rigs for rock and concrete 	Use dust collection system with close capture hood or shroud around drill bit with a low-flow water spray to wet the dust at the discharge point from the dust collector. OR Operate from within an enclosed cab and use water for dust suppression on drill bit.	None None	None None	Dust Collection Systems: ■ The shroud or hood is intact and installed in accordance with the manufacturer's instructions; ■ The hose connecting the tool to the vacuum is intact and without kinks or tight bends; ■ The filter(s) on the vacuum are cleaned or changed in accordance with the manufacturer's instructions; and ■ The dust collection bags are emptied to avoid overfilling. Water Controls: ■ An adequate supply of water for dust Suppression is used; ■ The spray nozzles are working properly and produce a pattern that applies water on the discharge point from the dust collector; ■ The spray nozzles are not clogged or damaged; and ■ All hoses and connections are intact.

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(x) Jackhammers and handheld powered chipping tools 	Use tool with water delivery system that supplies a continuous stream or spray of water at the point of impact. ■ When used outdoors. ■ When used indoors or in an enclosed area. OR Use tool equipped with commercially available shroud and dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism. ■ When used outdoors. ■ When used indoors or in an enclosed area.	None APF 10 None APF 10	APF 10 APF 10 APF 10 APF 10	Water Controls[4]: ■ An adequate supply of water for dust suppression is used; ■ The water sprays are working properly and produce a pattern that applies water at the point of dust generation; ■ The spray nozzles are not clogged or damaged; and ■ All hoses and connections are intact. Dust Collection Systems: ■ The shroud is intact and installed in accordance with the manufacturer's instructions; ■ The hose connecting the tool to the vacuum is intact and without kinks or tight bends; ■ The filter(s) on the vacuum are cleaned or changed in accordance with the manufacturer's instructions; and ■ The dust collection bags are emptied to avoid overfilling.
(xi) Handheld grinders for mortar removal (i.e., tuckpointing) 	Use grinder equipped with commercially available shroud and dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism.	APF 10	APF 25	Dust Collection Systems: ■ The shroud is intact, encloses most of the grinding blade, and is installed in accordance with the manufacturer's instructions; ■ The hose connecting the tool to the vacuum is intact and without kinks or tight bends; ■ The filter(s) on the vacuum are cleaned or changed in accordance with the manufacturer's instructions; ■ The dust collection bags are emptied to avoid overfilling; ■ The blade is kept flush against the surface whenever possible; and ■ The tool is operated against the direction of blade rotation, whenever practical.

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(xii) Handheld grinders for uses other than mortar removal 	For tasks performed outdoors only: Use grinder equipped with integrated water delivery system that continuously feeds water to the grinding surface. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. OR Use grinder equipped with commercially available shroud and dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism. ■ When used outdoors. ■ When used indoors or in an enclosed area.	None None None	None None APF 10	Water Controls[5]: ■ An adequate supply of water for dust suppression is used; ■ The spray nozzles are working properly and produce a pattern that applies water at the point of dust generation; ■ The spray nozzles are not clogged or damaged; and ■ All hoses and connections are intact. Dust Collection Systems: ■ The shroud is intact and installed in accordance with the manufacturer's instructions; ■ The hose connecting the tool to the vacuum is intact and without kinks or tight bends; ■ The filter(s) on the vacuum are cleaned or changed in accordance with the manufacturer's instructions; and ■ The dust collection bags are emptied to avoid overfilling.

[5] The integrated water delivery system can be a free-flowing water system designed for blade cooling as well as manufacturers' systems designed for dust suppression alone. This option applies only when grinders are used outdoors.

(xiii) Walk-behind milling machines and floor grinders 	Use machine equipped with integrated water delivery system that continuously feeds water to the cutting surface. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. OR Use machine equipped with dust collection system recommended by the manufacturer. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide the air flow recommended by the manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism. When used indoors or in an enclosed area, use a HEPA-filtered vacuum to remove loose dust in between passes.	None None	None None	Water Controls: ■ An adequate supply of water for dust suppression is used; ■ The spray nozzles are working properly and produce a pattern that applies water at the point of dust generation; ■ The spray nozzles are not clogged or damaged; and ■ All hoses and connections are intact. Dust Collection Systems: ■ The hose connecting the tool to the vacuum is intact and without kinks or tight bends; ■ The filter(s) on the vacuum are cleaned or changed in accordance with the manufacturer's instructions to prevent clogging; and ■ The dust collection bags are emptied to avoid overfilling.

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(xiv) Small drivable milling machines (less than half-lane) 	Use a machine equipped with supplemental water sprays designed to suppress dust. Water must be combined with a surfactant. Operate and maintain machine to minimize dust emissions.	None	None	Water Controls: ■ An adequate supply of water for dust suppression is used; ■ The spray nozzles are working properly and produce a pattern that applies water at the point of dust generation; ■ The spray nozzles are not clogged or damaged; and ■ All hoses and connections are intact.
(xv) Large drivable milling machines (half-lane and larger) 	For cuts of any depth on asphalt only: Use machine equipped with exhaust ventilation on drum enclosure and supplemental water sprays designed to suppress dust. Operate and maintain machine to minimize dust emissions. For cuts of four inches in depth or less on any substrate: Use machine equipped with exhaust ventilation on drum enclosure and supplemental water sprays designed to suppress dust. Operate and maintain machine to minimize dust emissions. OR Use a machine equipped with supplemental water spray designed to suppress dust. Water must be combined with a surfactant. Operate and maintain machine to minimize dust emissions.	None None None	None None None	No additional information provided. Refer to the engineering and work practice control methods outlined.
(xvi) Crushing machines 	Use equipment designed to deliver water spray or mist for dust suppression at crusher and other points where dust is generated (e.g., hoppers, conveyers, sieves/sizing or vibrating components, and discharge points). Operate and maintain machine in accordance with manufacturer's instructions to minimize dust emissions. Use a ventilated booth that provides fresh, climate-controlled air to the operator, or a remote control station.	None	None	Water Controls[6]: ■ Nozzles are located upstream of dust generation points and positioned to thoroughly wet the material; ■ The volume and size of droplets is adequate to sufficiently wet the material (optimal droplet size is between 10 and 150 µm); and ■ Spray nozzles are located far enough from the target area to provide complete water coverage but not so far that the water is carried away by wind.

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(xvii) Heavy equipment and utility vehicles used to abrade or fracture silica-containing materials (e.g., hoe-ramming, rock ripping) or used during demolition activities involving silica-containing materials[7] 	Operate equipment from within an enclosed cab. When employees outside of the cab are engaged in the task, apply water and/or dust suppressants as necessary to minimize dust emissions.	None None	None None	No additional information provided. Refer to the engineering and work practice control methods outlined.
(xviii) Heavy equipment and utility vehicles for tasks such as grading and excavating but not including: demolishing, abrading, or fracturing silica-containing materials 	Apply water and/or dust suppressants as necessary to minimize dust emissions. OR When the equipment operator is the only employee engaged in the task, operate equipment from within an enclosed cab.	None None	None None	The following scenarios are examples of when the employer must use water and/or dust suppressants as necessary to minimize dust emissions: ■ Equipment for grading and excavating is not equipped with enclosed, pressurized cabs. AND ■ Employees other than the operator are engaged in the task. If water or dust suppressants are applied as necessary to minimize visible dust, the employer need not provide an enclosed, filtered cab for the operator. *If water or dust suppressants are applied as necessary to minimize visible dust, the employer need not provide an enclosed, filtered cab for the operator.*

Activities not listed in Table 1:

Housekeeping	Use Wet Sweeping HEPA Filtered Vacuum − When used outdoors. − When used indoors or in an enclosed area	None APF 10	None APF 10	**The employer shall not allow dry sweeping, compressed air, or dry brushing where such activity could contribute to employee exposure to respirable crystalline silica where feasible.**

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- The following is the list of activities in which employees may be exposed to silica, equipment and materials to be used, controls, crew size, job responsibilities, operating procedures, and maintenance practices.
    - Provide a method of exhaust to minimize the accumulation of visible airborne dust for tasks performed indoors or in enclosed areas.
    - Apply water at flow rates sufficient to minimize release of visible dust for tasks performed using wet methods.
    - If an enclosed cab or boot is used, Tarlton must ensure that it:
        - Is maintained as free as practicable from settled dust;
        - Has working seals and closing mechanisms that work properly;
        - Is under positive pressure maintained through continuous delivery of fresh air;
        - Has intake air that is filtered through a filter that is 95% efficient in the .03-10 µm range (e.g., MERV-16 or better); and
        - Has heating and cooling capabilities.

    - If one of Tarlton employees performs more than one task on Table 1 during the course of a single work shift, the total time for all tasks will be considered. If it's more than 4 hours in total, the employees must use the respiratory protection specified in the >4 hours/shift column. If combined it's less than four hours, employee will follow the guidelines in the ≤ 4 hours/shift column

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

Alternative Exposure Control Methods

If Tarlton is unable to fully and properly implement the engineering controls, work practices, and respiratory protection described in Table 1, Tarlton must ensure the following requirements are in place:

- **Permissible Exposure Limit (PEL):** Tarlton must ensure that none of its employees are exposed to a concentration of respirable crystalline silica in excess of 50µg/m3 calculated as an 8-hour TWA.

- **Exposure Assessment:** Tarlton must assess the exposure of each employee who is or may reasonably be expected to be exposed to respirable crystalline silica at or above the action level. This can be accomplished using one of the following options:
    - **Performance Option:** The performance option requires that Tarlton must assess the 8-hour TWA exposure for each employee based on any combination of air monitoring data or objective data sufficient to accurately characterize employee exposures to respirable crystalline silica.
    - **Scheduled Monitoring Option:** If Tarlton uses the scheduled monitoring option, Tarlton must provide initial monitoring to assess the 8-hour TWA exposure for each employee based on one or more personal breathing zone air samples that reflect the exposures of employees on each shift, for each job classification, and in each work area.

        - Where several employees perform the same tasks on the same shift and in the same work area, Tarlton may sample a representative fraction of these employees. If Tarlton uses representative sampling, Tarlton must sample the employees who are expected to have

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the highest exposure to respirable crystalline silica.

- If initial exposure monitoring indicates that certain employees' exposures are below the action level, Tarlton may discontinue monitoring for those employees.
- If the most recent exposure monitoring indicates that employees' exposures are at or above the action level but at or below the PEL, Tarlton will ensure that the monitoring is repeated within six months of those results.
- If the most recent exposure monitoring indicates that employees' exposures are above the PEL, Tarlton will be sure to repeat the monitoring within three months of those results.
- If the most recent exposure monitoring results (after the first round of monitoring) indicates that employees' exposures are below the action level, then Tarlton will repeat the monitoring within six months of those results to determine if Tarlton needs to continue monitoring.
- If repeat monitoring results indicate two consecutive measurements, taken seven or more days apart, are below the action level, Tarlton may discontinue monitoring for employees whose exposures are represented by the monitoring.

- **Reassessment of Exposures:** It is Tarlton's responsibility as the employer to provide a hazard free work place for its employees and if Tarlton has any reason to believe that new or additional exposures at or above the action level have occurred, Tarlton will reassess employee exposure.
  - Tarlton will reassess exposures whenever Tarlton has a change in the production, process, control equipment, personnel, or work practices may reasonably be expected to result in new or additional exposures at or above the action level.

- **Methods of Sample Analysis:** Tarlton will ensure that all of its exposure monitoring samples are evaluated by a laboratory that analyzes air samples for respirable crystalline silica in accordance with the procedures in 1926.1153 - Appendix A.
  Note: Requirements for laboratory evaluation of exposure samples are required to begin on June 23, 2018.

- **Employee Notification of Assessment Results:** Tarlton will individually notify each affected employee in writing of the results of that assessment or post the results in an appropriate location accessible to all affected employees within five working days after completing an exposure assessment.

  - If an exposure assessment indicates that an employee's exposure is above the PEL, Tarlton will describe in the written notification the corrective action being taken to reduce employee exposure to or below the PEL.

- **Observation of Monitoring:** Tarlton will provide all affected employees, or their designated representatives, an opportunity to observe any monitoring of employee exposure to respirable crystalline silica.

  - When observation of monitoring requires entry into an area where the use of protective clothing or equipment is required for any workplace hazard, Tarlton must provide the observer with

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protective clothing and equipment at no cost and must ensure that the observer uses such clothing and equipment correctly.

Methods of Compliance

- **Engineering and Work Practice Controls:** Tarlton must use engineering and work practice controls to reduce and maintain employee exposure to respirable crystalline silica to or below the PEL, unless Tarlton can demonstrate that such controls are not feasible. Wherever such feasible engineering and work practice controls are not sufficient to reduce employee exposure to or below the PEL, Tarlton will still use them to reduce our employee's exposure to the lowest feasible level. Tarlton will then supplement those controls with the use of respiratory protection in accordance with our Respiratory Protection Program.

- **Abrasive Blasting:** Tarlton must also comply with other OSHA standards, in addition to the engineering and work practice controls previous discussed, if abrasive blasting is conducted using crystalline silica-containing blasting agents or if abrasive blasting is conducted on substrates that contain crystalline silica.

Medical Previsions

- **Medical Surveillance:** Tarlton shall make medical surveillance available at no cost to the employee, and at a reasonable time and place, for each employee who will be required under this section to use a respirator for 30 or more days per year. Tarlton shall ensure that all medical examinations and procedures required by this section are performed by a PLHCP.

- **Initial Examination:** Tarlton shall make available an initial (baseline) medical examination within 30 days after initial assignment, unless the employee has received a medical examination that meets the requirements of this section within the last three years. The examination shall consist of:
    - A medical and work history, with emphasis on: past, present, and anticipated exposure to respirable crystalline silica, dust, and other agents affecting the respiratory system; any history of respiratory system dysfunction, including signs and symptoms of respiratory disease (e.g., shortness of breath, coughing, wheezing); history of tuberculosis; and smoking status and history;
    - A physical examination with special emphasis on the respiratory system;
    - A chest X-ray (a single poster anterior radiographic projection or radiograph of the chest at full inspiration recorded on either film (no less than 14 x 17 inches and no more than 16 x 17 inches) or digital radiography systems), interpreted and classified according to the International Labor Office (ILO) International Classification of Radiographs of Pneumoconiosis by a NIOSH-certified B Reader;
    - A pulmonary function test to include forced vital capacity (FVC) and forced expiratory volume in one second (FEV1) and FEV1/FVC ratio, administered by a spirometry technician with a current certificate from a NIOSH-approved spirometry course;
    - Testing for latent tuberculosis infection; and
    - Any other tests deemed appropriate by the PLHCP.

- **Periodic Examinations:** Tarlton will make medical examinations available that include the procedures described in paragraph (h)(2) of this section (except paragraph (h)(2)(v)) at least every three years, or more

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frequently if recommended by the PLHCP.

- **Information provided to the PLHCP:** Tarlton will ensure that the examining PLHCP has a copy of this program, and must provide the PLHCP with the following information:
    - A description of the employee's former, current, and anticipated duties as they relate to the employee's occupational exposure to respirable crystalline silica;
    - The employee's former, current, and anticipated levels of occupational exposure to respirable crystalline silica;
    - A description of any personal protective equipment used or to be used by the employee, including when and for how long the employee has used or will use that equipment; and
    - Information from records of employment-related medical examinations previously provided to the employee and currently within the control of the employer.
- **PLHCP's Written Medical Report for the Employee** Tarlton must ensure that the PLHCP explains to the employee the results of the medical examination and provides them with a written medical report within 30 days of the medical examination performed. The written report must contain:
    - A statement indicating the results of the medical examination, including any medical condition(s) that would place the employee at increased risk of material impairment to health from exposure to respirable crystalline silica and any medical conditions that require further evaluation or treatment;
    - Any recommended limitations on the employee's use of respirators;
    - Any recommended limitations on the employee's exposure to respirable crystalline silica; and
    - A statement that the employee should be examined by a specialist (pursuant to paragraph (h)(7) of this section) if the chest x-ray provided in accordance with this section is classified as 1/0 or higher by the B Reader, or if referral to a specialist is otherwise deemed appropriate by the PLHCP.

- **Additional Examinations:** If the PLHCP's written medical opinion indicates that an employee should be examined by a specialist, Tarlton must make a medical examination by a specialist available within 30 days after receiving the PLHCP's written opinion.
    - Tarlton must ensure that the examining specialist is provided with all the information that Tarlton provided to the PLHCP.
    - Tarlton must ensure that the specialist explains the results of the medical examination to the employee and provides them with a written medical report within 30 days of the examination that meets the requirements of paragraph (h)(5) of this section (except paragraph (h)(5)(iv)) of this section.
    - Tarlton will also obtain a written opinion from the specialist within 30 days of the medical examination that meets the requirements of paragraph (h)(6) (except paragraph (h)(6)(i)(B) and (ii)(B)) of this section.

Hazard Communication

Tarlton will include respirable crystalline silica in its Hazard Communication program. This requires that Tarlton ensures its employees have access to labels on containers of crystalline silica and safety data sheets. Additionally, Tarlton will ensure its employees are trained in accordance with the provisions of HCS and the below information.

Training

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- Prior to performing activities, or working on project sites where personnel could be exposed to silica dust, Tarlton will ensure that personnel receive suitable education and training. As necessary, personnel will be trained to a level of "demonstrated competency". While not necessarily an exhaustive list, education and training may include:

  - The hazards and risks associated with exposure to silica dust.
  - The signs and symptoms of silica related diseases.
  - General and specific silica exposure reduction methods/strategies (i.e. as detailed in the general/specific exposure control plans).
  - The use of specific pieces of equipment and control systems (i.e. LEV and WDS systems).
  - The use and care of respiratory (and other) personal protective equipment.
  - How to seek first aid (i.e. for respiratory related concerns, including those that may be caused/associated with silica dust exposure), and
  - How to report items of the concern (i.e. those related to silica dust).

- The education and training detailed will be delivered to Tarlton employees through a variety of forums, including but not necessarily limited to:

  - New Employee Orientations.
  - Project/Site Orientations.
  - Equipment/task specific training (in accordance with Tarlton Policy, all personnel must be trained to a level of "demonstrated competency" prior to using required tools, equipment, and appliances).
  - Start of shift "tool box talks".
  - Regularly scheduled crew "Tailgate Meetings".
  - Notifications and Bulletins (those developed in house and those acquired from other reputable sources).

- Tarlton will make a copy of this section readily available and without cost to our employees covered by this program.

Record Keeping

- Air Monitoring Data: Tarlton will make and maintain an accurate record of all exposure measurements taken to assess employee exposure to respirable crystalline silica. This record will include at least the following information:

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

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- Objective Data: Tarlton will make and maintain an accurate record of all objective data relied upon to comply with the requirements of this section. This record will include at least the following information:
    - The crystalline silica-containing material in question;
    - The source of the objective data;
    - The testing protocol and results of testing;
    - A description of the process, task, or activity on which the objective data were based; and
    - Other data relevant to the process, task, activity, material, or exposures on which the objective data were based.

- Medical Surveillance: Tarlton will make and maintain an accurate record for each employee covered by medical surveillance under paragraph (h) of this section. The record will include the following information about the employee:
    - Name and social security number;
    - A copy of the PLHCP's and specialist's written medical opinions; and
    - A copy of the information provided to the PLHCP and specialist.

- Medical Record Retention: Tarlton will maintain medical records and make them available in accordance with 29 CFR 1910.1020, including that medical record for each employee be preserved and maintained for at least the duration of employment plus thirty (30) years.

References

- 29 CFR § 1926.1153 Respirable crystalline silica

- 29 CFR § 1910.134 Respiratory protection standard

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Purpose

Overhead cranes, hoists, and rigging equipment are used by TARLTON employees for lifting and moving materials and require coordinated and safe signaling procedures.

Scope

Applies to all TARLTON employees who operate overhead cranes, hoists, and rigging equipment in the scope of their job duties and assignments.

Key Responsibilities

Managers and Supervisors

- Are responsible to ensure that employees and contractors are trained and qualified on the proper operations and have been trained in crane and hoist safety including signaling safety.
- Are responsible to see that all provisions of this procedure are followed and that signaling operations are performed and the equipment is in safe operating condition.

Employees

- Employee operators are responsible to follow the requirements of this program.
- Employees designated as signalers are responsible to follow the requirements of this program.

General Requirements

Only one person may give signals to a crane at a time with the exception of emergency stop signals. Only one person shall give signals to a crane at a time, unless the emergency stop signal is given due to safety issues.

TARLTON shall ensure the testing of communication devices on site prior to beginning work. The device used to transmit signals must be tested on site before beginning operations to ensure that the signal transmission is effective, clear, and reliable.

When a Signal Person Must be Provided

A signal person must be provided in each of the following situations:

- The load travel or the area near or at load placement is not in full view of the operator.
- When the equipment is traveling, the view in the direction of travel is obstructed.
- The operator or person handling the load determines a signal person is necessary due to site-specific safety concerns.

Stop Work Immediately

If signals between the operator and signal person are interrupted, the operator must safely stop operations until communication is reestablished. The ability to transmit signals between the operator and signal person must be maintained. If the ability to transmit signals is interrupted at any time, the operator must safely stop operations requiring signals until communication is reestablished and a proper signal is given and understood.

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The Types of Signals to be Used

Signals to operators must use the hand, voice, audible method. Means of transmitting the signals (direct line of sight, radio, etc.) must be suitable and appropriate for the site conditions. Hand signals must follow the Standard Method in Appendix A of Subpart CC of 29 CFR 1926.1419. See Standard Hand Signals illustrations at the end of this procedure.

Qualification Requirements of the Signal Person

Mandatory training is required for the following crane related personnel:

- Overhead power lines
- Signal persons
- Competent/qualified persons
- Operators
- Crush/pinch points
- Tag-out

Each signal person must:

- Know and understand the type(s) of signals used;
- Be competent in the application of the type of signals used;
- Have a basic understanding of equipment operation and limitations, including the crane dynamics involved in swinging and stopping loads and boom deflection from hoisting loads;
- Demonstrate that he/she meets the qualification requirements through an oral or written test, and through a practical test.
- Must be trained in

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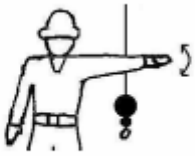
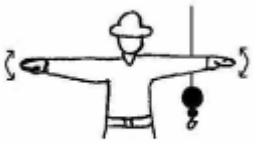
STANDARD HAND SIGNALS



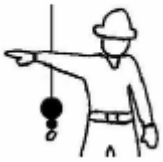
STOP – With arm extended horizontally to the side, palm down, arm is swung back and forth.



EMERGENCY STOP – With both arms extended horizontally to the side, palms down, arms are swung back and forth.

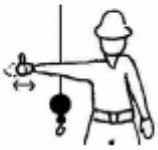
HOIST – With upper arm extended to the side, forearm and index finger pointing straight up, hand and finger make small circles.

RAISE BOOM – With arm extended horizontally to the side, thumb points up with other fingers closed.



SWING – With arm extended horizontally, index finger points in direction that boom is to swing.

RETRACT TELESCOPING BOOM – With hands to the front at waist level, thumbs point at each other with other fingers closed.

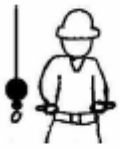


RAISE THE BOOM AND LOWER THE LOAD – With arm extended horizontally to the side and thumb pointing up, fingers open and close while load movement is desired.

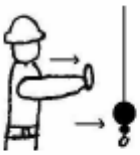
DOG EVERYTHING – Hands held together at waist level.

LOWER – With arm and index finger pointing down, hand and finger make small circles.

LOWER BOOM – With arm extended horizontally to the side, thumb points down with other fingers closed.



EXTEND TELESCOPING BOOM – With hands to the front at waist level, thumbs point outward with other fingers closed.



TRAVEL/TOWER TRAVEL – With all fingers pointing up, arm is extended horizontally out and back to make a pushing motion in the direction of travel.

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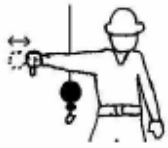
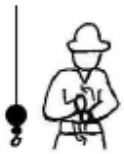


LOWER THE BOOM AND RAISE THE LOAD – With arm extended horizontally to the side and thumb pointing down, fingers open and close while load movement is desired.

MOVE SLOWLY – A hand is placed in front of the hand that is giving the action signal.

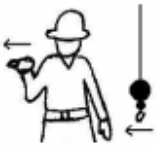
USE AUXILIARY HOIST (whipline) – With arm bent at elbow and forearm vertical, elbow is tapped with other hand. Then regular signal is used to indicate desired action.



CRAWLER CRANE TRAVEL, BOTH TRACKS – Rotate fists around each other in front of body; direction of rotation away from body indicates travel forward; rotation towards body indicates travel backward.

USE MAIN HOIST – A hand taps on top of the head. Then regular signal is given to indicate desired action.

CRAWLER CRANE TRAVEL, ONE TRACK – Indicate track to be locked by raising fist on that side. Rotate other fist in front of body in direction that other track is to travel.



TROLLEY TRAVEL – With palm up, fingers closed and thumb pointing in direction of motion, hand is jerked horizontally in direction trolley is to travel.

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PURPOSE

The purpose of this program is to address control measures to protect personnel from severe weather, such as lightning, tornados, and high winds.

SCOPE

Each jobsite is responsible for monitoring current and future weather conditions and implementing the controls in this policy.

Prior to mobilizing, project staff should identify and designate an appropriate storm shelter. Location of shelter should be covered in the site-specific orientation and signage should be conspicuously posted. The location of the designated storm shelter may change over the course of a project. Any changes in the designated storm shelter location should be communicated with all onsite personnel immediately.

CONTENTS

- Lightning
- Severe Thunderstorms
- Tornados

LIGHTNING

Lightning Watch – Indicates that lightning has been detected within a **25-mile** radius of the project site.

- Outdoor work activities taking place on the jobsite should be reviewed and appropriate communications should be made to inform workers of impending lighting arrival in the area.
- Personnel should take appropriate steps (delay the start of new activities, exit intricately configured confined spaces, exit work at heights that inhibit a timely exit to a safe area, etc.) to prepare for incoming weather.

Lightning Warning – Indicates that lightning has been detected within a **10-mile** radius of the project site.

- Personnel working outdoors should ensure that their work area is made safe and they should seek shelter in an approved building at ground level.
- If a safe building at ground level is not immediately available, personnel should seek shelter in an enclosed vehicle.
- All crane lift operations should be suspended.
- **PERSONNEL SHOULD NOT RESUME WORK UNTIL 30 MINUTES AFTER THE LAST OBSERVED LIGHTING STRIKE WITHIN THE 10 MILE RADIUS OF THE PROJECT SITE.**

SEVERE THUNDERSTORMS

Severe Thunderstorm Watch - This is issued by the National Weather Service when conditions are favorable for the development of severe thunderstorms in and close to the watch area. A severe thunderstorm by definition is a thunderstorm that produces one-inch hail or larger in diameter and/or winds equal or exceed 58 miles an hour.

Severe Thunderstorm Warning - This is issued by the National Weather Service when either a severe thunderstorm is indicated by the WSR-88D radar or a spotter reports a thunderstorm producing hail one inch or larger in diameter and/or winds equal or exceed 58 miles an hour; therefore, people in the affected area should seek safe shelter immediately. Severe thunderstorms can produce tornadoes with little or no advance warning.

- Be prepared to leave the area and take shelter indoors in the storm arrives in the area of the jobsite.

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- If thunderstorms arrive in the area of the jobsite, take shelter in appropriate designated storm shelter.

TORNADOS

Tornado Watch - This is issued by the National Weather Service when conditions are favorable for the development of tornadoes in and close to the watch area. Their size can vary depending on the weather situation. They are usually issued for a duration of 4 to 8 hours. They normally are issued well in advance of the actual occurrence of severe weather. During the watch, people should review tornado safety rules and be prepared to move to a place of safety if threatening weather approaches.

- Determine the appropriate shelter areas where personnel can seek refuge in the event that tornados are sighted in the area.
- Monitor NOAA Weather Radio or local news broadcast for further information.

Tornado Warning - This is issued when a tornado is indicated by the WSR-88D radar or sighted by spotters; therefore, people in the affected area should seek safe shelter immediately. They can be issued without a Tornado Watch being already in effect. They are usually issued for a duration of around 30 minutes.
In the event that a Tornado Warning is issued, or a tornado is actually sighted:

- Take shelter immediately in an appropriate shelter area.
- If in a building, go to the basement or an interior room on the lowest level. Stay away from windows.
- If in a vehicle or trailer, get out immediately and move to a more substantial structure.
- If there is no shelter nearby, lie flat in the nearest ditch.

SEVERE WINTER WEATHER

1) Monitoring weather conditions for your project
2) Calling off non-essential and/or all workers if weather conditions dictate.
3) Clearing parking area, access paths to and through the project, break areas, ect… before work begins
4) Having an adequate amount of snow melt, shovels, manpower, ect.. available
5) Inspections of parking areas, access paths to and through the project and break areas throughout the day to ensure they remain clear.

Winter weather can present a variety of unique complications on a job site. Snow, ice, and the freezing and thawing of water raise numerous concerns to the aspects of productivity, quality, and most importantly, safety. Having and implementing a plan ahead of time can greatly help reduce and eliminate these concerns.

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Purpose:

The purpose of this program is to establish requirements for the use and handling of materials that expose employees to cadmium and/or hexavalent chromium.

Scope

This program covers all employees.

Key Responsibilities

Managers/Supervisors

- Shall ensure that all employees are aware of the proper work procedures for cadmium and hexavalent chromium
- Shall ensure that initial training is conducted for all new employees and that retraining is conducted when employee behaviors suggest that retraining is warranted.
- As part of the JSA and other hazard evaluation processes, identifies and evaluates chromium or cadmium hazards and potential exposures during planning and the conduct of work.
- Reviews and approves the Task-Specific Safety Analysis.
- As necessary, quantitatively determines the presence of chromium or cadmium in materials, substrates, and other media. This may involve the collection of samples for analysis by a qualified laboratory or field testing using acceptable test methods.
- Provides results of any chromium or cadmium survey to management/supervision, along with information regarding hazard potential and control measures. As appropriate, makes recommendations to management/supervision to maintain, modify, upgrade, or downgrade controls accordingly.
- Takes prompt corrective measures (or supports any Competent Person in this role) to eliminate hazards; such as recommending to management/supervision to implement or modify engineering, administrative, work practice, and personal protection (including respiratory protection) controls.
- Conducts periodic exposure assessment.
- As appropriate, assists management/supervision in ensuring that workers have the necessary training and medical surveillance based upon the activity and hazard.
- Ensures that medical monitoring is conducted in accordance with 29 CFR 1926.1126 (for chromium) or 29 CFR 1926.1127 (for cadmium) including imposition of work restrictions where appropriate and reviewing results of medical monitoring.
- In evaluating chromium or cadmium hazards and specifying controls for a job, (a) utilizes reliable historical exposure monitoring data generated for other similar operations or activities, (b) utilizes objective data, and/or (c) plans and conducts initial monitoring to determine exposures and assess the effectiveness of hazard controls.
- Conducts initial and periodic exposure monitoring in accordance with National Institute for Occupational Safety and Health (NIOSH)/OSHA methods if lacking historical or objective data.
- Maintains effective records of jobs monitored, so that a historical database can be used to specify controls and eliminate unnecessary and redundant monitoring for future activities.
- Supports project management/supervision in responding to exposures above the PEL when workers were not adequately protected.

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- As appropriate, participates in pre-job and daily worker briefings regarding task-specific chromium or cadmium hazards and controls, work practices/plans (such as JSAs), and other applicable information, including any changes that are made to controls or to the work practices or plans.

Employees

- Shall follow all requirements regarding the safe work procedures for cadmium and hexavalent chromium.

Cadmium Procedure

Compliance Program

A written compliance program shall be implemented when the PEL for cadmium is exceeded at a work site.

The following areas shall be addressed within the site compliance program and to ensure emergency plans are in place should a release of cadmium occur:

- Potential exposure determination including a description of each operation where cadmium is omitted, machinery use, material processed, controls in place, crew size, employee job responsibilities and maintenance practices.
- Air monitoring data or developing a justification for not conducting monitoring based on previous monitoring/historical data or objective data.
- Engineering controls including the specific means that will be employed to meet compliance.
- A report of technology considered in meeting the PEL.
- A detailed schedule of implementation.
- Consideration of respiratory protection.
- A documented, written plan for dealing with emergency situations involving a substantial release of cadmium.
- Work practice program.
- Other relevant information such as protective clothing, housekeeping, hygiene areas and practices (including consideration of shower facilities), consideration of medical surveillance, training and recordkeeping.

The written program must be reviewed and updated annually or more often to reflect significant changes in the compliance status for TARLTON.

The program shall be provided for examination and copying upon request of affected employees, their representatives or OSHA officials.

Maintenance procedures while working on ventilation systems and changing of filters will be established. Procedures shall be developed and implemented to minimize employee exposure to cadmium when maintenance of ventilation systems and changing of filters. Examples include: Proper use of PPE, use of HEPA filtered vacuums, wet sweeping or other methods to minimize the likelihood of exposure to chromium. No compressed air shall be used to remove chromium from any surface. Cleaning equipment must be handled in a manner that minimizes the reentry of chromium into the workplace.

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Construction work activities that result in exposure to chromium or cadmium may include, but are not limited to, the following:

- Demolition or salvage of structures where chromium or cadmium, or materials containing chromium or cadmium, are present.
- Removal or encapsulation of materials containing chromium or cadmium.
- New construction, alteration, repair, or renovation of structures and substrates that contain chromium or cadmium.
- Installation of products containing chromium or cadmium.
- Working with/around Portland cement (in powder or dust form – chromium only).
- Torch-cutting chromium/cadmium containing paints.
- Transportation, disposal, storage, or containment of chromium or cadmium, or materials containing chromium or cadmium.
- Maintenance operations associated with construction activities.
- Welding, cutting, burning, or grinding stainless steel, chromium-/cadmium-containing alloy steel, and chromium/cadmium containing alloys.

Note!!! Exposure to chromium (especially hexavalent chromium) has also occurred when the welding rod or wire in use contains chromium.

The permissible exposure limit (PEL) for cadmium and hexavalent chromium is five (5) micrograms calculated as an 8-hour time-weighted average over a work shift. The action level (AL) of 2.5 micrograms triggers the following requirements:

- Pre-job planning includes, as needed, a thorough identification of chromium or cadmium materials. Identification may include the product name, a Material Safety Data Sheet (MSDS) with the MSDS number (if available) or a sample content analysis. Sampling data includes location, sampling method, sampling dates, laboratory identification, and analytical method.
- If documentation is not feasible or has been determined by the project engineer to be unavailable or unreliable, chromium or cadmium content sufficient to exceed the action level for chromium or cadmium is assumed.

Results of bulk sampling, calculations of potential chromium or cadmium exposure, and other data that demonstrate compliance with this practice (as well as the pertinent standards) are attached to the work package.

Where chromium or cadmium exposure above the action level is suspected, and in the absence of monitoring data, interim protective measures are established that are equal to or greater than the assumed exposure level.

Hexavalent Chromium Procedure

Welding, Cutting, and Grinding

Certain welding and cutting activities have been shown to expose the welder/cutter, and potentially helpers, to hexavalent chromium above the action level when exhaust ventilation is not used. The activities have included the following:

- Shielded metal arc welding, Gas metal arc welding

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- Flux cored arc welding, Sub arc welding
- Torch cutting through chromate-containing paints, grinding chromium-containing metals.

The types of metal involved have been stainless steel, chromium-containing alloy steel, and chromium-containing nonferrous alloys. Exposure has also occurred when the welding rod or wire in use contains chromium, and exhaust ventilation is not used.

Therefore, exhaust ventilation is always prescribed as a control measure when activities with the materials mentioned above are in use unless historical personal monitoring data performed when similar materials, using similar methods, under similar environmental conditions are used shows conclusively that the welder/cutter and helper (if applicable) are not exposed above the action level without regard to respiratory protection.

Practices and procedures shall ensure that no employee is exposed to hexavalent chromium in excess of the permissible exposure level which is 5 micrograms per cubic meter of air based on an 8 hour Time Weighted Average.

Plasma and Air Arc Cutting and Gouging
Plasma and air arc cutting and gouging operations have been shown to expose the worker and helpers within 10 feet of the work to levels of hexavalent chromium above the permissible exposure limit (PEL) under most circumstances and conditions. Exhaust ventilation and respiratory protection (at least a half-face, tight-fitting respirator with a HEPA filter/cartridge) are always prescribed as control measures when activities with the materials mentioned above are in use; a higher level of respiratory protection may be prescribed, depending on conditions.

Note!!! Each discrete task must begin with ventilation and respiratory protection control measures in place. Respiratory protection may be downgraded only upon conclusive results of breathing zone monitoring of the employee(s) involved in each discrete task showing exposure to be less than 50 percent of the protection factor of the respirator relative to the concentration and PEL of hexavalent chromium. Respiratory protection may be eliminated only upon conclusive results of breathing-zone monitoring of the employee(s) involved in each discrete task showing exposure to be less than the PEL as an 8-hour time-weighted average.

Additional controls may also be appropriate to be in compliance with 29 CFR 1926.1126, depending on the results of evaluations of the materials to be used, environmental conditions, length of the work process/activity, etc.
Employees who are exposed at or above the action level 30 days or more per year are enrolled in a medical surveillance program.

Personal hygiene is very important while working with chromium or cadmium products. To avoid accidental ingestion of chromium or cadmium, employees wash thoroughly (regardless of other controls) prior to eating, chewing, smoking, or drinking.

Practices

TARLTON Management/supervision supported by safety professional(s), the medical contractor and training providers conducts the following basic steps to control exposure to chromium or cadmium:

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- Determine the types of projects, activities, and operations that could involve chromium or cadmium, or chromium or cadmium-containing materials. For those jobs, conduct hazard identification as part of the work design, planning, and control process.
- If chromium or cadmium materials are involved, ensure that project safety (for chromium) or a competent person (for cadmium) conducts a hazard evaluation to determine the potential exposure and to recommend initial controls.
- Develop and implement a Task-Specific Safety when exposure is or is likely to be above the PEL. The JSA (or equal) addresses the scope of work activities; provides initial exposure assessment; and prescribes exposure controls, air-monitoring requirements, work practices, personal protective equipment and additional information as required.
- Incorporate recommendations from project safety for chromium or cadmium hazard control measures into any JSA and work control documents.

Exposure Monitoring

Monitoring or measuring of employee exposure shall be conducted at least every 6 months if the initial monitoring shows employee exposure. Air monitoring will be performed at the beginning of each job task. If exposure monitoring results indicate exposure is above the PEL TARLTON must include in the written notification to employees the corrective action being taken to reduce exposure to or below the PEL.

- Notify each affected employee, in writing, of the results of monitoring within five (5) working days.
- Air monitoring for chromium or cadmium may be waived provided the following conditions are met:
    - Monitoring has been performed in the last 12 months.
    - Data from historical monitoring originates from work operations that closely resemble the planned work operations.
    - Workplace and environmental conditions (such as indoors or outdoors, temperature, wind speed, ventilation, and space configuration) are similar to those when the monitoring was performed.
    - The processes, types of material, control methods and work practices are similar.
    - Justification for waving initial monitoring shall be included in the Task-Specific Safety Analysis or equal. Employees involved are briefed regarding the existence of such data.

Surveillance

Medical surveillance shall be provided when an employee experiences signs or symptoms of the adverse health effects of Hexavalent Chromium (dermatitis, asthma, bronchitis, etc.). Medical evaluations will be provided at no cost to employees. Examinations will be performed by or under the supervision of a physician or other licensed health care professional.

Facilities

TARLTON must provide change rooms for decontamination and ensure facilities prevent cross-contamination. Washing facilities shall be readily accessible for removing chromium from the skin. Workers must wash their hands and face or any other potentially exposed skin before eating, drinking or smoking.

Regulated Areas

Regulated areas shall be established when exposure to an employee is or is expected to be in excess of the PEL. Regulated areas shall be marked with warning signs to alert employees and access is restricted to authorized persons only.

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Controls
If the exposure level is above the PEL for 30 days or more then engineering controls and work practices shall be provided to reduce exposure to the lowest feasible level. If employees can demonstrate that such controls are not feasible TARLTON shall use engineering and or work controls to reduce employee exposure to the lowest levels achievable and shall supplement them by the use of required respiratory protection.

Recordkeeping
TARLTON is required to maintain and make available an accurate record of all employee exposure monitoring, medical surveillance and training records.

Respiratory Protection & PPE
The appropriate respirator shall be used when engineering controls and work practices cannot reduce employee exposure during work operations where engineering controls and work practices are not feasible and emergencies. Respirators shall be provided in accordance with 1910.134 (Respiratory Protection) (see TARLTON Respiratory Protection Program). Specific requirements contained within 1926.1127 (Cadmium) regarding respiratory protection shall also be followed including:

- Providing employees with full face piece respirators when they experience eye irritation.
- Providing HEPA filters for powered and non-powered air-purifying respirators.
- Providing a powered air-purifying respirator instead of a negative-pressure respirator when an employee entitled to a respirator chooses to use this type of respirator and such a respirator will provide adequate protection to the employee.

PPE will be provided when there is a hazard from skin or eye contact and employees are required to use the PPE. Gloves, aprons, coveralls, goggles, foot covers and other as needed PPE shall be provided at no cost to the employee and will be removed at the end of the work shift. TARLTON must clean, launder and replace all protective clothing as needed.

Housekeeping
All surfaces shall be maintained as free as practicable of chromium. All spills and releases of chromium shall be cleaned promptly with approved procedures including use of HEPA filtered vacuums as the primary method, dry or wet sweeping or other methods to minimize the likelihood of exposure to chromium.

No compressed air shall be used to remove chromium from any surface unless the compressed air is used in conjunction with a ventilation system designed to capture the dust cloud created by the compressed air or no alternative method is feasible.

Cleaning equipment must be handled in a manner that minimizes the reentry of chromium into the workplace.

Training

TARLTON shall provide appropriate types of training for employees who are potentially exposed to chromium or cadmium prior to their initial assignment and annually thereafter. TARLTON will assure employee participation and maintain a record of the training contents. This training includes:

- Hazard communication training for potentially exposed employees.
- Training specified by the applicable chromium or cadmium standard for workers exposed at the action level for any one day, or who are exposed to chromium or cadmium compounds that are skin irritants.

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- Respirator training if respirators are to be used.
- Provide information to workers regarding task-specific chromium or cadmium hazards and control methods, the JSA, work practices, medical surveillance and other applicable information, including any changes that are made to these controls.
- Provide training annually, as appropriate, to workers who continue to have exposure to chromium or cadmium at or above the action level on any one day.
- All training will be recorded and include the identity of the employee trained, the signature of the person who conducted the training and the date of the training.
- Training records must be kept for one year.

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PURPOSE and SCOPE

Construction workers performing demolition work are exposed to many hazardous conditions and materials. Although a contractor may be concerned about safety, there should also be heightened awareness for the safety of the general public and the property of others.

PROCEDURES

Before the start of every demolition job, Tarlton Corporation, hereafter referred to as "The Company", shall take a number of steps to safeguard the health and safety of workers at the job site. These preparatory operations involve the overall planning of the demolition job, including the methods to be used to bring the structure down, the equipment necessary to do the job, and the measures to be taken to perform the work safely. Planning for a demolition job is as important as actually doing the work. Therefore, a competent (or qualified in some jurisdictions) person experienced in all phases of the demolition work to be performed shall perform all planning work.

Pre-Demolition/Engineering Survey

Prior to starting a demolition operation, a written pre-demolition survey or engineering survey of the structure must be performed. The purpose of this survey is to determine the condition of the framing, floors, and walls so that measures can be taken, if necessary, to prevent the premature collapse of any portion of the structure. In addition, the survey will identify designated/hazardous substances, physical hazards, and health hazards, etc. When indicated, any adjacent structure(s) or improvements shall also be similarly checked. The Company will maintain a written copy of this survey. Photographing existing damage in neighboring structures will also take place by the competent/qualified person designated.

The pre-demolition survey or engineering survey provides The Company with the opportunity to evaluate the job in its entirety. The Company shall plan for the demolition of the structure, the equipment to do the work, manpower requirements, and the protection of the public. The safety of all workers on the job site will be a prime consideration. During the preparation of the pre-demolition survey or engineering survey, The Company shall plan for potential hazards such as fires, cave-ins, and injuries. If the structure to be demolished has been damaged by fire, flood, explosion, or some other cause, appropriate measures, including bracing and shoring of walls and floors, shall be taken to protect workers and any adjacent structures. It shall also be determined if any type of hazardous chemicals, gases, explosives, flammable material, or similar dangerous substances have been used or stored on the site. If the nature of a substance cannot be easily determined, samples shall be taken and analyzed by a qualified person prior to demolition.

Prior to starting work, a qualified person will identify health hazards associated with all demolition and blasting activities. A hazard assessment will be conducted with appropriate control plans implemented to protect workers from identified or potential hazards. Personal Protective Equipment (PPE) will be provided and worn as identified in the assessment. This may include proper hearing protection for excess noise during demolition or blasting operations. Communication of potential health hazards will be shared with all affected workers prior to beginning work.

Utility Location

One of the most important elements of the pre-job planning is the location of all utility services. All electric, gas, water, steam, sewer, and other service lines shall be shut off, capped, or otherwise controlled, at or outside the building before demolition work is started. In each case, any utility company that is involved shall be notified in advance, and its approval or services, if necessary, shall be obtained.

If it is necessary to maintain any power, water, or other utilities during demolition, such lines shall be temporarily relocated as necessary and/or protected. The location of all overhead power sources shall also be determined, as they can prove especially hazardous during any machine demolition. All workers shall be informed of the location of any existing or relocated utility service. The telephone numbers of the local police, ambulance, and fire departments shall be available at each job site. This information can prove useful to the job supervisor in the event of any traffic problems, such as the movement of equipment to or from the job site. All shut-off valves/disconnects or utilities left live during demolition must be identified and located prior to demolition starting.

Medical Services and First Aid

Prior to starting work, provisions shall be made for prompt medical attention in case of serious injury. The nearest hospital, infirmary, clinic, or physician shall be located as part of the pre-demolition survey or engineering survey. The supervisor shall be provided with instructions for the most direct route to these facilities. Proper equipment for prompt transportation of an injured worker, as well as a communication system to contact any necessary ambulance service, will be available at the job site. The telephone numbers of the hospitals, physicians, or ambulances shall be conspicuously posted.

A properly stocked first aid kit will be available at the job site. The first aid kit shall contain approved supplies in a weatherproof container with individual sealed packages for each type of item. The contents of the kit shall be checked before being sent out on each job and at least weekly to ensure the expended items are replaced.

Fire Prevention and Protection

A **"fire plan"** shall be set up prior to beginning a demolition job. This plan shall outline the assignments of key personnel in the event of a fire and provide an evacuation plan for workers on the site.

Preparatory Operations

When workers are required to work within a structure to be demolished which has been damaged by fire, flood, explosion, or other cause, the walls or floor shall be shored or braced.

All electric, gas, water, steam, sewer, and other service lines shall be shut off, capped, or otherwise controlled, outside the building line before demolition work is started. In each case, any utility company that is involved shall be notified in advance.

If it is necessary to maintain any power, water or other utilities during demolition, such lines shall be temporarily relocated, as necessary, and protected. All shut-off valves/disconnects or utilities left live during demolition must be identified and located prior to demolition starting.

It shall also be determined if any type of hazardous chemicals, gases, explosives, flammable materials, or similarly dangerous substances have been used in any pipes, tanks, or other equipment on the property. When the presence of any such substances is apparent or suspected, testing and purging shall be performed, and the hazard eliminated before demolition is started.

Where a hazard exists from fragmentation of glass, such hazards shall be removed.

Where a hazard exists to workers falling through wall openings, the opening shall be protected to a height of approximately 42 inches.

When debris is dropped through holes in the floor without the use of chutes, the area onto which the material is dropped shall be completely enclosed with barricades not less than 42 inches high and not less than 6 feet back from the projected edge of the opening above. Signs, warning of the hazard of falling materials, shall be posted at each level. Removal shall not be permitted in this lower area until debris handling ceases above.

All floor openings, not used as material drops, shall be covered over with material substantial enough to support the weight of any load that may be imposed. Such material shall be properly secured to prevent its accidental movement.

Except for the cutting of holes in floors for chutes, holes through which to drop materials, preparation of storage space, and similar necessary preparatory work, the demolition of exterior walls and floor construction shall begin at the top of the structure and proceed downward. Each story of exterior wall and floor construction shall be removed and dropped into the storage space before commencing the removal of exterior walls and floors in the story next below.

Worker entrances to multi-story structures being demolished shall be completely protected by sidewalk sheds or canopies, or both, providing protection from the face of the building for a minimum of 8 feet. All such canopies shall be at least 2 feet wider than the building entrances or openings (1 foot wider on each side thereof) and shall be capable of sustaining a load of 150 pounds per square foot.

During the planning stage of the job, all safety equipment needs shall be determined. The required number and type of respirators, lifelines, warning signs, safety nets, special face and eye protection, hearing protection, and other worker protection

In the absence of an infirmary, clinic, hospital, or physician that is reasonably accessible in terms of time and distance to the work site, a worker who has a valid certificate in first aid training shall be available at the work site to render first aid.

A comprehensive first aid plan is necessary for any confined space entry.

Pre-Demolition Considerations

- All potential sources of ignition shall be evaluated, and the necessary corrective measures taken.

- When storing debris or combustible material inside a structure, such storage shall not obstruct or adversely affect the means of exit.
- Identification and location of shut-off valves/disconnect for all live utilities must be obtained before demolition begins.
- Electrical wiring and equipment for providing light, heat, or power shall be installed by a competent person and inspected regularly.
- A suitable location at the job site shall be designated and provided with plans, emergency information, and equipment, as needed.
- Access to heavy fire-fighting equipment shall be provided on the immediate job site at the start of the job and well maintained until the job is completed.
- Equipment powered by an internal combustion engine shall be located so that the exhausts discharge away from combustible materials and away from workers.
- When the exhausts are piped outside the building, clearance of at least six inches shall be maintained between such piping and combustible material.
- Free access from the street to fire hydrants and to outside connections for standpipes, sprinklers, or other fire extinguishing equipment, whether permanent or temporary, should be provided and maintained at all times.
- All internal combustion equipment shall be shut down prior to refueling. Fuel for this equipment shall be stored in a safe location.
- Pedestrian walkways should not be constructed so as to impede access to hydrants.
- Sufficient firefighting equipment shall be located near any flammable or combustible liquid storage area.
- Only approved containers and portable tanks shall be used for the storage and handling of flammable combustible liquids.
- No material or construction should interfere with access to hydrants, splitter connections, or fire-extinguishing equipment.
- A temporary or permanent water supply of volume, duration, and pressure sufficient to operate the fire-fighting equipment properly shall be made available.
- Standpipes with outlets should be provided on large multistory buildings to provide fire protection on upper levels. If the water pressure is insufficient, a pump shall also be provided.
- Heating devices shall be situated so they are not likely to overturn and shall be installed in accordance with their listing, including clearance to combustible material or equipment
- Temporary heating equipment, when utilized, shall be maintained by competent personnel.
- An ample number of fully charged portable fire extinguishers should be provided throughout the operation. All motor-driven mobile equipment shall be equipped with an approved fire extinguisher.
- Roadways between and around combustible storage piles shall be at least 15 feet wide and maintained free from accumulation of rubbish, equipment, or other materials.
- Smoking shall be prohibited at or in the vicinity of hazardous operations or materials. Where smoking is permitted, safe receptacles shall be provided for smoking materials.
- An alarm system, (e.g., telephone system, siren, two-way radio, etc.) shall be established in such a way that workers on the site and the local fire department can be alerted in case of an emergency. The alarm code and reporting instructions shall be conspicuously posted, and the alarm system shall be serviceable at the job site during the demolition. Fire cutoffs shall be

retained in the buildings undergoing alterations or demolition until operations necessitate their removal.

- A Demolition Permit must be completed prior to any demolition work beginning.

Procedures

Stairs, Passageways, and Ladders:

- Only those stairways, passageways, and ladders, designated as means of access to the structure of a building, shall be used. Other accessways shall be entirely closed at all times.
- All stairs, passageways, ladders, and incidental equipment thereto, which are covered by this section, shall be inspected as required and maintained in a clean safe condition.
- In a multistory building, when a stairwell is being used, it shall be properly illuminated by either natural or artificial means, and completely and substantially covered over at a point not less than two floors below the floor on which work is being performed, and access to the floor where the work is in progress shall be through a properly lighted, protected, and separate passageway.

Chutes

- No material shall be dropped to any point lying outside the exterior walls of the structure unless the area is effectively protected.
- All materials chutes or sections thereof, at an angle of more than 45° from the horizontal, shall be entirely enclosed, except for openings equipped with closures at or about floor level for the insertion of materials. The openings shall not exceed 48 inches in height measured along the wall of the chute. At all stories below the top floor, such openings shall be kept closed when not in use.
- A substantial gate shall be installed in each chute at or near the discharge end. A competent worker shall be assigned to control the operation of the gate, and the backing and loading of trucks.
- When operations are not in progress, the area surrounding the discharge end of a chute shall be securely closed off.
- Any chute opening, into which workers dump debris, shall be protected by a substantial guardrail approximately 42 inches above the floor or other surface on which the workers stand to dump the material. Any space between the chute and the edge of openings in the floors through which it passes shall be solidly covered over.
- Where the material is dumped from mechanical equipment or wheelbarrows, a securely attached toe board or bumper, not less than 4 inches thick and 6 inches high, shall be provided at each chute opening.
- Chutes shall be designed and constructed of such strength as to eliminate failure due to impact of materials or debris loaded therein.

Removal of Materials through Floor Openings

- Any openings cut in a floor for the disposal of materials shall be no larger in size than 25 percent of the aggregate of the total floor area, unless the lateral supports of the removed flooring

remain in place.

- Floors weakened or otherwise made unsafe by demolition operations shall be shored to carry safely the intended imposed load from demolition operations.

Removal of Walls, Masonry Sections and Chimneys

- Masonry walls, or other sections of masonry, shall not be permitted to fall upon the floors of the building in such masses as to exceed the safe carrying capacities of the floors.
- No wall section, which is more than one story in height, shall be permitted to stand alone without lateral bracing, unless such wall was originally designed and constructed to stand without such lateral support, and is in a condition safe enough to be self-supporting. All walls shall be left in a stable condition at the end of each shift.
- Workers shall not be permitted to work on the top of a wall when weather conditions constitute a hazard.
- Structural or load-supporting members on any floor shall not be cut or removed until all stories above such a floor have been demolished and removed. This provision shall not prohibit the cutting of floor beams for the disposal of materials or for the installation of equipment, provided that the jurisdictional requirements (Local, State, Federal, or Provincial) are met.
- Floor openings within 10 feet of any wall being demolished shall be planked solid, except when workers are kept out of the area below.
- In buildings of "skeleton-steel" construction, the steel framing may be left in place during the demolition of masonry. Where this is done, all steel beams, girders, and similar structural supports shall be cleared of all loose material as the masonry demolition progresses downward.
- Walkways or ladders shall be provided to enable workers to safely reach or leave any scaffold or wall.
- Walls, which serve as retaining walls to support earth or adjoining structures, shall not be demolished until such earth has been properly braced or adjoining structures have been properly underpinned.
- Walls, which are to serve as retaining walls against which debris will be piled, shall not be so used unless capable of safely supporting the imposed load.

Manual Removal of Floors

- Openings cut in a floor shall extend the full span of the arch between supports.
- Before demolishing any floor arch, debris and other material shall be removed from such arch and other adjacent floor area. Planks not less than 2 inches by 10 inches in cross section, full size undressed, shall be provided for, and shall be used by workers to stand on while breaking down floor arches between beams. Such planks shall be so located as to provide a safe support for the workmen shall the arch between the beams collapse. The open space between planks shall not exceed 16 inches.
- Safe walkways, not less than 18 inches wide, formed of planks not less than 2 inches thick if wood, or of equivalent strength if metal, shall be provided and used by workmen when necessary to enable them to reach any point without walking upon exposed beams.
- Stringers of ample strength shall be installed to support the flooring planks, and the ends of such stringers shall be supported by floor beams or girders, and not by floor arches alone.
- Planks shall be laid together over solid bearings with the ends overlapping at least 1 foot.

- When floor arches are being removed, workers shall not be allowed in the area directly underneath, and such an area shall be barricaded to prevent access to it.
- Demolition of floor arches shall not be started until they, and the surrounding floor area for 20 feet, have been cleared of debris and any other unnecessary materials.

Removal of Walls, Floors, and Material with Equipment

- Mechanical equipment shall not be used on floors or working surfaces unless such floors or surfaces are of sufficient strength to support the imposed load.
- Floor openings shall have curbs or stop-logs to prevent equipment from running over the edge.

Storage

- The storage of waste material and debris on any floor shall not exceed the allowable floor loads.
- In buildings having wooden floor construction, the flooring boards may be removed from not more than one floor above grade to provide storage space for debris, provided falling material is not permitted to endanger the stability of the structure.
- When wood floor beams serve to brace interior walls or freestanding exterior walls, such beams shall be left in place until other equivalent support can be installed to replace them.
- storage area for debris: Provided that such removal does not endanger the stability of the structure.
- Storage space into which material is dumped shall be blocked off, except for openings necessary for the removal of material. Such openings shall be kept closed at all times when material is not being removed.

Removal of Steel Construction

- When floor arches have been removed, planking in accordance with jurisdictional requirements (Local, State, Federal, or Provincial) shall be provided for the workers engaged in razing the steel framing.
- Cranes, derricks, and other hoisting equipment used shall meet the requirements specified in other chapters of this Program.
- Steel construction shall be dismantled column length by column length, and tier by tier (columns may be in two-story lengths).
- Any structural member being dismembered shall not be overstressed.

Mechanical Demolition

- No workers shall be permitted in any area which can be adversely affected by demolition operations when balling or clamming is being performed. Only those workers necessary for the performance of the operations shall be permitted in this area at any other time.
- The crane boom and load line shall be as short as possible.
- The weight of the demolition ball shall not exceed 50 percent of the crane's rated load, based on the length of the boom and the maximum angle of operation at which the demolition ball will be used, or it shall not exceed 25 percent of the nominal breaking strength of the line by which it is suspended, whichever results in a lesser value.

- The ball shall be attached to the load line with a swivel-type connection to prevent twisting of the load line and shall be attached by positive means in such manner that the weight cannot become accidentally disconnected.
- When pulling over walls or portions thereof, all steel members affected shall have been previously cut free.
- All roof cornices or other such ornamental stonework shall be removed prior to pulling walls over.
- During demolition, continuing inspections by a competent person shall be made as the work progresses to detect hazards resulting from weakened or deteriorated floors, or walls, or loosened material. No worker shall be permitted to work where such hazards exist until they are corrected by shoring, bracing, or other effective means.

Special Structures Demolition

Safe work practices when demolishing a chimney, stack, silo, or cooling tower

Inspection and Planning

When preparing to demolish any chimney, stack, silo, or cooling tower, the first step will be a careful, detailed inspection of the structure by a competent person. If possible, architectural/engineering drawings shall be consulted. Particular attention shall be paid to the condition of the chimney or stack. Workers shall be on the lookout for any structural defects such as weak or acid-laden mortar joints, and any cracks or openings. The interior brickwork in some sections of industrial chimney shafts can be extremely weak. If the stack has been banded with steel straps, these bands shall be removed only as the work progresses from the top down. Sectioning of the chimney by water, etc., shall be considered.

Safe Work Practice

When hand demolition is required, it shall be carried out from a working platform.

- Experienced workers will install a self-supporting tubular scaffold, suspended platform, or knee-braced scaffolding around the chimney.
- Particular attention shall be paid to the design, support, and tie-in (braces) of the scaffold.
- A competent person shall be present at all times during the erection of the scaffold.
- It is essential that there be adequate working clearance between the chimney and the work platform.
- Access to the top of the scaffold shall be provided by means of portable walkways.
- The platforms shall be decked solidly and the area from the work platform to wall bridged with a minimum of two-inch thick lumber.
- A top rail 42 inches above the platform, with a mid-rail covered with canvas or mesh, shall be installed around the perimeter of the platform to prevent injury to workers below. Debris netting may be installed below the platform.
- Excess canvas or plywood attachments can form a windsail that could collapse the scaffold.
- When working on the work platform, all workers shall wear hard hats, long-sleeved shirts, eye and face protection, such as goggles and face shields, respirators, and safety belts, as required.

- Care shall be taken to assign the proper number of workers to the task.
- Too many workers on a small work platform can lead to accidents.

An alternative to the erection of a self-supporting tubular steel scaffold to "climb" the structure with a creeping bracket scaffold. Careful inspection of the masonry and a decision as to the safety of this alternative will be made by a competent person. It is essential that the masonry of the chimney be in good enough condition to support the bracket scaffold.

The area around the chimney shall be roped off or barricaded and secured with appropriate warning signs posted. No unauthorized entry shall be permitted to this area. It is also good practice to keep a worker, (i.e., a supervisor, operating engineer, another worker, or a "safety person,") on the ground with a form of communication to the workers above.

Special attention shall be paid to weather conditions when working on a chimney. No work shall be done during inclement weather such as during lightning or high wind situations. The work site shall be wet down, as needed, to control dust.

Debris Clearance

If debris is dropped inside the shaft, it can be removed through an opening in the chimney at grade level.

- The opening at grade will be kept relatively small in order not to weaken the structure.
- If a larger opening is desired, a professional engineer shall be consulted.
- When removing debris by hand, an overhead canopy of adequate strength shall be provided.
- If machines are used for removal of debris, proper overhead protection for the operator shall be used.
- Excessive debris shall not be allowed to accumulate inside or outside the shaft of the chimney as the excess weight of the debris can impose pressure on the wall of the structure and might cause the shaft to collapse.
- The foreman shall determine when debris is to be removed, halt all demolition during debris removal, and make sure the area is clear of cleanup workers before continuing demolition.
- All tools and equipment used during demolition projects will be kept in good working order. Prior to beginning work, tools and equipment will be inspected. Damaged or defective tools or equipment will be removed from service and tagged “Do Not Use.”

Demolition By Deliberate Collapse

Another method of demolishing a chimney or stack is by deliberate collapse. Deliberate collapse requires extensive planning and experienced worker and shall be used only when conditions are favorable.

There will be a clear space for the fall of the structure of at least 45^0 on each side of the intended fall line and 1½ times the total height of the chimney. Considerable vibration may be set up when the chimney falls, so there should be no sewers or underground services on the line of the fall. Lookouts must be posted on the site and warning signals must be arranged. The public and other workers at the job site must be kept well back from the fall area.

The use of explosives is one way of setting off deliberate collapse. **This type of demolition shall be undertaken only by qualified workers.** The entire work area shall be cleared of nonessential workers before any explosives are placed. Though the use of explosives is a convenient method of bringing down a chimney or stack, there is a considerable amount of vibration produced, and caution shall be taken if there is any likelihood of damage.

Demolition Of Prestressed Concrete Structures

The different forms of construction used in a number of more or less conventional structures built during the last few decades will give rise to a variety of problems when the time comes for them to be demolished. Prestressed concrete structures fall in this general category. The most important aspect of demolishing a prestressed concrete structure takes place during the pre-demolition survey or engineering survey. During the survey, a qualified person shall determine if the structure to be demolished contains any prestressed members.

It is the responsibility of The Company to inform all workers on the demolition job site of the presence of prestressed concrete members within the structure. The Company shall also instruct them in the safe work practice that will be followed to safely perform the demolition. Workers shall be informed of the hazards of deviating from the prescribed procedures and the importance of following their supervisor's instruction.

Categories of Prestressed Construction

There are four main categories of prestressed members. The category or categories shall be determined before attempting demolition, bearing in mind that any prestressed structure may contain elements of more than one category.

Category 1- Members are prestressed before the application of the superimposed loads, and all cables or tendons are fully bonded in the concrete or grouted within ducts.

Category 2- Like Category 1, but the tendons are left un-grouted. This type of construction can sometimes be recognized from the access points that may have been provided for inspection of the cables and anchors. More recently, unbonded tendons have been used in the construction of beams, slabs, and other members; these tendons are protected by grease and surrounded by plastic sheathing, instead of the usual metal duct.

Category 3- Members are prestressed progressively as building construction proceeds and the dead load increases, using bonded tendons as in Category 1.

Category 4 Like Category 3 but using unbonded tendons as in Category 2.

Examples of construction using members of Categories 3 or 4 are relatively rare. However, they may be found, for example, in the podium of a tall building or some types of bridges. They require particular care in demolition.

Pretensioned Members

These usually do not have any end anchors, the wires being embedded or bonded within the length of the member. Simple pretensioned beams and slabs of spans up to about 7 meters (23 feet) can be demolished in a manner similar to ordinary reinforced concrete. Pretensioned beams and slabs may be lifted and lowered to the ground as complete units after the removal of any composite concrete covering to tops and ends of the units. To facilitate breaking up, the members shall be turned on their sides. Lifting from the structure shall generally be done from points near the ends of the units or from lifting point positions. Reuse of lifting eyes, if in good condition, is recommended whenever possible. When units are too large to be removed, consideration shall be given to temporary supporting arrangements.

Precast units stressed separately from the main frames of the structure with end anchors grouted and un-grouted

Ducts

Before breaking up, units of this type shall be lowered to the ground, if possible. It is advisable to seek the counsel of a professional engineer before carrying out this work, especially where there are un-grouted tendons. In general, this is true because grouting is not always 100% efficient. After lowering the units can be turned on their side with the ends up on blocks after any composite concrete is removed. This may suffice to break the unit and release the prestress; if not, a sandbag screen, timbers, or a blast mat as a screen shall be erected around the ends and demolition commenced, taking care to clear the area of any worker. It shall be borne in mind that the end blocks may be heavily reinforced and difficult to break up.

Monolithic Structures

The advice of the professional engineer experienced in prestressed work shall be sought before any attempt is made to expose the tendons or anchorages of structures in which two or more members have been stressed together. It will usually be necessary for temporary support to be provided so the tendons and the anchorage can be cautiously exposed. In these circumstances it is essential that indiscriminate attempts to expose and de-stress the tendons and anchorages are not made.

Progressively Prestressed Structures

In the case of progressively prestressed structures, it is essential to obtain the advice of a professional engineer, and to demolish the structure in strict accordance with the engineer's method of demolition. The stored energy in this type of structure is large. In some cases, the inherent properties of the stressed section may delay failure for some time, but the presence of these large prestressing forces may cause sudden and complete collapse with little warning.

Safe Work Practices When Working in Confined Spaces

The Company often comes in contact with confined spaces when demolishing structure at industrial sites. These confined spaces can be generally categorized into two major groups: those with open tops and a depth that restricts the natural movement of air, and enclosed spaces with very limited openings for entry. Examples of these spaces include storage tanks, vessels, degreasers, pit vaults, casing, and silos. The hazards encountered when entering and working in confined spaces are capable of causing bodily injury, illness, and death. Accidents occur among workers because of failure to recognize that a confined space is a potential hazard. It shall therefore be considered that the most unfavorable situation exists in every case and that the danger of explosion, poisoning, and asphyxiation will be present at the onset of entry.

Safe Blasting Procedures

Blasting Survey and Site Preparation

Prior to the blasting of any structure or portion thereof, a complete written survey will be made by a qualified person of all adjacent improvements and underground utilities. When there is a possibility of excessive vibration

due to blasting operations, seismic or vibration tests shall be taken to determine proper safety limits to prevent damage to adjacent or nearby buildings, utilities, or other property.
The preparation of a structure for demolition by explosives may require the removal of structural columns, beams, or other building components. This work shall be directed by a structural engineer, or a competent person qualified to direct the removal of these structural elements. Extreme caution will be taken during this preparatory work to prevent the weakening and premature collapse of the structure.
The use of explosives to demolish smokestacks, silos, cooling towers, or similar structures shall be permitted only if there is a minimum of 90^0 of open space extended for at least 150% of the height of the structure or if the explosives specialist can demonstrate consistent previous performance with tighter constraints at the site.

Fire Precautions

The presence of fire near explosives presents a severe danger. Every effort shall be made to ensure that fires or sparks do not occur near explosive materials. Smoking, matches, firearms, open flame lamps, and other fires, flames, or heat-producing devices will be prohibited in or near explosive magazines or in areas where explosives are being handled, transported, or used. In fact, workers working near explosives shall not even carry matches, lighters, or other sources of sparks or flames. Open fires or flames shall be prohibited within 100 feet of any explosive materials. In the event of a fire which is in imminent danger of contact with explosives, all workers will be removed to a safe area.

Electrical detonators can be inadvertently triggered by stray radio frequency (RF) signals from two-way radios. RF signal sources shall be restricted from or near to the demolition site if electrical detonators are used.

Personnel Selection

A blaster is a competent person who uses explosives. A blaster will be qualified by reason of training, knowledge, or experience in the field of transporting, storing, handling, and using explosives. In addition, the blaster shall have a working knowledge of state and local regulations that pertain to explosives. Training courses are often available from manufacturers of explosives and blasting safety manuals are offered by the Institute of Makers of Explosives (IME) as well as other organizations.

Blasters shall be required to furnish satisfactory evidence of competency in handling explosives and in safely performing the type of blasting required. A competent person shall always be in charge of explosives and shall be held responsible for enforcing all recommended safety precautions in connection with them.

Transportation Of Explosives

Vehicle Safety

Vehicles used for transporting explosives shall be strong enough to carry the load without difficulty and shall be in good mechanical condition. All vehicles used for the transportation of explosives shall have tight floors, and any exposed spark-producing metal on the inside of the body shall be covered with wood or some other non-sparking material.

Vehicles or conveyances transporting explosives shall only be driven by, and shall be under the supervision of, a

licensed driver familiar with the local, state, and federal regulations governing the transportation of explosives. No passengers shall be allowed in any vehicle transporting explosives.

Explosives, blasting agents, and blasting supplies shall not be transported with other materials or cargoes. Blasting caps shall not be transported with other materials or cargoes.

Blasting caps shall not be transported in the same vehicle with other explosives. If an open-bodied truck is used, the entire load shall be completely covered with a fire and water-resistant tarpaulin to protect it from the elements. Vehicles carrying explosives shall not be loaded beyond the manufacturer's safe capacity rating, and in no case shall the explosives be piled higher than the closed sides and ends of the body.

Every motor vehicle or conveyance used for transporting explosives shall be marked or placarded with warning signs required by OSHA and the DOT.

Each vehicle used for transportation of explosives shall be equipped minimally with at least 10 pound rated serviceable ABC fire extinguisher. All drivers shall be trained in the use of extinguishers in their vehicle.

In transporting explosives, congested traffic and high-density population areas shall be avoided, where possible, and no unnecessary stops shall be made. Vehicles carrying explosives, blasting agents, or blasting supplies shall not be taken inside a garage or shop for repairs or servicing. No motor vehicle transporting explosives shall be left unattended.

Storage Of Explosives

Inventory Handling and Safe Handling

All explosives will be accounted for at all times, and all not being used will be kept in a locked magazine. A complete detailed inventory of all explosives received and placed in, removed from, and returned to the magazine shall be maintained at all times. Appropriate authorities will be notified of any loss, theft, or unauthorized entry into a magazine.

Manufacturers' instructions for the safe handling and storage of explosives are ordinarily enclosed in each case of explosives. The specifics of storage and handling are best referred to in these instructions and the IME manuals. They shall be carefully followed. Packages of explosives shall not be handled roughly. Sparking metal tools shall not be used to open wooden cases. Metallic slitters may be used for opening fiberboard cases, provided the metallic slitter does not come in contact with the metallic fasteners of the case.

The oldest stock shall always be used first to minimize the chance of deterioration from long storage. Loose explosives or broken, defective, or leaking packages can be hazardous and shall be segregated and properly disposed of in accordance with the specific instructions of the manufacturer. If the explosives are in good condition, it may be advisable to repack them. In this case, the explosives supplier shall be contacted. Explosives shall not be opened, or explosives packed or repacked while in a magazine.

Storage Conditions

Providing a dry, well-ventilated place for the storage of taken to make sure mats and other protection do not disturb the explosives is one of the most important and effective safety measures. Exposure to weather damages most kinds of explosives, especially dynamite and caps. Every precaution shall be taken to keep them dry and relatively cool. Dampness or excess humidity may be the cause of misfires resulting in injury or loss of life. Explosives shall be stored in properly constructed fire and bullet-resistant structures, located according to the IME American Table of Distances, and kept locked at all times except when opened for use by an authorized worker. Explosives shall not be left, kept, or stored where children, unauthorized persons, or animals have access to them, nor shall they be stored in or near a residence.

Detonators shall be stored in a separate magazine located according to the IME American Table of Distances. Detonators shall never be stores in the same magazine with any other kind of explosive.

Ideally, arrangements shall be made whereby the supplier delivers the explosives to the job site in quantities which will be used up during the workday. An alternative would be for the supplier to return to pick up unused quantities of explosives. If it is necessary for the Company to store his explosives, he shall be familiar with all local requirements for such storage.

Proper Use of Explosives

Blasting operations shall be conducted between sunup and sundown, whenever possible. Adequate signs shall be sounded to alert to the hazard presented by blasting. Blasting mats or other containment shall be used where there is danger of rocks or other debris being thrown into the air or where there are buildings or transportation systems nearby. Care shall be taken to make sure mats and other protection do not disturb the connections to electrical blasting caps.

Radio, television, and radar transmitters create fields of electrical energy that can, under exceptional circumstances, detonate electric blasting caps. Certain precautions will be taken to prevent accidental discharge of electric blasting caps from current induced by radar, radio transmitters, lightning, adjacent power lines, dust storms, or other sources of extraneous or static electricity.

These precautions shall include:

- Ensuring that mobile radio transmitters on the job site which are less than 100 feet away from electric blasting caps, in other than original containers, shall be de-energized and effectively locked.
- The prominent display of adequate signs, warning against the use of mobile radio transmitters, on all roads within 1,000 feet of the blasting operations.
- Maintaining the minimum distances recommended by the IMES between the nearest transmitter and electric blasting caps.
- The suspension of all blasting operations and removal of persons from the blasting area during the approach and progress of an electric storm.
- After loading is completed, there shall be as little delay as possible before firing. Each blast shall be fired under the direct supervision of the blaster, who shall inspect all connections before firing and who shall personally see that all workers are in the clear before giving the order to fire. Standard signals, which indicate that a blast is about to be fired and a later all clear signals have

been adopted. It is important that everyone working in the area be familiar with these signals and that they be strictly obeyed.

Procedures After Blasting

Inspection After the Blast

Immediately after the blast has been fired, the firing line shall be disconnected from the blasting machine and short-circuited. Where power switches are used, they shall be locked open or in the off position. Sufficient time shall be allowed for dust, smoke, and fumes to leave the blasted area before returning to the spot.

An inspection of the area and the surrounding rubble shall be made by the blaster to determine if all charges have been exploded before workers are allowed to return to the operation. All wires shall be traced and the search for unexploded cartridges made by the blaster.

Disposal Of Explosives

Explosives, blasting agents, and blasting supplies that are obviously deteriorated or damaged shall not be used; they shall be properly disposed of. Explosive's distributors will usually take back old stock. Local fire marshals or representatives of the United States Bureau of Mines may also arrange for its disposal. Under no circumstances shall any explosives be abandoned.

Wood, paper, fiber, or other materials that have contained high explosives shall not be used again for any purpose but shall be destroyed by burning. These materials shall not be burned in a stove, fireplace, or other confined space. Rather, they shall be burned at an isolated outdoor location, at a safe distance from thoroughfares, magazines, and other structures. It is important to check that the containers are entirely empty before burning. During burning the area shall be adequately protected from intruders and all workers kept at least 100 feet from the fire.

PURPOSE

To define the procedures and standards that apply to the care, control, maintenance, inspection, and operation of Forklifts also known as Powered Industrial Trucks (PIT) pertaining to the service provided by Tarlton Corporation; hereafter referred to as "The Company".

Forklifts shall be operated, maintained, and controlled in a safe manner.
This policy covers minimum performance standards applicable to all The Company associates, workers and locations. Local practices requiring more detailed or stringent rules, or local, state, or other federal requirements regarding this subject can and should be added as an addendum to this procedure as applicable.

SCOPE
The Company work sites, i.e., client job sites, etc. requiring the use of Forklifts.

DEFINITIONS
Forklift - a mobile, power-propelled truck used to carry, push, pull, lift, stack, or tier materials. PIT (Forklifts) are commonly known as pallet trucks, rider trucks, fork trucks, or lift trucks.

PROCEDURES

Training
Only trained and authorized persons are permitted to operate a forklift or other PIT. The Safety Officer or designee will administer the forklift operator certification program and maintain training records.

Training shall occur prior to worker operation of any forklift, and at least every three years thereafter unless observed performance by the operator dictates the need for more frequent retraining. Classroom and Practical Training in addition to Operator Evaluation are required. Each trainee, who satisfactorily completes the qualifications as outlined above, shall be issued a written document as evidence of being a Qualified Forklift Operator.

Each manufacturer or un-similar model of PIT shall require individual Practical Training and Operator Evaluation prior to receiving authorization to operate.

Inspection and Maintenance
Prior to placing a forklift truck into service, the truck operator shall inspect their vehicle and document this inspection. All inspection records will follow the company document control program.

Any noted condition that affects the safe operation of the lift truck shall be reported to the operator's supervisor for corrective action and shall keep the lift truck from being operated until the unsafe condition is corrected.

Forklifts that are defective, in need of repair or are unsafe shall be tagged "Danger Do Not Operate" and taken out of service until restored to safe operating condition.

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A maintenance log shall be maintained for each forklift to determine when required maintenance is due. Only qualified personnel shall perform maintenance and repair. Maintenance records for each forklift shall be kept on file by the assigned department manager.

General Safe Operating Rules

The following safe operating rules apply to workers who operate a forklift. Violations of safe operating rules can and will result in retraining and/or disciplinary action.

- Only workers trained as per the requirements of this manual section and authorized by the department manager shall be allowed to operate Forklifts
- Forklifts shall not be loaned or rented to others for use.
- Stunt driving and horseplay shall not be permitted
- Forklifts equipped with seat belts will be used by the operator when in use.
- Personnel are not permitted to ride on Forklifts except in designated seats that are part of the equipment design.
- Forklifts shall be equipped with a portable fire extinguisher.
- Under travel conditions, the forklift shall be operated at a speed that will permit it to be brought to a stop in a safe manner.
- Traffic regulations shall be observed, including authorized work site speed limits. A safe distance shall be maintained approximately three forklift lengths from the forklift truck ahead.
- The driver shall be required to slow down and sound the horn at cross aisles and other areas where vision is obstructed. If the load being carried obstructs forward view, the driver shall be required to travel with the load trailing.
- The driver shall be required to look in the direction of and keep a clear view of the path of travel.
- Forklifts shall have a functional horn and back-up alarm with a distinctive sound, loud enough to be heard clearly above background noises. There are other scenarios where a flashing yellow/amber light would be installed.
- Copies of the manufacturer's operating instructions for each type of forklift shall be readily available for review by operators and supervisory personnel.
- Lift trucks, stackers, etc., shall have the rated capacity clearly posted on the vehicle to be clearly visible to the operator. When the manufacturer provides auxiliary removable counterweights, corresponding alternate rated capacities also shall be clearly shown on the vehicle. These ratings shall not be exceeded.
- No modifications or additions, which affect the capacity or safe operation of the equipment, shall be made without the manufacturer's written approval. If such modifications or changes are made, the capacity, operation, and maintenance instruction plates, tags, or decals shall be changed accordingly. In no case shall the original safety factor of the equipment be reduced.
- Steering or spinner knobs shall not be attached to the steering wheel unless the steering mechanism is of a type that prevents road reactions from causing the steering hand wheel to spin. The steering knob shall be mounted within the periphery of the wheel.
- Forklifts shall have the manufacturer's nameplate showing its weight with attachments, lifting capacity, lift height maximum and other pertinent data. Nameplates or markings shall be maintained in a legible condition and remain in place.
- Railroad tracks shall be crossed diagonally wherever possible. Parking closer than 8 feet from the center of railroad tracks is prohibited.

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- Grades shall be ascended or descended slowly.
- When ascending or descending grades in excess of 10 percent, loaded Forklifts shall be driven with the load upgrade.
- Unloaded Forklifts should be operated on all grades with the load engaging means downgrade.
- On grades, the load and load engaging means shall be tilted back if applicable and raised only as far as necessary tee clear the road surface.
- No person shall be allowed to stand or pass under the elevated portion of any forklift, whether loaded or empty.
- There shall be sufficient headroom under overhead installations, lights, pipes, sprinkler system, etc.
- Arms or legs are prohibited from being placed between the uprights of the mast or outside the running lines of the forklift.
- When a forklift is left unattended, load engaging means shall be fully lowered, controls shall be neutralized, power shall be shut off, brakes set and remove the key.
- Wheels shall be blocked if parked on an incline.
- A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock, or platform, or freight car. Forklifts shall not be used for opening or closing freight doors.
- Brakes shall be set, and wheel blocks shall be in place to prevent movement of trucks, trailers, or railroad cars while loading or unloading. Fixed jacks may be necessary to support a semi-trailer during loading or unloading when the trailer is not coupled to a tractor. Prior to forklift entry, the flooring and frames of trucks, trailers and railroad cars shall be checked for breaks and weakness before they are driven into and to determine if it will bear the intended weight of the forklift and intended load.
- Dock board or bridge plates shall be properly secured before they are driven over. Dock board or bridge plates shall be driven over carefully and slowly, and their rated capacity never exceeded. Portable dock boards shall be secured in position, by being anchored or equipped with devices that will prevent their slipping.
- An overhead guard shall be used as protection against falling objects. It should be noted that an overhead guard is intended to offer protection from the impact of small packages, boxes, bagged material. etc. representative of the job application, but not to withstand the impact of a falling capacity load.
- Additional counter weighting of Forklifts shall not be allowed unless approved by the manufacturer.
- Workers shall not jump off a forklift.
- Forklift operators shall yield to pedestrians.
- Loads carried shall be secured on the forks to prevent upset / overturn.

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Purpose

The purpose of this program is to provide general safety guidelines for working on or near water.

Scope

This program covers all Tarlton employees involved in working on or near water.

Procedure

Hazard Assessment
Tarlton requires a pre-task plan to be completed and signed by all members of the crew that may be working over or near water before employees may begin to work over or near water. The following items will be included:

- Discussion of work to be perform
- Review of required PPE
- Review of emergency procedures and contact numbers
- Reminder that employees with together at least in two man teams in case of man overboard emergency

Life Saving Equipment
Employees working over or near water shall be provided with a U.S. Coast Guard approved life jacket or buoyant work vest when the danger of drowning exists.

If the deck of a barge or work platform is not equipped with an OSHA-compliant railing system, employees walking or working on deck must wear a U.S. Coast Guard approved life jacket or buoyant work vest, also called a life preserver or personal flotation device (PFD). These PFDs should be fully buckled, snapped, or zipped whenever there is a hazard of falling into the water, regardless of the size of the barge. While a PFD is not required to be worn while an employee is inside an enclosed cab or equipment compartment on a barge, each employee should have a PFD accessible to them at all times. This safety precaution will allow employees the opportunity to don a PFD in a reasonable amount of time during an emergency (i.e., vessel sinking, fire, etc.).

<u>PFDs</u>

- An approved and readily available PFD is required to be on board the vessel for each individual on board. An immersion/exposure suit is considered to be an acceptable substitute for a PFD. All lifesaving equipment designed to be worn is required to be readily available and in serviceable condition.
- Each vessel 26 feet or longer must have at least one approved ring life buoy which is immediately available. All lifesaving equipment designed to be thrown into the water is required to be immediately available and in serviceable condition.
- An approved commercial hybrid PFD is acceptable if worn when the vessel is underway and the intended wearer is not within an enclosed space, is labeled for use on uninspected commercial vessels and used as marked and in accordance with the owner's manual.
- An approved light is required for all PFDs and immersion/exposure suits. Also, all PFDs must have approved retro reflective material installed.

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- Employees shall inspect buoyant work vests or life preservers for defects which could alter their strength or buoyancy prior to and after each use. Defective units shall not be used.

Have the necessary safety equipment to hand so it is ready for immediate use:

- Ring Lifebuoy
- 90’ Buoyant Heaving Line
- Life Saving Skiff

Ring buoys will be provided and readily available for emergency rescue operations with at least 90 feet of line and the distance spaced between ring buoys may not exceed 200 feet.

At least one lifesaving skiff shall be made immediately available when employees are working over or adjacent to water. Each skiff shall be checked daily prior to work beginning to ensure the capability of the skiff to respond to an emergency.

Man Overboard Prevention

- Employees are not permitted to work alone when performing work over or near water. Employees, who will be performing work over or near water, where the danger of drowning exists, are not permitted to work alone at any time by Tarlton.
- Railing should be continuous around the deck. The ends should be secured with lashings or quick release slips so that you can cut or release them to recover a person from the water.
- Treat any slippery areas with either non-skid paint or stick on strips. Pay particular attention to the tops of hatches and sloping sides which become walkways when the deck is heeled.
- Use harnesses in rough weather and at night. Ensure they are adjusted to a tight fit or you can fall out of them.
- Fit suitably placed harness attachment points close to the companionway so that you can clip on before coming on deck and on both sides of the cockpit.
- Rig jackstays on both sides of the boat so that you can walk the full length of the deck without having to unclip.
- Flat webbing straps are in some ways better than wire because the wire tends to roll underfoot when you stand on it.
- Wear suitable protective clothing and a USCG approved lifejacket fitted with reflective tape and a light.

Man Overboard Response

- When you first discover that someone has fallen overboard, the most important thing to remember is DON'T PANIC!
- If the person is on a lifeline, stop the boat immediately and then recover them using the lifeline/harness as necessary.
- If you are well prepared and have practiced the drill regularly, you will automatically know how to react.
- Immediately throw a lifebuoy and attachment overboard.
- Raise the alarm by shouting: “MAN OVERBOARD" (Even if you are the only one left aboard, shouting "man overboard" may provide reassurance to the person in the water).
- If there are others on board, instruct a crew member to watch the person in the water and point continuously.

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- Start your recovery maneuver.
- If you are the only person remaining on board, do not leave the deck as you may become disorientated and lose sight of the person in the water.
- During the hours of darkness, a white parachute flare, which will pick up the retro reflective tape on clothing/lifejacket, can be used to illuminate area.
- If you cannot see the person in the water or have any doubt about your ability to recover him/her, send a mayday call on your VHF radio.

Slips, Trips and Falls

Minimizing Hazards on Deck

- Keep all walking and working surfaces clean, dry, and unobstructed.
- Keep all areas free of debris.
- Clean up and/or report any spill immediately.
- Stack materials in a stable manner.
- Secure gear and equipment that is not in use.
- Keep stairs, doorways, walkways, and gangways free of equipment and stowed materials.
- Secure ramps during loading and offloading operations.
- Repair leaks from hoses, pipelines, and valves immediately.
- Use non-skid protective deck compound and do not paint over the non-skid compound with standard paint.
- Have de-icing procedures in place when necessary.
- Paint the perimeter and tripping hazards in a contrasting color.

Precautions in Walking

- Walk at a normal rate, keeping your hands out of your pockets.
- Slow down when moving between different surfaces.
- Do not run.
- Minimize short stops.
- Avoid sharp turns.
- Modify your way of walking to match the surface, such as an icy deck.
- Do not jump from one vessel to another.
- Do not climb on cargo, supplies, or equipment instead of using a ladder.
- Do not step on hatch covers.
- Avoid walking along the unguarded edge of a vessel.
- Watch out for reduced visibility due to poor lighting and weather conditions. If working at night, be sure there is adequate illumination (e.g., flashlight, headlight, light tower).

Wearing Appropriate Footgear

- Wear safety shoes or boots with slip-resistant soles as appropriate.
- Keep shoes clean of mud, snow, ice, spilled liquids, and debris.

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Preventing Elevated Falls

- Always maintain three-points of contact on a ladder—two hands and a foot, or two feet and a hand—so that only one limb is in motion at any one time.
- Avoid overextending the body when performing tasks such as checking sounders, checking lights, and wiring rigging, which can lead to falls from ladders.
- Falls from portable ladders are one of the leading causes of occupational fatalities and injuries. Use the following safe work practices when using ladders:
    - Use ladders only for their designed purpose (i.e., step ladders should not be used as portable rung ladders).
    - Position the ladder so that for every four feet in height, the ladder extends out from the vertical surface at the base approximately one foot.
    - Make sure that the ladder is long enough for the job—if used for access to an upper landing surface the side rails must extend at least three feet above that surface.
    - Make sure that there is proper footing to keep the ladder from slipping or sliding.
    - Tie the ladder to a secure object. Remember that the vessel(s) that the ladder is secured to can move. Use the buddy system, if possible, so that one person can hold the ladder to stop it from moving.
    - Never use portable metal ladders near energized electrical equipment (such as conductors or electric arc welding machines).
    - Keep your body near the middle of the step and always face the ladder while climbing.
    - Do not move, shift, or extend ladders while in use. Move the ladder instead of stretching or leaning to the side to reach your work.
    - Use hand lines or a tool bag/belt to keep hands free when using a ladder.
    - Fully enclosed slip-resistant footwear should always be worn when using ladders.

- An adequate guard rail should be installed or employees should wear Personal Fall Arrest Systems when work is being performed above a solid surface (e.g., to prevent falls from the deck to the dock).
- Use gangplanks with guardrails to prevent falls on the dock or pilings.
- All deck holes, openings, and hatches should be covered or guarded.
- Pigeon holes should not be used to access vessel walking or working surfaces.

Machinery and Equipment Hazards

Hazards related to the use of machinery and equipment can result in injuries to hands, feet, or limbs that become caught in moving machinery; head and other injuries from being struck by falling objects or moving equipment; and burns. Other potential hazards include getting pinned under a load; falling off equipment; and electric shock.

To reduce hazards from machinery and equipment:

- Inspect all equipment before use.
- Maintain equipment properly. Always shut down and lockout the power source before repairing mechanical systems. Make repairs according to the manufacturer's guidelines.
- Ensure that the person using the equipment is trained in its proper use and maintenance.
- Install appropriate rails, temporary or permanent, to avoid equipment being driven off the vessel or dock.
- Ensure retaining pins are properly installed and positively secured with a keeper or locking device.

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- Emergency shut-offs must be easily accessible, and sufficient guarding should be used for equipment controls.

Hoists, Cranes and Derricks

Hazards of hoists include being struck by a heavy object, such as the boom or the load being moved. To reduce these hazards:

- Stay clear when a hoist is being used unless you are part of the procedure and, in which case, never stand under a load or boom with a suspended load.
- Wear personal protective equipment, such as head, foot, eye, and hand protection at all times.
- Assess the hoisting systems for structural soundness by inspecting regularly for problems with welds, rivets, chains, pulleys, lines, blocks, hooks, etc.
- Secure power blocks with a safety chain.
- Ensure that cranes in use are secured to the vessel.
- Do not try to help lift a load being hoisted.

Winches

Operating or working near winches may potentially expose employees to hazards such as body parts caught in a winch drum, being struck by a broken line or cable, and tripping over a line or cable. To reduce hazards:

- Use a device or tool, never your hand, to keep the winch line spooling properly.
- Enclose the winch drum in a cage if practical.
- Stay off the deck unless you are part of the operation.
- Never stand in, on, over, or in line with lines or cables connected to winches when they are under tension. The danger zone lies within 15 degrees of either side of a line under tension.
- Never step on or walk over the winch drum.
- Inspect the winch system regularly for problems associated with general or localized deterioration, cracked welds, and other structural, mechanical, or electrical deficiencies.
- Inspect lines and cable systems regularly, including blocks, hooks, and associated components, for signs of damage or deterioration.
- A guard should be installed between the winch operator and the connected cables to protect the operator from potential whiplash.
- Never stand in the bight of a line.

Fire Hazards

Steps that can be taken to prevent fires on board a vessel include the following:

- Store engine fuel tanks and compressed gas tanks properly, away from sources of ignition. Only keep onboard quantities of flammable and combustible materials that are necessary for operations and maintenance. Post appropriate danger signs.
- When dealing with work that is capable of providing a source of ignition through a flame or spark (hotwork), such as welding, cutting, burning, drilling, grinding, etc., follow these precautions:
    - Ensure the space is properly tested by a qualified or shipyard-competent person and deemed safe before work is begun. (See 29 CFR 1915.7 and 1915.15.).
    - Make sure that proper fire extinguishing equipment is near the work area and that it is maintained in

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a state of readiness for emergency use.

- Do not leave oxygen or acetylene hoses unattended.
- Consider where sparks will fall when doing hotwork and employ a fire watch.
- Shield fuel sources to protect them from ignition sources.
- Cover openings to prevent sparks from entering.
- Stop any hotwork if you smell fuel or gas until the source has been identified and the problem fixed.
- When welding or burning on the deck of a vessel, the space below should be inspected to ensure that no flammable atmosphere or combustible materials are present.
- Use good housekeeping practices to limit the amount of clutter, debris and combustible/flammable material.

Follow these safety measures to help prevent electrical fires:

- Make sure that electrical systems are installed by a qualified marine electrician and that electrical systems are inspected regularly.
- Regularly conduct visual inspections of connections, switches and wiring, which may be subject to corrosion from saltwater and damage from use.

Fire Extinguishing Equipment

- Hand-portable fire extinguishers and semi-portable fire extinguishing systems must be of the "B" type (i.e., suitable for extinguishing fires involving flammable liquids, greases, etc.).
- Hand-portable fire extinguishers and semi-portable fire extinguishing systems must have a metal name plate listing the name of the item, rated capacity (gallons, quarts or pounds), name and address of person/firm for whom approved, and the manufacturer's identifying mark.
- Portable fire extinguishers must be inspected and weighed every six months.
- Minimum number of B-II hand-portable fire extinguishers required to be on board motor vessels: one if less than 50 tons, two if 50-100 tons, three if 100-500 tons, six if 500-1,000 tons and eight if over 1,000 tons.
- Fixed fire extinguishing systems must be an approved carbon dioxide type and must meet U.S. Coast

Ventilation

Fuel tanks and engine spaces, using fuel with a flashpoint of 110 degrees Fahrenheit or less, must be provided with adequate ventilation to remove explosive or flammable gases from the fuel tank compartment and bilges.

Training

Employees working over or near water will be provided training on the hazards. Employees working over or near water must be adequately trained in their responsibilities and the safe work practices associated with this task and the identified hazard for the site and equipment they are working with.

Training will also be conducted on pre-task planning and hazard identification and daily equipment checks prior to beginning work.

Practice man overboard drills regularly - This can be achieved by using a fender and bucket as the casualty.

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PURPOSE & APPLICATION

To ensure safety is a properly planned activity on all Special Projects, project safety start-up meetings will be conducted prior to all executive start-up meetings.

The project safety start-up meeting will establish clear policies and procedures for the project in conjunction with the Tarlton Corporation Safety Manual. The start-up meeting will also help determine specific project needs as well as determine the need for a site-specific safety plan.

PROCEDURE

1. <u>Site Specific Safety Plans (SSSP's)</u>
   An annual "General SSSP" will be created and established by the project team and coordination with the safety representative for each customer.

   a. For low safety risk work in Special Projects Division, the project team will utilize the annual "General SSSP's."
      i. Examples of Low-Risk Safety Activities include, but are not limited to:
         1. Typical painting
         2. interior framing & drywall
         3. flooring
         4. casework
         5. ceiling grid
         6. lighting & receptacles using LOTO.
         7. MEP hook-ups
         8. Shallow excavations – less than 4'

   b. For larger or higher Safety Risk scopes in the Special Projects Division, the project team needs to amend/update the general SSSP to be specific to the safety critical scopes.
      i. Examples of High-Risk Safety Activities include, but not limited to:
         1. The project dollar value is greater than $1.5 M and/or 20 or more workers on one shift.
         2. Steel Erection
         3. Precast/Tilt-up work
         4. Confined Space work
         5. Demolition work
         6. Trenching/Excavation 5' or deeper
         7. Cranes and/or Critical Lifts
         8. Shutdown work
         9. Complex Off-shift work.
         10. Electrical that cannot be LOTO.
         11. Hazardous material/chemical potential
         12. Concerning Subs – new to Tarlton, new to client, poor safety performance etc.
         13. Anything out of the ordinary
         14. If in doubt, reach out to the safety team.

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2. Safety Start-Up Meetings requirements:
   a. An annual "General" Safety Start-Up meeting will be held for each client to review the general safety requirements and scope of work at each facility.
   b. If project scope falls under the low safety risk category as defined above, then there is no need to perform a Safety Start-Up meeting for ops nor safety. Utilize the general annual SSSP in conjunction with daily PTSP's and client specific safety paperwork.
   c. If scope falls into the larger or higher safety risk category as defined above, the project team will be required to conduct a combined safety & ops start-up meeting.

3. Site Specific Safety Orientation
   a. Are required on all projects and jobsites.
   b. May include owner/client orientation material.
   c. May use Tarlton's Site-Specific Orientation video template.

4. Legal/OSHA Information and Posting
   a. All projects and jobsites need to have the Tarlton Legal/OSHA posting banner predominately posted on the jobsite.
   b. A smaller version can be utilized, only if space and logistics doesn't allow the standard Tarlton Legal/OSHA posting banner.

5. Required Supervisory Role
   a. Tarlton's policy states there must always be a Tarlton Competent Person (Supervisor) present when anyone is performing work on our jobsites.
      i. "Supervisor" defined as foreman & up, knowledgeable in the scope being overseen.
   b. If location allows one person to supervise multiple projects, it is possible for the one person to be the supervisor, but they must be available and able to adequately cover all assigned projects.

6. Pre-Task Safety Plans (PTSPs), Jobsite Safety Audit Reports (JSARs), Toolbox Talks (TBTs), Task Specific Behavior Observations (TSBOs) requirements:
   a. All the above are required on all projects no matter the size or complexity.
   b. Pre-Task Safety Plan must be completed at least every shift.
      i. PTSP must be completed at the foreman level or above.
      ii. PTSP should be a meeting held with the crew each shift to discuss the hazards that could be encountered during the day and how to eliminate those hazards.
      iii. Meeting size should be kept to 10 or below, depending on job and project size.
      iv. All employees must sign in after the meeting is held to show participation and understanding of the material discussed.
      v. All employees must sign out injury free at the end of their shift.
   c. Jobsite Audit Reports must be completed on each jobsite/project.
      i. Superintendents are required to complete 3/month, Project Engineers are required to complete 2/month, and Project Managers are required to complete 1/month.
   d. Toolbox Talks are required to be completed once a week.

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i. If possible TBTs should be held on Mondays after lunch.
ii. The project team is responsible for ensuring a TBT is conducted every week.

e. Task Specific Behavior Observations Requirements:
   i. TSBO should be conducted on a periodic basis by the project team.
   ii. TSBO are designed to be a quick observation of a crew conducting a task. Once the observation is over, a conversation should be conducted between the employee being observed and the employee observing. If any hazards were identified, they should be discussed with the employees.
   iii. Superintendents are required to complete 8/month, Project Engineers are required to complete 6/month, and Project Managers are required to complete 4/month.

7. Communication:
   a. If there is any incident or injury on the jobsite the Supervisor must immediately call the safety department and their Project Manager to report the incident or injury.
   b. Each specific group/client should establish a communication process to notify the safety department of what safety critical work maybe occurring on their projects during any given day or week.

8. Tarlton Policy Deviation Form
   a. If a Tarlton Corporate Safety policy will not be followed in its entirety, the Tarlton Policy Deviation form must be completed by the project team.
   b. The Tarlton Policy Deviation form can be completed on an annual basis, if the policy cannot be followed due to circumstances on the Special Project. (i.e. Owner/client requirements, logistics, owner/client request, ect..)
   c. The Tarlton Policy Deviation form must be completed at least annually by the Special Projects project team.

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PURPOSE and SCOPE

Post Offer Pre-employment examinations are successful tools utilized to create a safer working environment for employees. Tarlton is committed to upholding the highest standards in workplace safety. As part of that commitment, we require that all new-hires in certain positions Tarlton has identified as "safety-sensitive" participate in various pre-employment testing, which includes Comprehensive Pre-Offer Post-Employment assessments to ensure they can safely perform the job for which they are hired.

As a result, Tarlton is implementing the Pre-Employment Post-Offer evaluation program for all prospective employees in designated job categories as set forth below. This program has been in effect since 1986, has one of the largest normative databases in the United States, and has proven its success by creating safety in the workplace. Recognizing that every job and every employee are different, the tests are utilized to determine whether or not the employee can safely perform job duties.

When necessary to enable an otherwise qualified candidate with a "disability" to participate in testing, Tarlton will provide reasonable accommodations provided such accommodations do not cause an undue hardship. Candidates who believe they need an accommodation to participate in the testing program must request such accommodations. To minimize or avoid delays in testing, Tarlton asks candidates to advise Tarlton of the need for any accommodation as soon as possible after you have received a conditional offer of employment.

POLICY

Effective October 1, 2024, all persons applying for employment in the following positions will be required to successfully complete a functional employment test. The following is the process that will be followed.

- Laborer
- Carpenter
- Ironworkers
- Cement Masons

1. Candidates should report to personnel office to complete the necessary application forms.

2. A Human Resources manager and/or any other authorized staff member will interview candidates.

3. A Human Resources manager and/or any other authorized staff member will offer employment to those candidates deemed to be the most qualified and suitable for the positions sought. The offer of employment will be contingent upon the successful completion of a post-offer drug screen and the functional employment test.

4. Upon receiving conditional offers of employment, candidates will be given written job descriptions and additional written information regarding the post-offer pre-employment Tests functional employment test. After carefully reviewing this information and/or consulting with their personal physicians, candidates must complete a release authorizing Tarlton, WorkSTEPS, and the licensed WorkSTEPS testing facility to conduct the post-offer functional employment tests. Requests for accommodations should be noted on the release. Depending on the nature of the accommodation sought further discussions and/or medical delayed until the interactive process aimed at identifying appropriate and necessary reasonable accommodations is completed.

5. Once Tarlton receives a fully completed release and any requests for reasonable accommodation are resolved, Tarlton will schedule candidates for post-offer pre-employment functional employment test.

6. Upon reporting to the licensed WorkSTEPS testing facility, candidates will be examined by a licensed Physical Therapist, Occupational Therapist, or other qualified healthcare provider licensed to perform such testing in their respective state and their staff.

7. Candidates, who successfully complete the post-offer pre-employment functional employment test, will be informed of a “start” date by Tarlton Human Resource Manager or another authorized representative. Tarlton will notify candidates who are determined to be “not capable” of performing the essential functions of the job. Since Tarlton seeks to make employment decisions based on the best available objective medical evidence, candidates who receive a “not capable” result or who are unable to complete the test should provide Tarlton with any additional information they believe Tarlton should consider in evaluation the conditional offer of employment.

8. Absent receipt of additional information that persuades Tarlton that a candidate can safely and successfully perform the essential functions of the position sought, Tarlton will not place candidates who fail to successfully complete the post-offer pre-employment functional employment test. If the candidate provides Tarlton with information documenting a disability, Tarlton will analyze the medical and functional data relating to the candidate’s functional abilities, limitations and work restrictions as such relate to the candidate’s capability to perform essential job functions, with or without a reasonable accommodation. If Tarlton determines that the candidate is not qualified to perform the essential job functions with or without a reasonable accommodation or the candidate would pose a direct threat to the health and safety of the candidate or others, and that threat cannot be reduced to an acceptable level with a reasonable accommodation, Tarlton will withdraw the conditional offer of employment.

Additional Points

The cost of post-offer pre-employment employment test procedures are paid by Tarlton. Medical information collected in connection with such tests will be maintained in confidential files in accordance with requirements of the Americans with Disabilities Act and the information collected will not be used for any purpose inconsistent with the ADA.

Tarlton is an equal opportunity employer and does not discriminate against individuals on the basis of race, color, religion, sex, sexual orientation, gender identity, national origin, veteran or disability status, or any other basis protected by federal, state or local law.

Nothing in this policy is intended to be, and should not be construed as, a contract for any particular term or condition of employment. Unless otherwise set forth in a written agreement signed by the candidate/employee and Tarlton, individuals are employed “at will”. This means that Tarlton and the candidate/employee can terminate the employment relationship at any time, with or without cause or notice. If you believe you are employed on something other than an “at will” basis, you should advise Tarlton of such belief in writing. Failure to do so will be deemed by Tarlton as a further indication that you and Tarlton agree that the employment relationship is “at will”.

PURPOSE and SCOPE

Post-Employment examinations are successful tools utilized to create a more safe and secure working environment for employees. Tarlton is committed to upholding the highest standards in workplace safety.

POLICY

Post-employment tests may be conducted:

1. As part of employee's participation in a voluntary wellness program

2. To determine an employee's fitness for duty

3. In response to an employee's request for reasonable accommodation

Voluntary Testing:

Effective October 1, 2024, all persons employed by Tarlton in the positions listed below will be eligible to participate in voluntary testing once every twelve months. Employees are not required to participate in such testing and employees who elect not to participate will not be penalized for failing to participate.

- Carpenters
- Laborers
- Ironworkers
- Cement Masons

Fitness for Duty Testing:

Fit for duty testing may also be required on an as needed basis should employee demonstrate difficulty performing any essential function of their positions or there is some other reasonable basis for believing that an individual's ability to perform essential job functions is limited or impaired by a medical condition. Fit for duty testing may also be conducted when an employee returns from a medical leave of absence and the company has a reasonable basis to believe that the employee's medical condition will prevent the employee from performing essential job functions or will pose a "direct threat" to the health and safety of the employee or others.

Testing in Response to Requests for Reasonable Accommodation:

Post-employment testing might also be required when an employee requests a reasonable accommodation for a medical condition that is not known or obvious.

The cost of all post-employment test procedures are paid by Tarlton. Medical information collected in connection with such tests will be maintained in confidential files in accordance with requirements of the Americans with Disabilities Act and the information collected will not be used for any purpose inconsistent with the ADA.

When necessary to enable an otherwise qualified employee with a "disability" to participate in testing, Tarlton will provide reasonable accommodations provided such accommodations do not cause an undo hardship. Employees

who believe they need an accommodation to participate in the testing program, must request such accommodations. To minimize or avoid delays in testing, Tarlton asks employees to advise Tarlton of the need for any accommodation as soon as possible.

Purpose

The purpose of this program is to establish minimum requirements for site specific H2S safety, which will enhance safety in the occupational setting where hydrogen sulfide is present or is recognized as being potentially present.

Scope

This program sets forth accepted practices for Hydrogen Sulfide (H2S). This program applies to all employees of TARLTON, temporary employees, and any contractors working for TARLTON. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers TARLTON employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Definitions

- Contingency Plan - a site-specific written document that provides an organized plan for alerting and protecting the public within an area of exposure following the accidental release of all potentially hazardous atmospheric concentrations of hydrogen sulfide.
- Exposure Level - permissible exposure level of hydrogen sulfide is 10 PPM for an 8-hour, time weighted average.
- Gas Detector Instrument - An instrument/detector to measure levels of H2S. Instruments may be electronically or manually operated.
- Hydrogen Sulfide (H2S) - is an extremely deadly, toxic gas that in its pure state is colorless and is heavier than air. Additionally:
    - It is the second most toxic gas known to man, ranking behind hydrogen cyanide and ahead of carbon monoxide.
    - It has the odor of rotten eggs at low concentrations.
    - In higher concentrations rapidly paralyze the olfactory nerves (sense of smell).
    - Is soluble in water and is flammable and poses a definite threat of explosion.
- Parts Per Million (PPM) - parts of vapor or gas per million parts of contaminated air by volume.
- Personal H2S Monitor - An electronic instrument worn on the person that is set to alarm at 10 PPM of H2S.
- Possible Locations of Where May Be Exposed to H2S During Their Job Functions – While clients are required to notify TARLTON of known H2S locations the majority of time H2S can be located in drilling operations, recycled drilling mud, blowouts, water from sour crude wells, blowouts, tank gauging (tanks at producing, pipeline and refining operations), during routine field maintenance involving hydrocarbons, tank batteries and wells.
- Venting - the process of discharging a material to the atmosphere through a series piping and/or venting devices, to facilitate the proper and safe dispersion of toxic materials and to minimize personnel exposure.

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Key Responsibilities

Managers and Supervisors

- Shall ensure all employees who are to be assigned to work at locations where hydrogen sulfide is known to be present, or suspected to be present in any concentration, have been trained in hydrogen sulfide safety.
- To ensure employees have been medically approved to wear respirators and trained on the safe use of respirators, including a respirator fit test in accordance with TARLTON's Respiratory Protection Program.
- To ensure employees have been trained and familiar with personal H2S monitors and gas detection instruments.
- To have been provided with the client's safety procedures.
- To ensure the necessary respiratory equipment to perform the work safely is available.
- That each employee has been provided with a copy of this program.

Employees

- Employees are responsible to comply with this program.

Procedure

Characteristics of Hydrogen Sulfide

The characteristics of hydrogen sulfide include: being toxic, colorless, with the odor or rotten eggs at low concentrations, is soluble in water and is flammable:

- Toxicity – See table below. Hydrogen sulfide is a very dangerous and deadly gas - it is colorless and heavier than air. It can accumulate in low places and in small concentrations. Exposure to certain concentrations of H2S can cause serious injury or death.
- Color - H2S is colorless – you can't see it.
- Odor – it has a strong, pungent, somewhat distasteful odor similar to rotten eggs. In higher concentrations, it can deaden the sense of smell (olfactory nerve). Do Not Rely On Smell To Detect H2s – Rely Strictly On Instruments Designed To Measure Concentrations Of H2S.
- Solubility – H2S mixes with water.
- Flammability – H2S is an explosive gas.
- Toxic By Products – H2S presence can create sulfur dioxide which can ignite without warning

Toxic Effects of Hydrogen Sulfide

CONCENTRATION	PHYSICAL EFFECT
.01 PPM	Can smell odor.
10 PPM	Obvious and unpleasant odor. Beginning eye irritation. ANSI permissible exposure level for 8 hours (enforced by OSHA).
100 PPM	Immediately Dangerous to life or Health (IDLH) Kills smell in 3-15 minutes; may sting eyes and throat. May cause coughing and drowsiness. Possible delayed death within 48 hours.

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200 PPM	Kills smell shortly, stings eyes and throat. Respiratory irritation. Death after 1-2 hours exposure.
500 PPM	Dizziness; breathing ceases in a few minutes. Need prompt rescue breathing (CPR). Self-rescue impossible because of loss of muscle control.
700 PPM	Unconscious quickly; death will result if not rescued promptly. 1000 PPM Unconscious at once, followed by death within minutes.

Health Effect of Exposure to Hydrogen Sulfide
Some basic health effects of H2s can include eye irritations, effects nerve centers of the brain which control breathing.

General Requirements
TARLTON should have a written confined space program per 29 CFR 1910.146 and employees must be aware of site specific contingency/emergency plans and owners contingency plan provisions.

Each person entering a H2S designated location, regardless of the concentration, shall wear a personal H2S monitor that is set to alarm at 10 PPM and shall carry a 5-minute escape pack with them at all times. When the alarms sound the employees must either evacuate the area or don the SCBA's or airline respirators. Employees must evacuate the area, don SCBA's or airline respirators upon sounding of H2S alarm.

When work requires opening any equipment on location that has the potential of releasing concentrations of H2S at 100 PPM or higher, two or more H2S trained persons shall be present and follow these procedures prior to and during the opening of the equipment:

- Each person entering the H2S location shall don a personal H2S monitor prior to entry.
- A tailgate meeting will be held with everyone on location to discuss the work plan, the responsibilities of each person and the site specific contingency plan.
- Each person shall have either a self-contained breathing apparatus (SCBA) or a supplied airline respirator equipped with a 5-minute escape pack, and shall be worn when opening the equipment to the surrounding atmosphere.
- At least one person (per two workers), equipped with a SCBA will act as a stand-by person and may not participate in the work being performed until the atmosphere has been tested and found to have no H2S present in quantities over 10 PPM. The stand-by person shall be stationed up wind, within 100 feet and in clear view of the workers.
- If an operator or other third party provides the stand-by person, it will be the responsibility of the TARLTON manager/supervisor in charge to verify that the person has been H2S, CPR, and First Aid trained, and that they have been provided the proper respiratory equipment.
    - Only TARLTON employees may wear TARLTON respirator equipment.
    - If TARLTON employees will use client or other third party equipment, the equipment must be inspected to ensure it is safe to use and meets TARLTON's requirements.
- After the equipment has been locked and tagged out (per TARLTON Lockout/Tagout Program), opened and the H2S concentration has been cleared to less than 10 PPM, the stand-by person will no longer be required. Work may then be performed without respiratory equipment, except for the required 5-minute escape pack.

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Safe Work Procedures

- Maintain compliance with permit requirements of TARLTON and any requirements by the client.
- Verify that proper safety equipment is available, functioning properly and is utilized.
- Check and remain aware of wind conditions and direction.
- Perform a thorough check of the downwind area prior to the start of any potentially hazardous work activity.
- Check for other personnel and ignition sources.
- Ventilate work areas by venting and purging lines and vessels prior to beginning any work activities.
- Keep all non-essential personnel away from work areas.
- Immediately vacate the area when any H2S monitor sounds and do not re-enter without proper respiratory protection.

Required Equipment

The following equipment shall be provided and used as required by this program:

- Methods of detecting H2S by the use of fixed or portable monitors and will alarm at the appropriate permissible exposure limits of 20 PPM for 1910 or 10 PPM for 1926? Personal or area monitors that alarm when PEL exceeds the preset level of 20 PPM for OSHA 1910 or 10 PPM for OSHA 1926 requirements.
- Portable H2S gas testing instrument, either electronic or manual pump operated, capable of testing the suspected concentrations of H2S in the system.
- Each testing instrument must be capable of testing the suspected concentrations of H2S by using the manufacturer's recommended calibrated tube or other means of measuring the concentration of gas.
- Testing instruments shall be calibrated periodically according to the manufacturer's recommendation, and at least annually.
- Calibration kits with regulator for calibrating the personal monitor.
- Calibration gas cylinder for testing the personal monitor.
- Approved self-contained breathing apparatus or airline respirator with escape SCBA should be used with H2S with a 5-minute escape pack, and shall be worn when opening the equipment to the surrounding atmosphere.
- At least one person (per two workers), equipped with a SCBA will act as a stand-by person and may not participate in the work being performed until the atmosphere has been tested and found to have no H2S present in quantities over 10 PPM. The stand-by person shall be stationed up wind, within 100 feet and in clear view of the workers.
- If an operator or other third party provides the stand-by person, it will be the responsibility of the TARLTON manager/supervisor in charge to verify that the person has been H2S, CPR, and First Aid trained, and that they have been provided the proper respiratory equipment.
    - Only TARLTON employees may wear TARLTON respirator equipment.
    - If TARLTON employees will use client or other third party equipment, the equipment must be inspected to ensure it is safe to use and meets TARLTON's requirements.
- Respirator wearers requiring corrective eyewear will be fitted with spectacle kits according to the respirator manufacturer, at no expense to the employee.
- Respirators and their components, including all fittings of hoses, shall not be interchanged, which if done, would violate the approval rating of said respirator or related equipment.

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Medical
Each employee shall have completed a medical evaluation by a physician or licensed health care professional to determine the employee's ability to wear a respirator as required by the TARLTON Respiratory Protection Program.

Each employee will successfully complete the medical questionnaire and examination before being allowed to be fit tested with a respirator.

Training
Employees required to work on H2S locations will be trained. Training shall consist of:

- Physical and chemical properties of H2S
- Sources of H2S
- Human physiology
- Signs and symptoms of H2S exposure, acute and chronic toxicity
- Symptomatology of H2S exposure
- Medical evaluation
- Work procedures
- Personal protective equipment required working around H2S
- Use of contingency plans and emergency response
- Burning, flaring, and venting of H2S
- State and federal regulatory requirement
- H2S release dispersion models
- Rescue techniques, first aid, and post exposure evaluation
- Use, care, and calibration of personal monitors and gas detection instruments
- Respirator inspections and record keeping

Each respirator wearer will complete Respiratory Protection training and a Respirator Fit Test, after being given a medical clearance and before entering any H2S location.

Employees and other personnel visiting H2S locations who will not be involved in the work shall be briefed on the following prior to entering:

- Site-specific sources of H2S
- Health hazards of H2S
- Routes of egress
- Emergency assembly areas
- Applicable alarm signals and
- How to respond in the event of an emergency.

Rescue
Each employee, when working alone in a H2S designated area, shall plan and become familiar with self-escape procedures to include being aware of wind direction and obstacles to avoid when exiting the work area.

Employees working under the buddy system shall pre-plan an emergency rescue and/or evacuation procedure prior to commencing work, and arrange for periodic communications with his/her supervisor, and document the discussion on each employee’s service report.

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Respirator Inspections
Respirators will be inspected by the employee before each use and at least monthly.

The inspection will include the respirator face piece, hose, harness, 5minute escape pack cylinder and all other components of the air supply systems used.

Monthly inspections will be documented as per TARLTON Respiratory Protection Program, and will be kept on file at the local office for review during safety audits.

Monitors and Gas Detector Calibration
Each personal H2S monitor shall be calibrated at least monthly and the results recorded on the calibration log.

Those monitors that do not require calibrating shall be bump checked with calibration gas to test alarms, monthly or prior to use if not used routinely.

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Purpose

The purpose of this program is to define work practices, administrative procedures and engineering controls to protect employees exposed to benzene concentrations above the OSHA action level. This plan shall be implemented and kept current by the Safety Manager as required to reflect the most recent exposure monitoring data.

Scope

This program covers all employees who may be exposed to benzene in the course of completing job duties. This written plan shall be made available to the Assistant Secretary, the Director, affected employees and designated employee representatives. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers TARLTON employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent. Employees will be aware of provisions of site-specific contingency/emergency plans by either TARLTON or of a facility owner.

The TARLTON Safety Manager will develop and implement project/task specific benzene control procedures prior to the start of activities that may include exposure to benzene. TARLTON will be aware of an owner's contingency plan provisions and all employees must be informed where benzene is used in host facility and aware of additional plant safety rules.

Possible locations where employees may be exposed to benzene during their job functions may include, but not limited to: petroleum refining sites, tank gauging (tanks at producing, pipeline & refining operations) and field maintenance operations.

Definitions

- Action Level – means an airborne concentration of benzene of 0.5 ppm calculated as an 8-hour time-weighted average.
- Benzene – a toxic, colorless liquid or gaseous material. Benzene has an aromatic odor, is not soluble in water and is flammable.
- Employee exposure – exposure to airborne benzene that would occur if the employee were not using respiratory protective equipment.
- Health Effects – Short-term overexposure may cause irritation of eyes, nose and skin; breathlessness, irritability, euphoria, headache, dizziness or nausea. Long term effects may result in blood disorders such as leukemia and anemia.

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Key Responsibilities

Manager or Designee

- Ensure personnel are aware of work that has the potential of exposure to benzene.
- Ensure individuals responsible for monitoring areas of exposure are properly trained.
- Ensure personnel receive documented medical surveillance exams.
- Ensure that emergency exams are performed if an overexposure or suspected overexposure occurs.

Supervisors

- Ensure employees have the appropriate personal protective equipment (PPE) and are properly trained in its use and care.
- Ensure employees comply with the benzene control program.

Safety Manager

- In coordination with the Manager, develop and implement project/task specific benzene control procedures prior to the start of activities that may include exposure to benzene.
- Coordinate monitoring activities, ensuring monitoring equipment is in proper working order and, as necessary, modifying the benzene control procedures to reflect exposure monitoring data.
- Maintain the benzene control program, notify management of any regulatory changes and ensure compliance with regulatory, client and corporate requirements.
- Coordinate training activities.
- Coordinate the medical surveillance program, including maintenance of medical records and administration of exams.
- Ensure fire extinguishers shall always be readily available where benzene is used/stored. Benzene liquid is highly flammable and vapors may form explosive mixtures in air. Fire extinguishers must be readily available in areas where benzene is used or stored.

Employees

- Comply with the benzene control program.
- Know where benzene is used at TARLTON or client facilities and follow any of additional plant safety rules required by the client.
- Comply with the medical surveillance program and attend examinations as required.
- Maintain respiratory protection equipment in good working order and notify the supervisor or Safety Representative of any problems prior to starting work
- Review material safety data sheets or consult with the supervisor to identify any container with benzene containing material.
- Not smoke in prohibited areas where benzene is present.
- Report exposures resulting in any symptoms immediately.

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Procedure

Permissible Exposure Limits

The time-weighted average limit (TWA) for benzene is:

- 8-hour TWA 1 ppm
- 12-hour TWA 0.67 ppm

The short-term exposure limit (STEL) for benzene is 5 ppm.

Regulated Areas

- TARLTON shall establish regulated areas wherever airborne concentration of benzene exceeds or can reasonably be expected to exceed the PEL or STEL.
- TARLTON will control access to regulated areas and limit access to authorized personnel.
- Safety precautions such as prohibition of smoking in areas where benzene is used/stored shall be taken. Smoking is prohibited in areas where benzene is used or stored. The following signage shall be posted in all regulated areas when the potential exists for benzene vapors to be in excess of the PEL:

DANGER – BENZENE REGULATED AREA CANCER CAUSING AGENT FLAMMABLE – NO SMOKING AUTHORIZED PERSONNEL ONLY RESPRIATOR REQUIRED

Methods of Compliance

- The benzene control program shall be written and implemented to comply with OSHA regulation 29 CFR 1910.1028 (Benzene).
- TARLTON shall establish and implement a written program to reduce employee exposure to or below the PEL primarily by means of engineering and work practice controls to ensure compliance with the benzene control program and federal and state requirements.

Exposure Monitoring

Exposure monitoring shall be performed for the 8-hour and 12-hour TWAs or for the 15 minute STEL exposure when:

- Regulated areas are established
- An emergency occurs that could require a regulated area
- A change in the production, process, control equipment, personnel or work practices may result in new or additional exposure to benzene
- Cleanup of a spill, leak repair, or rupture occurs
- If the monitoring required reveals employee exposure at or above the action level but at or below the TWA, TARLTON shall repeat the monitoring for each employee at least every year.
- If the initial monitoring reveals employee exposure to be below the action level TARLTON may discontinue the monitoring.

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- If the monitoring reveals that employee exposures, as indicated by at least two consecutive measurements taken at least 7 days apart, are below the action level TARLTON may discontinue to monitor.
- Direct reading detection instruments (Drager CMS is recommended) will be used where benzene vapors may be present in work areas not previously monitored.
- Personal monitoring will be performed by use of vapor monitoring badges following manufacturer requirements. All samples shall be analyzed at an AIHA (American Industrial Hygiene Association) certified laboratory.

Medical Surveillance

- Baseline and annual medical exams shall be provided to employees that may work or are anticipated to participate in operations more than 10 times per year or may work in areas where benzene exposures may exceed the PEL over 30 days per year.
- TARLTON shall make available a medical surveillance program for employees who are or may be exposed to benzene at or above the action level 30 or more days per year; for employees who are or may be exposed to benzene at or above the PELs 10 or more days per year; for employees who have been exposed to more than 10 ppm of benzene for 30 or more days in a year prior to the effective date of the standard when employed by their current employer.
- Notification of monitoring results shall be provided to employees in writing within 15 working days of receipt of results.

Personal Protective Equipment

- PPE will be selected on the basis of its ability to prevent absorption, inhalation and ingestion.
- PPE will reflect the needs of the employee based on work conditions, amount and duration of exposure and other known environmental factors but shall contain as a minimum; boots, proper eye protection, gloves, sleeves, aprons and others as determined.
- PPE shall be provided and worn when appropriate to prevent eye contact and limit dermal exposure to liquid benzene. PPE must meet the requirements of 29 CFR 1910.133 and provided at no cost to the employees.

Respiratory Protection

- A respiratory protection program shall be established in accordance with 29 CFR 1910.134. Respiratory protection is required:
  - During the time period necessary to implement engineering controls or work practices.
  - When engineering and work practices are not feasible.
  - In emergencies.

Approved respirators shall be selected according to airborne concentrations of benzene or condition of use.

- 0 to 0.67 ppm – no respirator required
- 0.67 to 6.7 ppm – half-mask respirator with OV cartridges
- 6.7 to 33 ppm – full-face respirator with OV cartridges

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- Greater than 33 ppm – Due to the TARLTON policy of not permitting SCBA no employee shall enter a space containing more than 33 ppm.

Recordkeeping

- Medical surveillance records shall be maintained for 30 years after termination of employment
- Exposure monitoring records shall be maintained for 30 years after completion of the project
- Exposure and medical monitoring records shall be made available to affected employees or their representatives and to OSHA upon request

Communication of Benzene Hazards

- Signs and labels shall be posted at entrances of regulated areas
- The benzene control program shall be updated by the TARLTON Safety Manager
- Project site specific contingency and emergency procedures shall be updated by the Safety Manager and made available to project staff prior to beginning work at the specific site.

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Purpose

The purpose of this program is to protect employees who may encounter ionizing radiation and its hazards while performing work.

Scope

This procedure applies to Tarlton operations where employees may be exposed to ionizing radiation.

This program is to ensure essential information regarding the hazard of ionizing radiation is communicated to our staff to minimize any potential exposure to ionizing radiation. When work is performed on a non-owned or operated site, the operator's or their radiation services contractor's program shall be followed.

Introduction

Exposure/Effects

As a rule, the dangers of radioactive exposure are less visible than those of other hazardous materials, and the presence of dangerous levels of radioactivity is hard to detect; it can only be detected with special monitors. Its effect on the human body may not be evident for days, weeks, or even years after exposure occurs. As ionizing radiation is applied to humans, the effects may include dermatitis, redness of the skin, skin cancer, hair loss, and eye inflammation.

The human body is able to tolerate a certain level of ionizing radiation; after all, we are continuously exposed to ionizing radiation from natural sources, such as cosmic radiation from outer space, and from radioactive materials in the earth. The degree of injury that is inflicted on a person by radiation exposure depends on several factors, such as the amount of the radiation dose, the duration of the dose, the rate at which the dose was received, the type of radiation received, and the body parts receiving the dose.

Requirements

The Occupational Safety and Health Administration regulates ionizing radiation at 29 CFR 1910.1096.

The annual permissible dose for total body exposure is five rem per year, with three rem permitted within a 13-week period. (Rem is a measure of the dose of any ionizing radiation to body tissue in terms of its estimated biological effect relative to a dose of one roentgen of X–rays).

No part of the body should be directly exposed to radiation. If there is a danger of exposing a body part, appropriate protection must be used. Lead aprons, gloves, and goggles should be worn by workers located in the direct field or in areas where radiation levels from scattering are high. All protective equipment should be checked annually for cracks in the lead and other signs of deterioration. For consistently elevated exposure, a thyroid shield and leaded glasses are recommended.

Definitions

"Dose" means the quantity of ionizing radiation absorbed, per unit of mass, by the body or by any portion of the body. When the provisions in this section specify a dose during a period of time, the dose is the total quantity of radiation absorbed, per unit of mass, by the body or by any portion of the body during such period of time.

“High radiation area” means any area, accessible to personnel, in which there exists radiation at such levels that a major portion of the body could receive in any one hour a dose in excess of 100 millirem.

"Rad" means a measure of the dose of any ionizing radiation to body tissues in terms of the energy absorbed per unit of mass of the tissue. One rad is the dose corresponding to the absorption of 100 ergs per gram of tissue (1 millirad (mrad) = 0.001 rad).

"Radiation" includes alpha rays, beta rays, gamma rays, X-rays, neutrons, high-speed electrons, high-speed protons, and other atomic particles; but such term does not include sound or radio waves, or visible light, or infrared or ultraviolet light.

“Radiation area” means any area, accessible to personnel, in which there exists radiation at such levels that a major portion of the body could receive in any 1 hour a dose in excess of 5 millirem, or in any 5 consecutive days a dose in excess of 100 millirem; and

"Radioactive material" means any material which emits, by spontaneous nuclear disintegration, corpuscular or electromagnetic emanations.

"Restricted area" means any area access to which is controlled by the COMPANY for purposes of protection of individuals from exposure to radiation or radioactive materials.

"Rem" means a measure of the dose of any ionizing radiation to body tissue in terms of its estimated biological effect relative to a dose of 1 roentgen (r) of X-rays (1 millirem (mrem) = 0.001 rem). The relation of the rem to other dose units depends upon the biological effect under consideration and upon the conditions for irradiation.

Each of the following is considered to be equivalent to a dose of 1 rem:

- A dose of 1 roentgen due to X- or gamma radiation;
- A dose of 1 rad due to X-, gamma, or beta radiation;
- A dose of 0.1 rad due to neutrons or high energy protons;
- A dose of 0.05 rad due to particles heavier than protons and with sufficient energy to reach the lens of the eye;

"Unrestricted area" means any area access to which is not controlled by Tarlton for purposes of protection of individuals from exposure to radiation or radioactive materials.

Procedure

Tarlton shall not possess, use, or transfer sources of ionizing radiation in such a manner as to cause any individual in a restricted area to receive in any period of one calendar quarter from sources in the employer's possession or control a dose in excess of the limits specified below:

TABLE G-18	Rems per calendar quarter
Whole body: Head and trunk; active blood-forming organs; lens of eyes; or gonads	1 1/4
Hands and forearms; feet and ankles	18 3/4
Skin of whole body	7 1/2

No allowance shall be made for the use of protective clothing or equipment or particle size.

Precautionary Procedures and Personal Monitoring

Survey
Tarlton shall ensure that survey of the area has been taken and appropriate restricted areas established at the client worksite prior to beginning work. Survey means an evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions. When appropriate, such evaluation includes a physical survey of the location of materials and equipment, and measurements of levels of radiation or concentrations of radioactive material present.

Monitoring
Tarlton shall ensure the supply of appropriate personnel monitoring equipment, such as film badges, pocket chambers, pocket dosimeters, or film rings, and shall require the use of such equipment by each employee who enters a restricted area. All shall be calibrated as required.

Signs and Emergency Signals

Signs
Symbols shall use the conventional radiation caution colors of magenta or purple on yellow background. The symbol prescribed by this paragraph is the conventional three-bladed design.

Each radiation area shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words: CAUTION RADIATION AREA.

Each high radiation area shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words: CAUTION HIGH RADIATION AREA.

Each area or room in which radioactive materials in regulated amounts are stored shall post a sign or sings bearing the radiation caution symbol and the words: CAUTION RADIOACTIVE MATERIAL.

Emergency Signal

Each high radiation area shall be equipped with a control device which shall either cause the level of radiation to be reduced below that at which an individual might receive a dose of 100 millirems in 1 hour upon entry into the area or shall energize a conspicuous visible or audible alarm signal in such a manner that the individual entering and the employer or a supervisor of the activity are made aware of the entry.

The signal generator shall not be less than 75 decibels at every location where an individual may be present whose immediate, rapid, and complete evacuation is essential.

A sufficient number of signal units shall be installed at every location where an individual may be present whose immediate, rapid, and complete evacuation is essential.

The signal shall be unique in the plant or facility in which it is installed.

The minimum duration of the signal shall be sufficient to insure that all affected persons hear the signal.

The signal-generating system shall respond automatically to an initiating event without requiring any human action to sound the signal.

Once the system has been placed in service, periodic tests, inspections, and checks shall be made to minimize the possibility of malfunction.

In addition to the initial startup and operating tests, periodic scheduled performance tests and status checks must be made to insure that the system is at all times operating within design limits and capable of the required response. Specific periodic tests or checks or both shall include:

All employees whose work may necessitate their presence in an area covered by the signal shall be made familiar with the actual sound of the signal-preferably as it sounds at their work location. Before placing the system into operation, all employees normally working in the area shall be made acquainted with the signal by actual demonstration at their work locations.

Training

All individuals working in or frequenting any portion of a radiation area shall be informed on:

- The occurrence of radioactive materials or of radiation in such portions of the radiation area,

- The safety problems associated with exposure to such materials or radiation and in precautions or devices to minimize exposure, including but not limited to time, distance, shielding and methods of keeping exposure limits as low as reasonably achievable (ALARA).
- The applicable provisions of 1910.1096 for the protection of employees from exposure to radiation or radioactive materials, and
- Shall be advised of reports of radiation exposure which employees may request a copy of.

Recordkeeping

Tarlton shall post a current copy of the applicable regulations and a copy of the operating procedures applicable to the work conspicuously in such locations as to insure that employees working in or frequenting radiation areas will observe these documents on the way to and from their place of employment or shall keep such documents available for examination of employees upon request.

Tarlton shall maintain records of the radiation exposure of all employees for whom personnel monitoring is required and advise each of his employees in writing of his individual exposure on at least an annual basis.

Purpose

The purpose of this procedure is to advise TARLTON employees in areas where asbestos is suspected on an awareness level basis about the properties and dangers of asbestos, general guidelines and training requirements and to provide basic precautions and protections for employees to avoid exposure to asbestos containing material (ACM) or presumed asbestos containing material (PACM).

Scope

This procedure applies to TARLTON operations where employees whose work activities may be in the vicinity of asbestos containing materials during their work activities. When work is performed on a nonowned or operated site, the operator's program shall take precedence, however, this document covers TARLTON employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Key Responsibilities

Managers/Supervisors

- Ensure owners or operators are notified of PACM.
- Prohibit TARLTON employees from working until material in question is confirmed as non-asbestos or abated.
- Ensure proper employee asbestos awareness training is completed.

All Employees

- All employees are required to act in strict compliance with the requirements of this program and delay or discontinue work if there is ever an unresolved concern regarding exposure to asbestos.
- Immediately report any suspected asbestos containing material to their supervisor

Awareness Level Requirements and Information

Asbestos Exposure Control

Depending on the exposure level TARLTON is required to develop and train workers on an Asbestos Exposure Controls Plan.

Background of Asbestos

The word asbestos is derived from a Greek word that means inextinguishable or indestructible. Asbestos is a naturally occurring mineral that is found throughout the world. Asbestos has several characteristics that make it desirable for many commercial uses. The fibers are extremely strong, flexible, and very resistant to heat, chemicals and corrosion. Asbestos is also an excellent insulator and the fibers can be spun, woven, bonded into other materials, or pressed to form paper products. For these reasons and because it is relatively inexpensive asbestos has been widely used for many years and now is found in over three thousand different commercial products.

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Exposure to asbestos fibers can cause serious health risks. The major risks from asbestos come from inhaling the fibers. Asbestos is composed of long silky fibers that contain hundreds of thousands of smaller fibers. These fibers can be subdivided further into microscopic filaments that will float in the air for several hours. Asbestos fibers can easily penetrate body tissues and cause disabling and fatal diseases after prolonged exposure.

Although exposure to asbestos is potentially hazardous, health risks can be minimized. In most cases the fibers are released only if the asbestos containing materials (ACM) is disturbed. Intact and undisturbed asbestos materials do not pose a health risk. The mere presence of asbestos does not mean that the health of occupants is endangered. When ACM is properly managed, release of fibers into the air is prevented or minimized, and the risk of asbestos related disease can be reduced to a negligible level. However, asbestos materials can become hazardous when they release fibers into the air due to damage, disturbance, or deterioration over time.

The ability to recognize the kinds of material that contain asbestos, knowing under what conditions they are dangerous, and understanding basic safety precautions, are all important in keeping exposures to a minimum.

Health Effects of Asbestos

The most dangerous exposure to asbestos is from inhaling airborne fibers. The body's defenses can trap and expel many of the particles. However, as the level of asbestos fibers increase many fibers bypass these defenses and become embedded in the lungs. The fibers are not broken down by the body and can remain in body tissue indefinitely. Exposure to asbestos has been shown to cause respiratory diseases such as lung cancer, asbestosis, mesothelioma and various types of cancer of the stomach and colon.

Possible Locations Where Employees May Be Exposed to Asbestos During Their Job Functions

Asbestos materials are used in the manufacture of heat-resistant clothing, automotive brake and clutch linings, and a variety of building materials including insulation, soundproofing, floor tiles, roofing felts, ceiling tiles, asbestos-cement pipe and sheet and fire-resistant drywall. Asbestos is also present in pipe and boiler insulation materials, pipeline wrap and in sprayed-on materials located on beams, in crawlspaces, and between walls.

Client owned and/or operated equipment and facilities, where surfacing material or insulation is present, must be confirmed non-asbestos before TARLTON employees disturb that material. Where surfacing material or insulation cannot be confirmed non-asbestos, the client or owner must test, and where necessary abate, the material before TARLTON employees are permitted to work.

Types of Asbestos

Asbestos can be defined as friable or non-friable. Friable means that the material can be crumbled with hand pressure and is therefore likely to emit fibers. The fibrous or fluffy sprayed-on materials used for fireproofing, insulation, or sound proofing are considered to be friable and they readily release airborne fibers if disturbed.

Materials such as vinyl-asbestos floor tile or roofing felts are considered non-friable and generally do not emit airborne fibers unless subjected to sanding or sawing operations. Asbestos cement pipe or sheet can emit airborne fibers if the materials are cut, abraded or sawed, or if they are broken during demolition operations.

Identifying Asbestos

There are many substances that workers contact that may contain asbestos and have the potential to release fibers. Only rarely can asbestos in a product be determined from labeling or by consulting the manufacture. The

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presence of asbestos cannot be confirmed visually in many cases. The only way to positively identify asbestos is through laboratory analysis of samples. If the presence of asbestos is suspected always assume that it is an asbestos containing material and have it analyzed.

Employees will abide warning signs and labels and will not disturb the asbestos containing material.

Signs and labels shall identify the material which is present, its location, and appropriate work practices which, if followed, will ensure that Asbestos Containing Material (ACM) and/or Presumed Asbestos Containing Material (PACM) will not be disturbed. TARLTON shall ensure that employees working in and adjacent to regulated areas comprehend the warning signs.

General Safety Precautions

The following general precautions will reduce exposure and lower the risk of asbestos related health problems:

- Drilling, sawing, or using nails on asbestos materials can release asbestos fibers and should be avoided.
- Floor tiles, ceiling tiles or adhesives that contain asbestos should never be sanded.
- Use care not to damage asbestos when moving furniture, ladders, or any other object.
- Know where asbestos is located in your work area. Use common sense when working around products that contain asbestos. Avoid touching or disturbing asbestos materials on walls, ceilings, pipes, ducts or boilers.
- All asbestos containing materials should be checked periodically for damage or deterioration. Report any damage, change in condition or loose asbestos containing material to a supervisor.
- All removal or repair work involving asbestos must be done by specially trained personnel.
- Asbestos should always be handled wet to help prevent fibers from being released. If asbestos is soaked with water or a mixture of water and liquid detergent before it is handled, the fibers are too heavy to remain suspended in the air.
- In the presence of asbestos dust above the PEL, the use of a respirator approved for asbestos work is required. A dust mask is not acceptable because asbestos fibers will pass through it.
- Dusting, sweeping, or vacuuming dry asbestos with a standard vacuum cleaner will put the fibers back into the air. A vacuum cleaner with a special high efficiency filter (HEPA) must be used to vacuum asbestos dust.
- If a HEPA vacuum is not used clean-ups must be done with a wet cloth or mop. The only exception to this would be if the moisture presents an additional hazard such as around electricity.

Remember, the mere presence of asbestos itself does not create a health hazard unless the material is disturbed and releases fibers to the atmosphere. Protect yourself and others by being aware of where asbestos is located, the dangers involved and using common sense when working around ACM.

Multiple Worksites

When working on multi-contractor worksites our employees shall be protected from exposure. If employees working adjacent to Class I asbestos jobs are exposed to asbestos due to the inadequate containment of such jobs TARLTON shall either remove the employees from the area until the enclosure breach is repaired or perform an initial exposure assessment.

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Personnel Air Monitoring
Depending on the exposure level TARLTON is required to perform air sampling.

Medical Surveillance Program
All TARLTON employees who are exposed to asbestos at the regulated level shall be included in the TARLTON medical surveillance program.

Respiratory Protection
The only circumstances that will necessitate TARLTON employees using respiratory equipment for protection against asbestos is during the asbestos exposure assessment process, while confirming (via personnel monitoring) that the engineering controls and work practices designed and employed for a particular work activity are adequate to maintain exposure levels below the PEL/excursion limit. Asbestos work that requires respiratory equipment beyond the PEL should be performed by a qualified contractor.

Waste Disposal
Asbestos waste, scrap, debris, bags, containers, equipment, and contaminated clothing shall be collected and disposed of in sealed, labeled impermeable bags of greater than 6 mils thickness or other closed, labeled, impermeable containers.

Training

Asbestos awareness training is required for employees who work in areas that contain or may contain asbestos and the training is documented.

Asbestos awareness training is required for employees whose work activities may contact Asbestos Containing Material (ACM) or Presumed Asbestos Containing Material (PACM) but do not disturb the ACM or PACM during their work activities.

Training elements are to include:

- The health effects associated with asbestos exposure;
- The relationship between smoking and exposure to asbestos producing lung cancer:
- The quantity, location, manner of use, release, and storage of asbestos and the specific nature of operations which could result in exposure to asbestos;
- The engineering controls and work practices associated with the employee's job assignment;
- The specific procedures implemented to protect employees from exposure to asbestos, such as appropriate work practices, emergency and clean-up procedures and personal protective equipment to be used.
- The purpose, proper use, and limitations of respirators and protective clothing, if appropriate;
- The purpose and a description of the medical surveillance program;
- The content of the OSHA asbestos standard, including appendices.
- The requirements for posting signs and affixing labels and the meaning of the required legends for such signs and labels.

Subcontractors performing work shall comply with the requirements of this standard and all applicable regulatory and environmental regulatory requirements.

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PURPOSE & APPLICATION

To ensure safety is a properly planned activity on all Special Projects, project safety start-up meetings will be conducted prior to all executive start-up meetings.

The project safety start-up meeting will establish clear policies and procedures for the project in conjunction with the Tarlton Corporation Safety Manual. The start-up meeting will also help determine specific project needs as well as determine the need for a site-specific safety plan.

PROCEDURE

1. <u>Site Specific Safety Plans (SSSP's)</u>
   An annual "General SSSP" will be created and established by the project team and coordination with the safety representative for each customer.

   a. For low safety risk work in Special Projects Division, the project team will utilize the annual "General SSSP's."
      i. Examples of Low-Risk Safety Activities include, but are not limited to:
         1. Typical painting
         2. interior framing & drywall
         3. flooring
         4. casework
         5. ceiling grid
         6. lighting & receptacles using LOTO.
         7. MEP hook-Up of fixtures (If shutdowns are necessary, then this is High Risk)
         8. Shallow excavations – less than 4'

   b. For larger or higher Safety Risk scopes in the Special Projects Division, the project team needs to amend/update the general SSSP to be specific to the safety critical scopes.
      i. Examples of High-Risk Safety Activities include, but not limited to:
         1. 20 or more workers on one shift.
         2. Steel Erection
         3. Precast/Tilt-up work
         4. Confined Space work
         5. Demolition work
         6. Trenching/Excavation 5' or deeper
         7. Cranes and/or Critical Lifts
         8. Shutdown work
         9. Complex Off-shift work.
         10. Electrical that cannot be LOTO.
         11. Hazardous material/chemical potential
         12. Concerning Subs – new to Tarlton, new to client, poor safety performance etc.
         13. Anything out of the ordinary
         14. If in doubt, reach out to the safety team.

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2. Safety Start-Up Meetings requirements:
   a. An annual "General" Safety Start-Up meeting will be held for each client to review the general safety requirements and scope of work at each facility.
   b. If project scope falls under the low safety risk category as defined above, then there is no need to perform a Safety Start-Up meeting for ops nor safety. Utilize the general annual SSSP in conjunction with daily PTSP's and client specific safety paperwork.
   c. If scope falls into the larger or higher safety risk category as defined above, the project team will be required to conduct a combined safety & ops start-up meeting.

3. Site Specific Safety Orientation
   a. Are required on all projects and jobsites.
   b. May include owner/client orientation material.
   c. May use Tarlton's Site-Specific Orientation video template.
   d. May utilize Microsoft Forms and QR Code process to record. Final document must be saved in Procore.

4. Legal/OSHA Information and Posting
   a. All projects and jobsites need to have the Tarlton Legal/OSHA posting banner predominately posted on the jobsite.
   b. A smaller version can be utilized, only if space and logistics doesn't allow the standard Tarlton Legal/OSHA posting banner.

5. Required Supervisory Role
   a. Tarlton's policy states there must always be a Tarlton Competent Person (Supervisor) present when anyone is performing work on our jobsites.
      i. "Supervisor" defined as foreman & up, knowledgeable in the scope being overseen.
   b. If location allows one person to supervise multiple projects, it is possible for the one person to be the supervisor, but they must be available and able to adequately cover all assigned projects.

6. Pre-Task Safety Plans (PTSPs), Jobsite Safety Audit Reports (JSARs), Toolbox Talks (TBTs), Task Specific Behavior Observations (TSBOs) requirements:
   a. All the above are required on all projects no matter the size or complexity.
   b. Subcontractor will be required to compete their own safety paperwork on Procore.
   c. Pre-Task Safety Plan must be completed at least every shift.
      i. PTSP must be completed at the foreman level or above.
      ii. PTSP should be a meeting held with the crew each shift to discuss the hazards that could be encountered during the day and how to eliminate those hazards.
      iii. Meeting size should be kept to 10 or below, depending on job and project size.
      iv. All employees must sign in after the meeting is held to show participation and understanding of the material discussed.
      v. All employees must sign out injury free at the end of their shift.
   d. Jobsite Audit Reports must be completed on each jobsite/project.

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i. Superintendents are required to complete 3/month, Project Engineers are required to complete 2/month, and Project Managers are required to complete 1/month.

e. Toolbox Talks are required to be completed once a week.
   i. If possible TBTs should be held on Mondays after lunch.
   ii. The project team is responsible for ensuring a TBT is conducted every week.
   iii. If Microsoft Forms is utilized for tracking and record retention, a document of completion must also be uploaded to the project Procore site.

f. Safety Hazard Observation Requirements:
   i. TSBO should be conducted on a periodic basis by the project team.
   ii. TSBO are designed to be a quick observation of a crew conducting a task. Once the observation is over, a conversation should be conducted between the employee being observed and the employee observing. If any hazards were identified, they should be discussed with the employees.
   iii. Superintendents are required to complete 8/month, Project Engineers are required to complete 6/month, and Project Managers are required to complete 4/month.

7. Communication:
   a. If there is any incident or injury on the jobsite the Supervisor must immediately call the safety department and their Project Manager to report the incident or injury.
   b. Each specific group/client should establish a communication process to notify the safety department of what safety critical work may be occurring on their projects during any given day or week.
   c. A running list of the proper contacts should be developed as the list will likely change from building to building and/or project to project.

8. Tarlton Policy Deviation Form
   a. If a Tarlton Corporate Safety policy will not be followed in its entirety, the Tarlton Policy Deviation form must be completed by the project team.
   b. The Tarlton Policy Deviation form can be completed on an annual basis, if the policy cannot be followed due to circumstances on the Special Project. (i.e. Owner/client requirements, logistics, owner/client request, ect..)
   c. The Tarlton Policy Deviation form must be completed at least annually by the Special Projects project team.

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AED	Automated External Defibrillator
AGC	Associated General Contractors
COO	Chief Operating Officer
CPR	Cardio Pulmonary Resuscitation
CSD	Corporate Safety Director
DART	Days Away, Restricted, Transferred Rate
DMV	Department of Motor Vehicles
DUI	Driving Under the Influence
DWI	Driving While Intoxicated
EAP	Employee Assistance Program
EEO	Equal Employment Opportunity
EMR	Experience Modification Rate
EMS	Emergency Medical Services
EPP	Emergency Procedure Plan
ERT	Emergency Rescue Team
IR	Incident Rate/OSHA Recordable Rate
JSAR	Jobsite Safety Audit Report
LEL	Lower Explosive Limit
LOTO	Lock Out / Tag Out
MSHA	Mine Safety and Health
MUTCD	Manual of Uniform Traffic Control Devices
MSDS	Material Safety Data Sheet
NCCI	National Council for Compensation Insurance
NFPA	National Fire Protection Association
OSHA	Occupational Safety and Health Administration
PE	Project Engineer
PM	Project Manager
PD	Project Director
PPE	Personal Protection Equipment
PSP	Project Safety Person
PTSP	Pre Task Safety Plan
SA	Safety Assistant
SCBA	Self Contained Breathing Apparatus
SF	Square Foot
TBT	Tool Box Talk
TSBO	Task Specific Behavior Observation
TEAM	Tarlton Equipment and Maintenance Facility
VIN	Vehicle Identification Number
VP	ViewPoint Project Management Software

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Corporate

A. Annual Safety Program Evaluation
B. Minimum Safety Requirements
C. Safety Committee Membership Guidelines
D. Driver Acknowledgment of Policies

Medical / Drug Testing

E. Reasonable Suspicion
F. Post-Exposure Evaluation
G. Hepatitis Vaccination Acceptance/Declination

Disciplinary Forms

H. Tarlton Employee Safety Violation
I. Subcontractor Employee Safety Violation
J. Subcontractor Directive

Project Safety

K. Project Difficulty Rating
L. Site Specific Orientation Checklist
M. Pre-Task Safety Plan (PTSP)
N. Tool Box Talk (TBT)
O. Tool Box Talk Schedule (sample)
P. Job Safety Audit Report (JSAR)
Q. Respirator Medical Evaluation (Fit Test)

Incident

R. Incident Investigation Report –Standard
S. Incident Investigation Report –Short Form
T. Near Miss Reporting
U. Light Duty Offer Letter (sample)
V. Driver Accident Report
W. Root Cause Report
X. OSHA Inspection Report
Y. Crisis Management Responsibility Listing
Z. Crisis Management External Contact Listing
AA. Major Injury Flowchart (site-specific sample)

General Safety Information

BB. OSHA Fact Sheet: Subpart CC – Cranes and Derricks in Construction: Signal Person Qualification
CC. Overhead Powerline Protocol
DD. Critical Pick Planning Agenda

Permits

EE. Confined Space
FF. Critical Lifting Worksheet
GG. Excavation Checklist

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HH. Hot Work
II. Lock Out / Tag Out
JJ. Daily Excavation Checklist

Equipment Inspection

KK. Aerial Work Platform Daily Inspection Log
LL. Crane Operator's Daily Inspection Log
MM. Forklift
NN. Manbasket
OO. Mobile Equipment Operator's Report
PP. Scissor Lift
QQ. Skid Steer, Bobcat
RR. Suspended Scaffolding

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ARCHPOINT
ENGINEERING

Quality Management System

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ARCHPOINT ENGINEERING

0.0 Revision History:

Rev No.	Prepared by/ Date	Reviewed by/ Date	Pages Revised	Remarks
0	J.Rogers 2025-08-29	**M.Rogers** **2025-09-02**		Issue for Use
01				
02				

1.0 Introduction

ArchPoint Engineering is a multidisciplinary provider of project controls, engineering, and testing & commissioning services. We deliver value added solutions that help clients plan, build, and operate with confidence. Located in St. Louis MO, ArchPoint is a small business committed to making quality our highest priority and meeting the expectations of the clients we serve.

ArchPoint has developed and implemented a quality management system (QMS), which uses ISO 9001:2015 as a framework that allows our organization to document and improve our practices to better satisfy the needs and expectations of our customers, stakeholders, and other interested parties.

2.0 About the Quality Management System

The system is prepared for the purposes of defining the company's interpretation of the ISO 9001:2015 international standard. In addition, it is created to demonstrate how the company complies with the standard.

3.0 Terms and Definitions:

ArchPoint Engineering adopts the following terms and definitions within its Quality Management System. Where no definition is provided, ArchPoint applies the definitions in ISO 9000: Quality Management – Fundamentals and Vocabulary. In cases where a procedure or client requirement defines a term differently, that definition shall take precedence for the purpose of that document.

General Terminology

- **Document** – Written information describing how an activity is to be performed.
- **Record** – Evidence that an activity has been completed.

4.0 About the Organization

4.1 Understanding the Organization and Its Context

ArchPoint has reviewed and analyzed key aspects of itself and its partners to determine the strategic direction of the company. This requires understanding internal and external issues that are of concern to ArchPoint and its interested parties (per 4.2 below); An evaluation of internal and external stakeholders, as well as assessment of their expectation is done within the yearly Management Review.

In addition, such issues are monitored and updated as appropriate and discussed as part of management reviews.

4.2 Understanding the Needs and Expectations of Interested Parties

The issues determined per 4.1 above are identified through an analysis of risks facing ArchPoint and its interested parties. “Interested parties” are those stakeholders who receive our deliverables or who may be impacted by them, or those parties who may otherwise have a significant interest in our company. These parties are identified during the yearly Management Review.

This information is then used by executive leadership to determine the company’s strategic direction. This is defined in records of management review and periodically updated as conditions and situations change.

4.3 Determining the Scope of the Quality Management System

Our QMS applies to all activities carried out by ArchPoint Engineering, including the interaction with our external stakeholders and clients. The process map below illustrates this scope by showing the interaction between our quality management processes, core processes, and support processes.

ArchPoint provides project controls, engineering, and testing & commissioning services to utility, industrial, and infrastructure clients. These services include development and management of project schedules and technical engineering. All work is executed in alignment with client specifications, regulatory requirements, and industry standards.

This scope reflects ArchPoint’s business model as a service-based engineering firm and ensures that our QMS consistently delivers value to clients, aligns with stakeholder expectations, and supports continual improvement.

4.4 Quality management system and its processes

The goal of ArchPoint's Quality Management System (QMS) is to implement the quality policy and objectives across all areas of the business, ensuring that our services consistently meet client requirements while enhancing client satisfaction. The QMS applies to all ArchPoint activities related to project controls, engineering, and testing & commissioning services.

- Organization of the Quality Management System

  The overall responsibility for the implementation, effectiveness, and continual improvement of the QMS resides with ArchPoint's executive leadership. The executive leadership monitors the performance of the QMS, coordinates internal quality audits, and ensures that processes deliver their intended outcomes.

5.0 Leadership

5.1 Leadership and Commitment

ArchPoint Engineering's leadership demonstrates its commitment to the development, implementation, and continual improvement of the Quality Management System (QMS) by:

- Taking accountability for the effectiveness of the QMS.
- Ensuring that the Quality Policy and measurable quality objectives are established, maintained, and aligned with the strategic direction of ArchPoint.
- Integrating QMS requirements into the company's daily business processes, project execution, and client engagement practices.
- Promoting the process-based and risk-based thinking approaches throughout the organization.
- Ensuring the provision of adequate resources—people, tools, training, and infrastructure—to sustain the QMS.
- Ensuring that the QMS achieves its intended results, including client satisfaction, risk mitigation, and delivery of high-quality services.
- Directing, engaging, and supporting employees and partners to actively contribute to the effectiveness of the QMS.
- Fostering a culture of continual improvement across all disciplines and services.
- Supporting managers, project leads, and supervisors in demonstrating leadership within their areas of responsibility.

5.1.1 Customer Focus

ArchPoint leadership maintains a client-first approach, ensuring that client needs,

expectations, and applicable statutory and regulatory requirements are consistently determined, understood, and met. Leadership ensures this focus through:

- Confirming that client and regulatory requirements are embedded into project schedules, engineering analyses, and testing procedures.
- Assessing risks and opportunities that may impact service quality, compliance, or client satisfaction, and ensuring they are addressed.
- Maintaining a continual focus on enhancing client satisfaction by delivering accurate, timely, and value-added project controls, engineering, and testing & commissioning services.

5.2 Quality Policy

5.2.1 Establishing the quality policy. Top management has established, approved, and maintains the ArchPoint Quality Policy, which is appropriate to our purpose and context, supports our strategic direction, provides a framework for quality objectives, includes a commitment to satisfy applicable requirements, and a commitment to continual improvement. (Ref: QP-001 Quality Policy, Rev 00, controlled per QMP-002.)

5.2.2 Communicating the quality policy. The policy is controlled, communicated, and available: it is posted internally, included in onboarding/training, periodically reinforced by leadership, and made available to interested parties upon request or via the website. Awareness and understanding are evidenced by training records and MR minutes.

5.3 Organizational roles, responsibilities and authorities

President assigns and communicates QMS roles/authorities; the Managing Partner approves the QMS and Quality Policy; functional leaders approve their QMPs; and the President ensures document control per QMP-002

6.0 Planning

6.1 Actions to Address Risks and Opportunities

ArchPoint Engineering integrates risk-based thinking into its Quality Management System (QMS) to ensure that risks and opportunities are systematically identified, assessed, and addressed at both the project and organizational levels. This approach ensures that:

- The QMS can reliably achieve its intended results.
- Positive opportunities for efficiency, growth, and client value are realized.
- Potential negative impacts on service quality, compliance, or client satisfaction are

prevented or minimized.
- Continuous improvement is driven through proactive planning rather than reactive correction.
- Risks and opportunities are identified through several inputs, including project risk registers, client feedback, lessons learned, regulatory changes, and internal audit findings. They are evaluated based on probability and impact, and actions are prioritized accordingly.

6.2 Quality Objectives and Planning to Achieve Them

ArchPoint has established measurable quality objectives that support the Quality Policy and are aligned with the company's strategic goals. These objectives are reviewed annually during Management Review and monitored on an ongoing basis through project dashboards and KPI tracking.

Examples of Quality Objectives:

- Client Satisfaction – Maintain a client satisfaction rating of ≥ 90% across all projects.
- On-Time Delivery – Deliver ≥ 95% of schedules, engineering analyses, and commissioning reports on or before agreed deadlines.
- Technical Accuracy – Achieve zero repeat nonconformances in testing & commissioning services.
- Competency Development – Provide annual technical and quality training for 100% of employees.
- Process Compliance – Complete all scheduled internal audits and close corrective actions within 30 days.

For each objective, ArchPoint defines the actions, resources, responsibilities, timelines, and evaluation methods needed to achieve and sustain the targets. Results are communicated to employees and stakeholders through management reviews and periodic updates.

6.3 Planning of Changes

ArchPoint ensures that all changes to the QMS, its processes, or project execution methods are carried out in a controlled and deliberate manner. Before changes are implemented, leadership considers:

- The purpose of the change and potential consequences.
- The ability of the QMS to continue delivering intended results.
- The resources required to support the change.
- The responsibilities and authorities that may need to be reassigned.

Planned changes are documented, communicated, and reviewed for effectiveness through internal audits and management reviews. This approach ensures that

improvements strengthen the QMS without compromising its integrity or disrupting service delivery.

7.0 Support

7.1 Resources

7.1.1 General

ArchPoint determines and provides the resources necessary to:

- Establish, implement, maintain, and continually improve the Quality Management System (QMS).
- Enhance client satisfaction by ensuring conformity to requirements for all services provided.
- Resource allocation is based on current capabilities, client requirements, regulatory expectations, and the need to support both internal operations and external partnerships. Resource planning and adjustments are reviewed during management reviews.

7.1.2 People

ArchPoint leadership ensures sufficient staffing for the effective operation of the QMS and delivery of services. Employees are assigned responsibilities aligned with their skills and training, ensuring all processes are carried out effectively. When required, ArchPoint supplements staff with subcontractors or specialized consultants, who are managed under documented quality controls.

7.1.3 Infrastructure

ArchPoint provides and maintains the infrastructure needed to ensure the quality of services. Infrastructure includes:

- Office facilities and secure workspaces.
- Hardware and software systems (e.g., Primavera P6, engineering analysis tools, commissioning test equipment).
- Secure IT and communication systems to support project collaboration and data exchange.
- Supporting services such as travel, logistics, and vendor-provided equipment.

7.1.4 Environment for the Operation of Processes

ArchPoint ensures a safe, supportive, and professional work environment that promotes effective service delivery. The environment encompasses:

- Physical – safe, well-maintained, and ergonomically designed office and field workspaces.
- Psychological – a culture of integrity, teamwork, and continuous improvement.
- Social – a collaborative, respectful workplace with open communication between employees and leadership.
- Special environmental requirements (e.g., safe conditions at substation sites or solar facilities) are identified during project planning and managed through safety and quality procedures.

Emergency preparedness and response are governed by QMP-012 Emergency Preparedness & Response, which defines:

- Supervisor responsibilities for maintaining accountability of personnel during emergencies (headcounts at muster points).
- Training for supervisors to recognize unusual or suspicious behavior that may present safety or security risks.
- The use of the Muster Log Form (QMP-012-F01) to document accountability during drills or actual emergencies.

Records generated under QMP-012 are retained in accordance with QMP-002 Document Control

7.1.5 Monitoring and Measuring Resources

ArchPoint ensures that equipment used in monitoring, measurement, inspection, or testing is properly controlled, maintained, and calibrated as required. This includes test equipment for commissioning services. Calibration records are retained to demonstrate traceability to national or international standards where applicable.

7.1.6 Organizational Knowledge

ArchPoint determines and maintains the organizational knowledge required to ensure service quality and conformity. This knowledge is drawn from:

- Internal sources – project experience, lessons learned, internal audits, training programs, and subject matter expertise.
- External sources – ISO standards, IEEE/ANSI codes, utility requirements, industry conferences, vendor training, and client specifications.
- Knowledge is captured, stored, and shared through documented procedures, project records, lessons learned databases, and training sessions. Changing needs and new knowledge are addressed proactively through professional development and industry engagement.

7.2 Competence

ArchPoint ensures that all personnel performing work affecting quality are competent on the basis of education, training, experience, and demonstrated capability. Competence requirements for roles are defined in job descriptions.

Training needs are assessed annually and as required by project changes. Records of training and qualifications are maintained to provide evidence of competence. Subcontractors and partners are evaluated for competency as part of procurement and onboarding processes.

ArchPoint maintains a controlled Training & Competency Matrix (Form QMP-002-F01) that identifies training standards and requirements for each functional position within the company, including Project Managers, Engineers, Schedulers, Testers, and Support Staff.

This matrix specifies required education, certifications, and skills, as well as competency verification methods and renewal requirements.

Records of training and verification are maintained as documented information in accordance with QMP-002 Document Control Procedure.

The matrix is reviewed during Management Review meetings to ensure that training standards remain aligned with project requirements and regulatory compliance

7.3 Awareness

ArchPoint ensures that employees and subcontractors are aware of:

- The Quality Policy and relevant quality objectives.
- Their contribution to the effectiveness of the QMS.
- The benefits of improved performance and the risks of nonconformance.

Awareness is reinforced through onboarding, training programs, safety briefings, internal meetings, and periodic communications from leadership.

7.4 Communication

ArchPoint establishes and maintains internal and external communications relevant to the QMS. This includes:

- Internal communication – team meetings, dashboards, emails, training sessions, corrective action processes, and management reviews.
- External communication – client meetings, reports, commissioning documentation, lessons learned sessions, and vendor coordination.

7.5 Documented Information

7.5.1 General

The QMS includes documented information in accordance with ISO 9001:2015, as

well as additional documentation determined by ArchPoint to be necessary for effective operations.

ArchPoint ensures control of documented information in accordance with ISO 9001:2015 Clause 7.5. The procedure for creation, approval, version control, distribution, and retention of QMS documents is defined in QMP-002 Document Control Procedure.

7.5.2 Creating and Updating

Documented information is created and updated with appropriate:

- Identification (title, author, date, version).
- Format and media (Word, Excel, PDF, Primavera P6 files, test reports, etc.).
- Review and approval to ensure suitability and adequacy.

7.5.3 Control of Documented Information

ArchPoint ensures that documented information is controlled to:

- Be available and suitable for use where and when it is needed.
- Be adequately protected from loss, misuse, or unauthorized changes.

Controls include:

- Document control procedures for revision, distribution, retrieval, and archiving.
- Secure storage of electronic files with access permissions.
- Defined retention periods for quality records, project files, and test data.
- Control of external documents (e.g., client specifications, vendor manuals) required for operations.

Records are retained as objective evidence of conformity, compliance, and effective QMS operation.

8.0 Operation

8.1 Operational planning and control

ArchPoint plans, implements, and controls the processes needed to meet requirements for the provision of services and to implement the actions defined in Section 6. Planning and control include:

- Determining requirements for the services to be provided.

- Establishing criteria for processes and for acceptance of services.
- Determining resources needed to achieve conformity to requirements.
- Controlling processes according to defined criteria.
- Maintaining documented information needed to:
    - Provide confidence that processes are carried out as planned.
    - Demonstrate conformity of services to requirements.

Operational planning outputs are captured in proposals, contracts, project execution plans, schedules, engineering work plans, commissioning test plans, and inspection and test plans. ArchPoint ensures that outsourced processes are controlled in accordance with 8.4.

ArchPoint ensures that operational processes are planned, implemented, and controlled in a consistent manner that aligns with ISO 9001:2015 requirements and client expectations. The following documented procedures support this clause and are controlled within the QMS:

- QMP-007 Project Management / Project Controls – Defines project initiation, planning, execution, monitoring, change control, and closeout, including the use of schedules, KPIs, and lessons learned.
- QMP-004 – Testing & Commissioning – Establishes requirements for planning, executing, documenting, and reviewing inspections and tests on equipment, systems, and project deliverables.
- QMP-005 - Measuring and Test Equipment (M&TE) Control Procedure – Defines processes for identification, calibration, verification, and control of monitoring and measuring resources.

8.2 Requirements for products and services

8.2.1 Customer communication

ArchPoint maintains effective communication with clients by:

- Providing information about services and delivery.
- Handling inquiries, proposals, contracts, and changes.
- Obtaining and processing client feedback and complaints.
- Handling or controlling client property and data.
- Establishing contingency requirements when relevant.

8.2.2 Determining requirements related to products and services

Before offering services, ArchPoint ensures that:

- Requirements are defined, including:
    - Applicable statutory and regulatory requirements.
    - Requirements ArchPoint determines are necessary.
- ArchPoint can meet the claims made for the services offered.

8.2.3 Review of requirements related to products and services

Prior to commitment, ArchPoint reviews the ability to meet requirements, including:

- Requirements specified by the client, including delivery and any post delivery activities.
- Requirements not stated by the client but necessary for intended use, when known.
- Requirements determined by ArchPoint.
- Applicable statutory and regulatory requirements.
- Any contract or order requirements different from those previously defined.

Results of reviews and any new requirements are retained as documented information. Differences are resolved with the client. When the client does not provide a written statement of requirements, ArchPoint confirms requirements before acceptance.

8.2.4 Changes to requirements for products and services

When requirements change, ArchPoint updates relevant documented information and informs affected personnel in a timely manner in accordance with the Change Management procedure.

8.3 Design and development of services

8.3.1 General

ArchPoint establishes, implements, and maintains a design and development process appropriate for service deliverables, including project schedules, protection and control studies, relay settings, engineering analyses, engineering design, commissioning procedures, and test plans.

Design and development activities are governed by QMP-008 Engineering Quality Management Program, which establishes the process for:

- Capturing and reviewing design inputs (client specifications, codes, and regulatory requirements).
- Producing design outputs (drawings, reports, specifications, test requirements) that meet input requirements and are suitable for downstream use.

- Conducting independent design reviews, verification, and validation.
- Documenting and controlling design changes.
- Maintaining design records in accordance with QMP-002 Document Control.

All design activities are performed by qualified personnel, reviewed and approved prior to release, and controlled to ensure compliance with customer, statutory, and regulatory requirements.

8.3.2 Design and development planning

ArchPoint determines stages and controls by considering:

- Nature, duration, and complexity of the work.
- Required stages and reviews.
- Verification and validation activities.
- Responsibilities and authorities.
- Internal and external resource needs.
- Control of interfaces between people involved.
- Client and user involvement.
- Requirements for subsequent service provision.
- Level of control expected by clients and interested parties.
- Documented information needed to demonstrate conformity.

8.3.3 Design and development inputs

ArchPoint determines inputs including:

- Functional and performance requirements.
- Information from previous similar work and lessons learned.
- Statutory and regulatory requirements.
- Applicable standards and codes.
- Potential consequences of failure.

Inputs are complete, adequate, and unambiguous. Conflicts are resolved. Inputs are retained.

8.3.4 Design and development controls

ArchPoint applies controls to ensure:

- Planned results are defined.
- Reviews evaluate the ability of results to meet requirements.

- Verification confirms outputs meet input requirements.
- Validation confirms deliverables meet intended use.
- Actions are taken on issues found.
- Records of reviews, verification, and validation are retained.

8.3.5 Design and development outputs

Outputs:

- Meet input requirements.
  Are adequate for subsequent provision of services.
- Include or reference monitoring and measuring needs and acceptance criteria;
- specify characteristics essential for intended purpose and safe provision.
- Are retained.

8.3.6 Design and development changes

Changes are identified, reviewed, verified or validated as needed, approved, implemented, and recorded, including authorization and actions taken to prevent adverse impact.

Design changes are controlled per QMP-011 Design Change Management; records are retained per QMP-002 Document Control.

8.4 Control of externally provided processes, products, and services

8.4.1 General

ArchPoint ensures externally provided processes, products, and services conform to requirements whether they are incorporated in ArchPoint deliverables, provided directly to clients on ArchPoint's behalf, or when a process is externally provided.

8.4.2 Type and extent of control

ArchPoint:

- Ensures externally provided processes remain under QMS control.
- Defines controls to apply to providers and to outputs.
- Considers potential impact on conformity and the effectiveness of controls applied by the provider.
- Determines required verification and other activities.

Evaluation, selection, monitoring, and re evaluation of providers are based on their

ability to meet requirements. Records are retained.

8.4.3 Information for external providers

ArchPoint communicates requirements for:

- Processes, products, and services to be provided.
- Approvals of methods, processes, equipment, and release.
- Competence and qualification of persons.
- Provider interaction.
- Performance control and monitoring.
- Verification and validation activities performed by ArchPoint or the client at provider premises when applicable.
- Supplier selection, qualification, monitoring, and re-evaluation are performed per QMP-010 Supplier Qualification & Monitoring

8.5 Service provision

8.5.1 Control of service provision

ArchPoint provides services under controlled conditions including, as applicable:

- Documented information defining service characteristics and results to be achieved.
- Suitable monitoring and measuring resources.
- Monitoring and measurement at appropriate stages against control and acceptance criteria.
- Suitable infrastructure and work environment.
- Competent persons with required qualifications.
- Validation and periodic revalidation where results cannot be fully verified later.
- Actions to prevent human error, including use of checklists and peer reviews.
- Release, delivery, and post delivery activities.

8.5.2 Identification and traceability

ArchPoint identifies service outputs as needed to ensure conformity, including status with respect to reviews, checks, tests, and approvals. Where unique traceability is required by contract or regulation, identification and records are maintained.

8.5.3 Property belonging to customers or external providers

ArchPoint exercises care with property and data belonging to clients or providers while under ArchPoint control. Property is identified, verified, protected, and safeguarded. Loss, damage, or unsuitability is reported to the owner and recorded.

8.5.4 Preservation

ArchPoint preserves deliverable integrity during service provision through proper identification, handling, storage, protection, access control, and data security.

8.5.5 Post delivery activities

When applicable, ArchPoint performs post delivery activities such as client satisfaction follow up, periodic quality reviews, monitoring complaints and corrective actions, warranty or return visits, and lessons learned. The extent of these activities considers regulatory requirements, potential undesired consequences, nature and intended use of services, client requirements, and feedback.

8.5.6 Control of changes

ArchPoint reviews and controls planned and unplanned changes to service provision to ensure continuing conformity. Results of change reviews, authorization, and actions taken are retained.

8.6 Release of services

ArchPoint implements planned arrangements at appropriate stages to verify that requirements have been met. Services are not released to the client until planned arrangements are satisfactorily completed unless approved by relevant authority and, when applicable, by the client. Records of release include evidence of conformity and identification of the person authorizing release.

8.7 Control of nonconforming outputs

ArchPoint ensures that nonconforming outputs are identified and controlled to prevent unintended use or delivery, including issues detected after delivery. ArchPoint manages nonconformance through one or more of the following:

- Correction.
- Segregation, containment, return, or suspension of services.
- Informing the client.
- Acceptance under concession when authorized.

Verification of conformity is performed when nonconforming outputs are corrected. Records describe the nonconformity, actions taken, any concessions, and the authority deciding the disposition.

9.0 Performance evaluation

9.1 Monitoring, measurement, analysis, and evaluation

9.1.1 General

ArchPoint determines:

- What needs to be monitored and measured.
- The methods for monitoring, measurement, analysis, and evaluation needed to ensure valid results.
- When monitoring and measuring are performed.
- When results are analyzed and evaluated.

Monitoring and measurement cover process performance, service conformity, and QMS effectiveness. Results are retained as documented information and are reviewed by leadership.

9.1.2 Customer satisfaction

ArchPoint monitors customer perception of whether requirements have been met. Methods include:

- Formal client surveys at key milestones and at closeout.
- Client interviews by project managers and department leads.
- Complaint and compliment tracking with corrective action linkage.
- Trends in on time delivery of schedules, studies, and commissioning reports.
- Repeat work, volume of awards, and client scorecards where available.

Findings feed the corrective action process and improvement plans and are summarized for management review.

9.1.3 Analysis and evaluation

ArchPoint analyzes data from monitoring and measurement to evaluate:

- Conformity of services.
- The degree of customer satisfaction.
- Performance and effectiveness of the QMS.
- Whether planning has been implemented effectively.
- The effectiveness of actions to address risks and opportunities.

- Performance of external providers.
- The need for improvements to the QMS.

Analysis methods may include control charts, trend analysis, and simple statistical checks appropriate to the data. Conclusions and required actions are recorded.

9.2 Internal audit

ArchPoint conducts internal audits at planned intervals to determine whether the QMS:

- Conforms to ArchPoint requirements.
- Is effectively implemented and maintained.

ArchPoint conducts risk-based internal audits at planned intervals to be in accordance with ISO 9001 and ArchPoint requirements, and to verify QMS effectiveness (per QMP-009). The Quality Manager maintains an annual audit program that considers process importance, changes, and prior results, and assigns competent, independent auditors who do not audit their own work. For each audit, a plan defines objectives, scope, criteria, and methods; evidence is sampled via interviews, observation, and records, and findings are classified as Major NC, Minor NC, or Opportunity for Improvement (OFI). A written report is issued within 5 business days; nonconformities are logged and closed through QMP-006 with effectiveness verification, and overdue actions are escalated to Top Management. Audit program, plans, reports, competence records, and evidence logs are controlled and retained per QMP-002, and results feed Management Review and quality objectives.

9.3 Management review

9.3.1 General

Top management reviews the QMS at planned intervals to ensure continuing suitability, adequacy, effectiveness, and alignment with ArchPoint strategic direction.

9.3.2 Management review inputs

Management review considers, at a minimum:

- Status of actions from previous reviews.
- Changes in external and internal issues relevant to the QMS.
- Information on QMS performance and effectiveness, including trends in:
    - Customer satisfaction and feedback from interested parties.

- Achievement of quality objectives and KPI results.
- Process performance and conformity of services.
- Nonconformities and corrective actions.
- Monitoring and measurement results.
- Internal audit results.
- Performance of external providers:
    - Adequacy of resources.
    - Effectiveness of actions taken to address risks and opportunities.
    - Opportunities for improvement.

9.3.3 Management review outputs

Outputs include decisions and actions related to:

- Opportunities for improvement.
- Changes needed to the QMS.
- Resource needs, including competence, tools, and infrastructure.
- Updates to quality objectives and targets.

Records of management review inputs, conclusions, and assigned actions are retained. Actions are tracked to closure.

10.0 Improvement

10.1 General

ArchPoint identifies and selects opportunities for improvement and implements actions needed to ensure client requirements are consistently met and satisfaction is enhanced. Improvement activities focus on:

- Enhancing the quality and reliability of project controls, engineering, and testing services to meet current requirements and anticipate future client expectations.
- Correcting, preventing, or reducing undesired effects that could impact project delivery, compliance, or client satisfaction.
- Improving the performance and effectiveness of the Quality Management System (QMS) through lessons learned, feedback, and regular evaluations.

Improvement opportunities may arise from client feedback, internal audits, management reviews, lessons learned, industry standards, or employee input.

10.2 Nonconformity and corrective action

10.2.1 Response to nonconformity

When a nonconformity occurs, including those identified through complaints, audits, inspections, or field performance, ArchPoint:

- Reacts to the nonconformity and, as applicable:
    - Takes action to control and correct it.
    - Deals with the consequences.
    - Evaluates the need for action to eliminate the cause(s) of the nonconformity to prevent recurrence, by:
        - Reviewing and analyzing the nonconformity.
        - Determining the underlying causes.
        - Assessing whether similar nonconformities exist or could potentially occur.
        - Implements corrective actions appropriate to the risk and impact of the issue.
        - Reviews the effectiveness of actions taken to confirm that the issue has been resolved.
        - Updates risks and opportunities identified during planning, if necessary.
        - Makes changes to the QMS, procedures, or processes when needed.

10.2.2 Documented information

ArchPoint retains documented information as evidence of:

- The nature of nonconformities and subsequent actions taken.
- The results and verification of corrective actions.

Records are maintained in the Nonconformance and Corrective Action Log and reviewed during management reviews.

Nonconformances are managed in accordance with QMP-006 Nonconformance and Corrective Action Procedure.

10.3 Continual improvement

ArchPoint continually improves the suitability, adequacy, and effectiveness of its QMS. This includes:

- Using data from monitoring, measurement, audits, lessons learned, and management reviews.

- Identifying new opportunities for improved scheduling methods, commissioning procedures, or quality practices.
- Establishing and revising quality objectives to reflect opportunities for growth and client expectations.
- Encouraging employees at all levels to contribute ideas and feedback for continual improvement.

Continual improvement is embedded in ArchPoint culture as a shared responsibility and is reinforced through leadership commitment, employee engagement, and client partnership.

TARLTON
GENERAL CONTRACTORS | CONSTRUCTION MANAGERS

Tarlton Quality Management Plan

TARLTON
GENERAL CONTRACTORS | CONSTRUCTION MANAGERS

Tarlton Quality Management Plan

This Quality Management Plan has been reviewed and is accepted by a member of Tarlton's Executive Committee. This plan will be monitored and updated by the Quality Committee. The Quality Committee will report to the Executive Committee for review and approval.

Signature

5/8/2026
Date

Tarlton Executive Committee Member

DIRK G. ELSPERMAN
Print EVP

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Revision History

Date of Initial Version: 11/29/18

Revisions to Initial Version:

Revision Date	Paragraphs Changed	Author (Name and Date)
10/10/19	Form Numbers	BMF 10/10/19
3/02/20	Change Pre-Installation meeting timeframe and DFW Table	JMS 3/02/20
2/8/21	Change test result tracking and Material Receiving and Verification details	JMS 2/8/21
11/15/22	Added 2.4 & 2.5, modified 4.1 & 4.4	JMS 11/29/22
5/08/26	Updated Forms	JMS 5/08/26

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1.0 Abbreviations

DFW – Definable Feature of Work

NCR – Non-conformance Report

PE – Project Engineer

PQT – Project Quality Team

PM – Project Manager

QC – Quality Control

QMP – Quality Management Plan

QMS – Quality Management System

QC – Quality Committee

2.0 Introduction

2.1 Mission Statement and Goals

Tarlton Corporation is committed to providing quality work which exceeds customer's expectations. Consistent quality is the result of commitment and participation by every project participant; this includes the owner, general contractor, subcontractors, sub-subcontractors, and designers. This manual outlines the responsibilities for each participant of the project team as well as the steps to accomplish a quality project. Pre-planning is a main focus of the plan, which is the key to delivering exceptional productivity, safety, and quality.

2.2 Scope

The Quality Management Plan will assure all materials and workmanship not only meet the contract requirements, but attain a high level of quality. The Quality Management Plan (QMP) specifically outlines implementation of Tarlton's Quality Management philosophy in respect to the contract documents.

This QMP will encompass the overall Quality Management steps to follow.

Pre-Construction Quality Activities

- Peer Reviews
- Constructability Reviews
- BIM Coordination
- Review of Plans and Specifications
- Documenting Existing Conditions
- Submittals / RFIs
- Material Receiving at the Jobsite
- Subcontractor Scopes/Selection
- Mockups
- Testing
- Factory/Shop Inspections

Construction Quality Activities

- Quality Control Administration
- Inspection and Testing Plan
- Inspection Checklists
- Non-Conformance Tracking Procedure
- Quality Control Program
- Material Receiving and Verification
- Progress Photos
- Pre-Coverup and Pre-Closure Inspections
- Water Intrusion Prevention
- Rolling Completion List

Post-Construction Quality Activities

- Warranty
- Warranty Call-Backs during the Warranty Period
- Eleven Month Warranty Walk Through
- Post-Construction Documentation

2.3 Roles and Responsibilities

Tarlton's executive committee is responsible for the overall development and implementation of the QMP. The executive committee has created a Quality Committee to develop, review, and maintain the QMP. The executive committee is committed to providing the adequate means and resources in support of the Quality Committee to fully implement the QMP and train all employees to ensure the Program's success.

The Quality Committee is responsible to:

- Evaluate the effectiveness of the Program at least annually
- Identify opportunities for improvement and recommend appropriate corrective measures
- Monitor construction industry quality issues and trends
- Coordinate all company functions in support of quality management best practices
- Establish quality-related metrics to measure Tarlton's performance
- After close-out of a project, customers will be asked to evaluate Tarlton's performance on their project so the Quality Committee can identify opportunities for growth and improvement

At the time of successful award of a project, the project quality team (PQT) will be identified. These members can include any of the following:

- Quality Manager – The QM will have the overall responsibility of the quality management of the project. The QM will oversee all other members of the quality team and will lead all meetings related to the QMP.
- Project Manager – The PM will be responsible to assist the QM with any quality management related items on the project. The PM will be present for all meetings related to the QMP. The PM will have overall responsibility to ensure all quality control testing and inspections are scheduled and completed.
- Project Engineer – The PE will assist the QM with any quality management related items on the project, specifically in the field. The PE will be present for all meetings related to the QMP. The PE will assist with scheduling of all quality control testing and inspections.
- Superintendent – The superintendent will be responsible for overseeing all quality on the jobsite. This will include attending meetings, scheduling testing and inspections, completing any task related checklists, and ensuring all subcontractors are aware of and comply with the QMP.
- Testing Agencies – Testing agencies will be responsible for successful completion of any quality control testing and submission of test results to Tarlton for review.

2.4 Document Control

The Quality Plan and all corresponding documentation is managed through Procore project management software. Updates to the plan are evaluated by the Quality Committee and implemented yearly as necessary with the changes being made by the Quality Manager and approved by the executive committee.

2.5 Management Review

Participation in the quality plan is audited on a continuous basis through the management software Procore. Reports are generated that measure metrics such as, meetings, non-conformance reports, and inspections which are shared with project and corporate executives quarterly. Quality Alerts are issued and shared companywide to highlight quality items as they occur.

3.0 Pre-Construction Quality Activities

3.1 Peer Reviews

3.1.1 Inter-Office Peer Review (Mandatory)

For all complex, high-risk, or unusual projects, the PQT will select members from other Tarlton departments to complete a peer review of the construction documents. The purpose is to assess all documents and have an additional review of plans and specifications step by a group of peers. Upon completion of the peer review, the results will be discussed with the PQT and utilized during the remaining steps of the pre-construction quality activities. (See 7.0 Attachments, Form #1).

3.1.2 Design/Build (As Applicable)

Upon successful award of a design-build project, a schedule of design meetings with the project team and the design team will be developed. These meetings will be a crucial portion of the preconstruction activities. The teams will work together to ensure a complete set of construction documents is produced with minimal need for changes during the construction phase. (See 7.0 Attachments, Form #2).

Upon completion of the construction documents, the PQT may elect for a design peer review of the documents to ensure a complete package has been developed for construction.

3.2 Constructability Review (Mandatory)

It is Tarlton's policy that a constructability review be performed by Tarlton's PQT along with key subcontractors, owners, and project consultants on all projects. Early and continuous

involvement by the entire project team during these reviews will reduce the likelihood of including products/designs prone to installation or functional difficulties based upon the collective experience with those products/designs. It is particularly important to perform a comprehensive constructability review for high-risk, one-of-a-kind or unusual design elements. An early review of these items will allow for any issues to be addressed and resolved prior to beginning the work.

3.2.1 Agenda

An agenda for the constructability review meeting will be assembled by a member of the PQT. This agenda will include a list of the specific items needed for review. (See 7.0 Attachments, Form #3).

3.3 BIM Coordination

Tarlton's commitment to quality has grown along with Technology with our BIM capabilities which assist our clients and subcontractors with features like clash detection, value engineering, cost savings, 3-D printing models and reducing rework. Tarlton also features and houses one the industries finest drone units which also provides other pre-detection, pre-construction views for logistics and project set-up which add value to each of our projects.

If applicable, the PQT along with the IT department, will make a BIM model of the project. This model will be evaluated by Tarlton and their subcontractors for any potential conflicts during installation. These potential conflicts will be presented to the Owner and Architect/Engineer to resolve prior to beginning any on-site work.

3.4 Review of Plans and Specifications

Before beginning construction and as early as development of plans and specifications allow, members of Tarlton's PQT will perform an in-depth review of the contract documents. This review will seek to identify conflicts and unclear or incomplete items. Reviews shall include but not limited to checking dimensions between civil, architectural, and structural drawings, checking dimensions between plans and details, checking details for missing notes, checking fixtures and equipment for conflicts or discrepancies in designation or quantities, checking location or routing conflicts among architectural and MEP items. Any conflicts, discrepancies, or other issues discovered will be noted and submitted to the owner and design consultants for review and resolution. This process has been included in all meetings.

3.5 Documenting Existing Conditions

Upon successful award of a project, the PQT will document existing conditions. Per Owner's approval, the PQT will inspect and create a detailed log including photographs of existing conditions paying close attention to pre-existing physical defects. Items to be logged and photographed include:

- Existing structures within or directly adjacent to the construction limits which are to remain

- Adjacent buildings and structures outside the construction limits which may be affected by construction activities
- Sidewalks, curbs, paving, and drainage structures
- Trees and existing vegetation
- Above-ground utilities
- Operable devices, such as, doors and windows
- Any other item with pre-existing damage or has the potential of being damaged during construction
- (See 7.0 Attachments, Form #4).

3.6 Submittals / RFIs

The PQT will develop a comprehensive submittal register during preconstruction. (See 7.0 Attachments, Form #5 and 6) The register will identify all items requiring submittal by Tarlton, subcontractors, and suppliers in coordination with the contractual requirements. The submittal register will identify the due date, taking into account the submittal review, approval process, revisions and re-submittals, fabrication, and delivery to the jobsite.

Tarlton will strictly comply with contract submittal requirements. No materials, equipment, or supplies requiring submittal review shall be procured until submittals have been approved by the owner, architect, and/or design consultants. Copies of approved submittals including manufacturer's installation instructions shall be maintained to be readily accessed in Tarlton's home or field offices. A member of the PQT shall be responsible to manage the submittal process and coordinate procurement activities. All variations or substitutions must be approved by the owner in accordance with the contract requirements.

Tarlton's PQT will ensure that all purchased building materials, equipment, and supplies conform to project requirements. Vendor selections will include their ability to provide the items specified on-time and packaged to ensure they are appropriately protected during loading, unloading, and storage at the jobsite.

During Peer Reviews (2.1), Constructability Reviews (2.2), Review of Plans and Specifications (2.3), and Documenting Existing Conditions (2.4), the PQT will document any questions, conflicts, and/or discrepancies to issue an RFI to the owner. RFIs will be documented and tracked in the RFI log. (See 7.0 Attachments, Form #7 and 8).

3.7 Material Receiving at the Jobsite

During the pre-construction activities, the PQT will develop an inventory log to track specialty/long lead items received at the jobsite. Upon receipt of a delivery, a member of the PQT will verify the items delivered are those specified and in strict conformance with approved submittals within 48 hours of arrival. These inspections will be documented in the Project Inventory Log. (See 7.0 Attachments, Form #9).

3.8 Subcontractor Selection

Subcontractor selection shall follow Tarlton's subcontractor pre-qualification and selection policies and procedures, which include safety, quality, capability, and capacity evaluations as well as pricing and inclusive scope. Selection shall be based on quality, experience, cost, and ability to successfully complete the scope of work as intended. Once selected, subcontractors will be involved in any necessary pre-construction activities including all meetings related to their work items. (See Subcontractor/Supplier Evaluation Form in 7.0 Attachments, Form #10).

Tarlton' s subcontractor pre-qualification selection process also includes the S.C.O.R.E Program (Subcontractor Cost of Risk Engineers) which is formatted to give a current financial status, bond limits and Insurance information of the subcontractor for our selection process.

3.9 Mockups (As Applicable)

As part of the pre-construction planning process, Tarlton's PQT will confirm the owner's contractual requirements for in-situs or freestanding mock-ups. In addition to these contractually defined mock-ups, Tarlton's PQT will identify other high-risk construction assemblies as candidates for additional in-situs or freestanding mock-ups. Tarlton's PQT will determine the exact number and type of mock-ups to be constructed on their specific project. Mock-ups will be utilized to establish appropriate minimum levels of quality wherever needed. (See 7.0 Attachments, Form #11).

3.10 Testing (As Applicable)

As part of the pre-construction planning process, Tarlton's PQT will review all contract documents for any required pre-construction testing. In addition to any contractually defined tests, the PQT will identify any other high-risk construction items as needed to complete pre-construction testing. Testing will be completed by Tarlton, a subcontractor, or a third-party consultant. (See 7.0 Attachments, Form #12).

3.11 Factory/Shop Inspections (As Applicable)

As part of the pre-construction planning process, Tarlton's PQT will identify high-risk construction assemblies, equipment, or materials that a member of the team will review throughout the procurement process. This review will include inspections during fabrication and any required testing prior to arrival on site. The PQT will provide a list of construction assemblies, equipment, or materials for factory/shop inspections to the owner, architect, and other consultants for their review and comment, as applicable. The owner, architect, and other consultants may choose to accompany Tarlton's representative to any applicable factory/shop inspections. (See 7.0 Attachments, Form #13).

4.0 Construction Quality Activities

4.1 Quality Control Administration

The PQT, which will be defined for each project, will participate in all aspects of the project specific quality management plan as required. These roles will be clearly defined in the project specific quality management plan as they will vary for each project depending on size and complexity. The quality manager will have overall responsibility for the quality management plan and will be responsible to ensure all other members of the team are completing their aspects of the quality management plan.

4.2 Inspection and Testing Plan

Tarlton's PQT will prepare an Inspection and Testing Plan delineating all inspections and tests required by the contract documents. This plan will include Tarlton's and all subcontractor's work. (See 7.0 Attachments, Form #14).

Information presented on the Inspection and Testing Plan will include:

- Specifications reference, paragraph, item number, etc.
- Company performing the inspection or test, i.e. Tarlton, subcontractor, third party consultant, manufacturer's representative, etc.
- Test or inspection description
- Test or inspection frequency
- Test or inspection desired results

Tarlton's PQT will maintain an Inspection and Testing Log, included with the Inspection and Testing Plan, that documents all inspections and testing performed for Tarlton's and all subcontractor's scopes of work. Tests and inspections can also be tracked in an organized file structure on Procore in lieu of a log. Manufacturer's representatives will be involved in inspections and approvals for any high-risk building elements.

Upon a failed test or inspection, the PQT will begin an investigation. An NCR will be issued for documentation of the failed test or inspection.

4.3 Inspection Checklists

Inspection Checklists have been developed by Tarlton as an aid to field personnel in making quality inspections/observations. As the site-specific quality management plan is developed, the necessary inspection checklists for the specific project will be included in the project specific plan.

Upon each subcontract award, the subcontractor will be given a copy of Tarlton's Inspection Checklists associated with their scope of work. Subcontractors will be asked to propose additions or modifications based on the project's specific requirements and their own checklists/inspection forms.

4.4 Non-Conformance Tracking Procedure

A non-conformance, also known as a deficiency, is work that is not in compliance with the project requirements. A non-conformance can be either material-related, workmanship related, design-related, or a combination thereof.

Upon identification of a non-conformance, the project quality manager will review the non-conformance in question and confirm the non-conformance. Work on the installation of the non-conforming item in question will be discontinued until the non-conforming work has been addressed. Upon addressing the item in question, the steps to follow will be documented in the NCR and work may begin again.

The non-conforming item will be documented in a Non-Conformance Report (NCR) and tracked in the Non-Conformance Report Log. (See 7.0 Attachments, Form #15 and 16). The non-conformance log will be discussed at the project meetings.

Tarlton's project quality manager is responsible to track any non-conforming work by Tarlton and all subcontractors through the following procedure:

- Non-conforming work items are identified and documented in an NCR and the NCR log within twenty-four (24) hours of identification of the non-conforming work.
- Non-conforming work item to be discussed with the PQT. A determination will be made to label the item: Use As Is, Repair, Rework, Return to Supplier, or Reject
- The corrective action will be addressed within forty-eight (48) hours and completed as soon as possible.
- The NCR will be completed with all corrective actions and signed off on by the project quality manager and any other applicable parties.
- The NCR log will be updated with the completed NCR.
- If applicable, the NCR will be discussed with the owner and architect/engineer through the NCR process.

At the conclusion of the project all applicable NCR's will be documented in the corporate Lesson's Learned log.

4.5 Quality Control (QC) Program

4.5.1 Definable Features of Work (DFW)

A Definable Feature of Work (DFW) is a task which is separate and distinct from other tasks and has separate control requirements. Each DFW will have a separate inspection and testing requirement and follow the Four Phases of Quality Control (see 4.5.2).

During the bidding phase of a project, the estimating team will begin developing a list of DFWs while reviewing all contract documents. Upon successful award of the project, the PQT will review the DFWs and make any necessary changes to the list. Once finalized, the list of DFWs will be kept in the DFW log and tracked for the Four Phases of Quality Control. (See 7.0 Attachments, Form #17).

4.5.2 Four Phases of Quality Control

Construction quality depends on effective planning, coordination, communication, supervision and testing. Tarlton's PQT will use the following tools to achieve quality:

- Quality planning meetings documented by meeting minutes (See 4.5.3, 4.5.4, and 4.5.6)
- Confirm materials meet the project requirements at the time of purchase and delivery to the jobsite (See 4.6)
- Daily inspections during construction (See 4.5.5)
- Recordkeeping/Documentation

Quality Control consists of tests, inspections, and observations before installation commences (Preparatory Phase), during First Work-in-Place (Initial Phase), daily, while installation continues (Follow-Up Phase), and at the completion of work (Final Phase).

The Four Phases of Quality Control are:

1. Preparatory Phase (Called the Pre-Installation Phase in this QMP)
2. Initial Phase (Called the First Work-in-Place Phase in this QMP)
3. Follow-Up Phase (Called Follow-Up or Daily Inspections in this QMP)
4. Final Phase (Called Final Inspection in this QMP)

The Four Phases of Quality Control allow Tarlton to plan, schedule, and install work in an orderly, consistent way that minimizes rework and ensures our teams are preventing quality issues.

4.5.3 Pre-Installation Meeting and Inspection

A pre-installation phase meeting and inspection will be performed twenty-four (24) to forty-eight (48) hours prior to any work beginning on each DFW. This meeting can occur up to one week prior to the start of work depending on the complexity of the DFW. Discussions and preparations for these meetings begin during the estimating phase of the project.

This meeting will be coordinated and conducted by the project quality manager and attended by the following:

- Tarlton's PQT
- Owner's representative
- Architects/engineers
- Subcontractors involved in the DFW
- Third party QC consultants/inspectors
- Craft supervisors for Tarlton and applicable subcontractors
- Manufacturer's representatives for any high-risk construction assemblies

The goal of this meeting is to focus on the quality efforts for **preventing** deficiencies rather than **detecting** deficiencies after the fact. Tarlton's project quality manager will prepare an agenda (See 7.0 Attachments, Form #18) and distribute to all attendees at least twenty-four (24) hours in advance. The meeting will review the following:

- Review contract drawings and specifications
- Review all submittals including shop drawings, samples, and mock-ups
- Review all RFIs
- Review manufacturer's installation instructions as applicable
- Review testing and inspection requirements and any previously completed factory test results
- Check arrangements have been made for required tests and inspections
- Check all materials and equipment are on-hand and have been tested, submitted, and approved as required
- Ensure all preliminary work necessary for the work to be accomplished has been satisfactorily completed
- Review site access, material handling, and storage requirements
- Discuss foreman and crews, construction methods, schedule of installation, workmanship, standards, and the approach to providing quality work by pre-planning and identifying potential problems
- Review jobsite safety plan and safety hazard analysis
- Confirm all applicable MSDS's are available and accessible to work crews

Meeting minutes will be assembled and distributed to all attendees within forty-eight (48) hours of the meeting.

4.5.4 First Work-in-Place Meeting and Inspection

A first work-in-place phase meeting and inspection will be performed at approximately ten percent completion of a DFW. This allows for a representative portion of the DFW to be reviewed at the time of the meeting and inspection.

The first work-in-place may be conducted more than one time per DFOW. In the case of a long lapse in work on the DFOW, a first work-in-place meeting will occur prior to work on the DFOW beginning again. The first work-in-place meeting will also be repeated in the case of an NCR as necessary. If an NCR changes components of the DFOW identified in the pre-installation and/or first work-in-place phase, an additional first work-in-place meeting will occur to discuss and document the changes.

This meeting will be coordinated and conducted by the project quality manager and attended by the following:

- Tarlton's PQT
- Owner's representative
- Architects/engineers

- Subcontractors involved in the DFW
- Third party QC consultants/inspectors
- Craft supervisors for Tarlton and applicable subcontractors
- Manufacturer's representatives for any high-risk construction assemblies

The purpose of this meeting is to review compliance with project requirements, discuss progress to date, and to address any potential quality issues. Tarlton's project quality manager will prepare an agenda (See 7.0 Attachments, Form #19) and distribute to all attendees at least twenty-four (24) hours in advance. The meeting will review the following:

- Review the minutes from the Pre-Installation meeting above
- Review contract drawings and specifications
- Review any submittals and RFIs that were outstanding at the time of the Pre-installation meeting
- Verify all materials are in strict compliance with construction documents, samples, submittals, and shop drawings
- Verify manufacturer's installation instructions are being followed
- Check new work for compliance with construction documents
- Review testing and inspection schedule and results to date
- Review the acceptable level of workmanship
- Review any quality issues to date and resolve these issues
- Review any work plans and make any changes necessary to improve efficiencies and any discrepancies in the completed work
- Review jobsite safety plan and safety hazard analysis

Meeting minutes will be assembled and distributed to all attendees within forty-eight (48) hours of the meeting.

4.5.5 Follow-Up Phase or Daily Inspections

Follow-Up inspections will be performed daily and are included on the Daily Report. (See 7.0 Attachments, Form #21). Subcontractors are also responsible to complete daily inspections included in their daily report. Inspection personnel will continually refer to the standards established in the Pre-installation and First Work-in-place phases above when making these daily inspections/observations.

Follow-Up Phase inspections/observations will:

- Ensure work continues to conform to the construction documents
- Ensure quality of workmanship is maintained
- Ensure required tests and inspections are being performed
- Ensure non-conforming or deficient work is being corrected
- Ensure work is taking place safely

4.5.6 Final Inspection

The Final Inspection Phase will occur at the end of each DFW and prior to the cover up of work for this DFW.

This meeting will be coordinated and conducted by the project quality manager and attended by the following:

- Tarlton's PQT
- Owner's representative
- Architects/engineers
- Subcontractors involved in the DFW
- Third party QC consultants/inspectors
- Craft supervisors for Tarlton and applicable subcontractors
- Manufacturer's representatives for any high-risk construction assemblies

The goal of this meeting is to establish any punch list items prior to any work being covered up and reducing the end of project punch list. Tarlton's project quality manager will prepare an agenda (See 7.0 Attachments, Form #20) and will distribute to all attendees at least twenty-four (24) hours in advance. The meeting will review the following:

- Review of the Pre-Installation and First Work-in-Place meeting minutes
- Review of all testing and inspection results for the DFW
- Check all work installed and create a punch list

Upon completion of the punch list, the items will be addressed within forty-eight (48) hours and completed as soon as possible. The meeting minutes will be distributed to all attendees upon completion of the correction of punch list items.

The Final Inspection Phase will be completed at the end of the project as well. This will create the final punch list of the project. All steps listed above for each DFW will be repeated for the project Final Inspection.

4.6 Material Receiving and Verification

As described in prior sections above, a Project Inventory Log has been developed to track specialty and long lead materials received at the jobsite. The Superintendent of the PQT will verify the material delivered at the jobsite is in strict compliance with contract documents, samples, approved submittals, and shop drawings within 48 hours of arrival.

Long lead time items as well as custom fabricated material are of high importance to inspect as soon as possible and any issues addressed immediately. This will help to prevent any delays from incorrect material delivered to the jobsite.

All subcontractors will be responsible to inspect their deliveries to the jobsite and track on an inventory log. Each subcontractors inventory log will remain up to date and accessible to the PQT to review throughout the project to ensure the correct materials are being utilized for the project. (See 7.0 Attachments, Form #9).

4.7 Progress Photos

Photos are an integral part of the quality management program. Tarlton requires progress photo documentation of as-built conditions during construction on all projects allowing photos. Although it is not practical to photograph every inspected item, Tarlton's policy is to provide representative photographic documentation for each DFW or phase of a project. Tarlton's digital photograph procedure covers both conforming and non-conforming work.

All members of the PQT will be responsible for ensuring photos are taken and stored properly. The PQT will have access to both cell phones and iPads with cameras to take photos to ensure a photographic record of construction progress and quality related issues are accomplished.

By taking photos on a frequent and regular basis, organizing them logically, and labeling them accurately, a complete pictorial record can be assembled post-construction documenting that Tarlton's work and work by subcontractors conform to the contract documents.

4.8 Weekly Foreman's Meetings

Throughout the duration of the project, a weekly foreman's meeting will be held on site. A member of the PQT will be required to attend. These meetings will review any quality items for the week and will address any outstanding issues. This meeting will also cover safety and work progress for the week. A standard agenda is to be utilized at these meetings for consistency of items discussed. (See 7.0 Attachments, Form #22)

4.9 Pre-Cover-Up and Pre-Closure Inspections

Pre-cover-up and Pre-closure Inspections will be utilized to prove all work to be covered-up or enclosed is shown to comply with the project requirements. A member of the PQT will inspect items to be covered-up by a following operation and verify the items are installed in accordance with the construction documents before covering up. These inspections will be documented in the Pre-Closure Inspection Form. (See 7.0 Attachments, Form #23) Any necessary photographs or videos will be included with the report.

The Pre-Closure Inspection will follow these steps:

- A member of the PQT along with any applicable subcontractors will walk the area to be enclosed or covered-up and assess completion and conformance with project requirements. All incomplete, unsatisfactory, or non-conforming work is identified and documented in the Pre-Closure Inspection Form.
- Tarlton and subcontractors complete all incomplete, unsatisfactory, or non-conforming work previously identified. Upon completion of the corrections, a member of the PQT

verifies the work was corrected and is now in compliance with project requirements and documented in the Pre-Closure Inspection Form.

- A member of the PQT walks the area with the owner, architect, consultants, and the building code compliance inspector, as appropriate, to obtain their approval. Any incomplete, unsatisfactory, or non-conforming work is identified and documented.
- After work is corrected, a member of the PQT will repeat the walk through above to obtain approval of the corrected work. Once all work is approved, all parties will sign off on the Pre-Closure Inspection Form.
- A member of the PQT will take any necessary photographs and include them with the completed Pre-Closure Inspection Form.

4.10 Water Intrusion Prevention

Prior to any work beginning on site, a member of the PQT will review the project specific materials list and the sequence of construction. Tarlton will evaluate work practices, materials, or inadequate design that may create or expose vulnerable materials to elevated moisture conditions during and after construction. Any potential issues will be documented and utilized during any water intrusion prevention activities.

While developing the construction schedule, the PQT will assist by attempting to schedule work to prevent the building and vulnerable construction materials from being exposed to high moisture conditions during construction. Consideration must be given to three distinct construction periods when evaluating the potential for building and vulnerable construction materials being exposed to high moisture conditions:

- Exposed Phase: This includes the period when all building materials are exposed to precipitation, which typically includes framing and placing of concrete.
- Partially Enclosed Phase: This includes the period after the roof deck is installed but the building is not fully weathered in.
- Enclosed Phase: This includes the phase when the building envelope and the roofing system are complete and the interior finishes are being installed.

During the construction of the project, a member of the PQT will inspect the project site and document these inspections on the daily report. The site will be inspected to assure it is being maintained in a manner to control water intrusion and to prevent mold growth. The inspection frequency will be dependent on project conditions but at a minimum should be completed every week. Inspections may need to be more frequent during extended periods of inclement weather and particular stages of work such as the installation of critical building envelope components. The inspection results will be reviewed periodically and any at risk conditions addressed, documenting any corrections made.

5.0 Post-Construction Quality Activities

5.1 Warranty

Tarlton's standard one-year warranty program provides a point of contact from the project quality team for all warranty requests. Tarlton will log all warranty call-back requests in the Warranty Log, differentiating between maintenance and warranty matters and ensuring prompt response by Tarlton or its subcontractors to warranty issues during the warranty period. All warranty costs will be tracked with a requirement that there will be closure to each issue. (See 7.0 Attachments, Form #24).

5.2 Warranty Call-Backs during the Warranty Period

Tarlton will endeavor to satisfy the warranty and post-construction issues of its customers during the contractual warranty period in accordance with the specific terms and conditions of the Owner / Tarlton construction contract. Tarlton will respond to a warranty call-back within 72 hours and requires similar responsiveness from its subcontractors. It is Tarlton's goal to resolve each warranty call within 30 days after receiving a warranty call-back request and requires a similar commitment on the part of all subcontractors. (See 7.0 Attachments).

5.3 Eleven (11) Month Warranty Walk Through

Tarlton will contact the owner during Month 10 of the one-year warranty period. At this time Tarlton will schedule a walk through to be held during Month 11 of the one-year warranty period. Any major subcontractors will be required to attend this walk through as well. The purpose of this walk through is to ensure all work is reviewed prior to the end of the warranty period, showing the owner Tarlton puts quality as a high priority. Upon completion of the walk through, any warranty items discovered will be addressed and resolved within 30 days of the walk through.

5.4 Post Construction Documentation

Quality records will be filed on Tarlton's network in an indexed, retrievable fashion. These records will become part of the project's permanent records.
Permanent quality records include:

- Daily Reports
- Inspection Reports
- Test Reports and Logs
- As-Built Drawings
- Approved Submittals
- Non-conformance Reports
- Material Certifications
- Photo and Video Documentation
- Final Inspections
- Special Process Procedures, As Applicable
- Final System Testing, As Applicable
- Commission Reports, As Applicable

- Operation and Maintenance Manuals
- Training of Owner Personnel
- Warranties
- Copies of City/County Inspections
- Copies of Certificates of Occupancy from Building Officials

6.0 Glossary of Terms

Approval : acceptance that equipment of system has been properly installed and is functioning in the tested modes according to the contract documents.

Architect/Engineer (A/E) : the prime consultant and subconsultants who comprise the design team. Develops the tenant and/or the owner operation criteria and requirements for the project.

Building Systems : the architectural, structural, mechanical, plumbing, life safety and electrical systems along with their respective subsystems, equipment and components.

Certified Inspection Reports : certified inspection reports are those signed by approved inspectors attesting that the items inspected meet the requirements other than any exceptions included in the report.

Certified Test Reports : certified test reports of test signed by qualified authorized personnel attesting that the test results reported are accurate, and that the items tested either meet , or fail to meet, the stated minimum requirements. These test reports include those performed by factory mutual, underwriters laboratories, Inc., Independent testing laboratories and others.

Compliance : the development and checking of a process to ensure that it does not contradict a standard or set of regulations.

Compliance Audit : a specific type of review that identifies areas where an organization processes fail to meet the requirements of a given regulation or other requirement.

Conformance : the development and checking of products and other concrete objects produced by a process, to ensure that they do not violate a standard or other definition of the product.

Continuous Quality Improvement (CQI) : philosophy and attitude for analyzing capabilities and processes and improving them repeatedly to achieve the objective of customer satisfaction.

Cost of Poor Quality : the cost associated with providing poor quality products or services. There are 4 categories of cost. ***Internal Failure Cost*** (cost associated with defects found before the customer receives the product or service) ***External Failure Cost*** (cost associated with defects found after the customer receives the product or service). ***Appraisal Cost*** (cost incurred to determine the degree of conformance to quality requirements). ***Prevention Cost*** (costs incurred to keep failure and appraisal cost to a minimum).

Customer Service : the results of delivering a product or service that meets customer requirements.

Deficiency : a condition in the installation or function of a component , piece of equipment or system that does not comply with the contract documents (that is, does not perform properly and is not complying with the design intent)

Definable Feature of Work (DFW) : a task that is separate and distinct from other tasks and has separate control requirements

Design Team : the various parties responsible for working together in providing for the design and preparation of contract documents for the various building systems of the facility.

Factory Testing : testing of the equipment on-site or at the factory , by factory personnel.

Field Tests : test or analysis made at, or near, the jobsite in connections with the actual construction including, but not limited to, concrete and asphalt batch plants, pre-cast concrete plants and similar establishments directly involved in the construction.

Inspection : examining and testing supplies, services, materials, components or assemblies to determine contract compliance.

Manufacturer's Certificate of Conformance or Compliance : a certificate signed by an authorized manufacturer's official attesting that the material or equipment delivered meets the specification requirements.

Non-Compliance or Non-Conformance : See Deficiency

Non-Conformance Report (NCR) : the document that describes the particular non-conformance with project requirements. NCR's shall be assigned a unique number and tracked on a non-conformance log- See below

Non-Conformance Log : the contemporaneous list of all outstanding non-conformances.

Owner Training : owner training and orientation on equipment and systems provided by the subcontractor or Tarlton.

Performance Verification : the process of determining the ability of a system to function and deliver services in accordance with the design intent.

Procedure : the steps in a process and how these steps are to be performed for the process to fulfill the customer's requirements.

Process : a set of interrelated work activities characterized by a set of specific inputs and value added tasks that make up a procedure for a set of specific outputs.

Product : the term "product", including the plural thereof, means a type or a category of manufactured goods, constructions, installations and natural and processed materials of those associated services whose characterizations, classifications or functional performance determination is specified by standards.

Project Management Team (PMT) : management personnel from the General Contractor assigned to manage Tarlton's subcontract. This includes the Project Manager, Project Engineer, Field Engineers, Project Superintendents, and other Discipline Engineers and Superintendents.

Project Manager (PM) : the assigned senior management person of Tarlton's responsible for Tarlton's subcontract.

Project Team (PT) : See Project Management Team.

Quality Audit : a systematic , independent examination and review to determine whether quality activities and related results comply with planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives.

Quality : conforming to the plans, specifications and applicable codes and standards; conformance to the requirements, i.e., meeting customer's requirements.

Quality Control (QC) : individual activities , such as , inspecting and testing by which conformance to the project specifications is validated.

Quality Control Plan (QCP) : subcontractors of Tarlton's quality control plan.

Quality Level : the specific degree of excellence, basic nature, character or kind of performance of a particular item or group of items as specified.

Quality Management System (QMS) : consists of the people and processes in place to ensure construction meets the customer's requirements.

Quality Management : the application of a quality management system in managing a process to achieve maximum customer satisfaction at the lowest overall cost to the organization while continuing to improve the process.

Quality Management Plan (QMP) : the project-specific plan to ensure quality as outlined in this quality management manual.

Site Quality Representative (SQR) : subcontractor's employee responsible to implement subcontractor's site-specific quality control plan.

Specifications : the construction specifications contained in the contract documents from the owner.

Testing Laboratory : the term " testing laboratory" means any "person" whose function include testing, analyzing or inspecting "products", as defined above, and/or evaluating the designs of specifications as such "products" according to the requirements of applicable standards.

Test Procedures : the detailed systematic and sequential process that must be executed to fulfill the system functionality and performance testing. The subcontractor shall utilize such as industry standards, manufacturer requirements and recommendations to develop the required test procedures.

Test Requirements : Requirements specifying what modes and functions, etc. shall be tested.

Third Party Evaluation, Inspection and Testing : elements of the inspection that determine the properties of functional operation of the materials or components by the application of established scientific principles, construction practices and procedures with formally documented records by a completely objective company/organization/ individual.

Vendor : supplier of materials, supplies, or equipment.

Warranty Period : warranty period for a project including equipment, components and systems. Warranty begins at agreed substantial completion and extends for at least one year, unless specifically noted otherwise in the contract documents and accepted submittals.

Procurement Plan

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Appendix A - Sample Equipment Procurement Register

Appendix B - Sample Technical and Commercial Evaluation Scorecard

1. Purpose and Objectives

This Procurement Plan describes an adaptable approach for identifying, selecting, evaluating, approving, purchasing, tracking, receiving, and closing out equipment. The process supports timely, technically sound decisions; integrates equipment information into design and construction; protects the schedule; and helps deliver equipment that satisfies the Owner's performance, reliability, safety, maintainability, and lifecycle objectives.

The Plan provides a general framework rather than a fixed set of procedures for every assignment. The Owner's requirements and the applicable contract documents will govern the specific procurement activities, reviews, approvals, records, and deliverables. The project team will tailor the framework to the project's scope, complexity, delivery method, risks, schedule, and procurement responsibilities.

1.1 Objectives

- Establish clear technical, commercial, schedule, and quality requirements before solicitation.
- Identify long-lead and schedule-critical equipment early and establish timely release strategies.
- Provide a transparent and documented evaluation process that supports best-value selection.
- Coordinate Owner, engineer, contractor, procurement, operations, and supplier input at defined decision points.
- Control equipment interfaces and incorporate approved vendor information into the design.
- Provide reliable forecasting, expediting, testing, delivery, and closeout controls.

1.2 Guiding Principles

Equipment will be selected on the basis of total project value, not purchase price alone. Evaluations will consider technical compliance, system compatibility, safety, reliability, lead time, quality, maintainability, operating experience, service support, warranty, lifecycle cost, and commercial terms. The team will preserve competition where practical while recognizing valid Owner standards, system-standardization goals, sole-source conditions, and emergency schedule needs.

1.3 Scalable Application and Owner Requirements

The process will be only as robust as needed for the equipment and project. At the outset, the team will confirm with the Owner which activities and deliverables apply, who is responsible for them, and what level of review and documentation is expected. Owner standards, approved manufacturers, operational preferences, funding and contracting requirements, and required approval points will be incorporated into the procurement strategy.

Application Level	Typical Use	Typical Process
Limited	Routine, low-value, readily available equipment with few interfaces and low schedule risk.	Confirm requirements and Owner preferences; obtain appropriate pricing; document selection and approval; track delivery and acceptance.
Standard	Moderate-value or moderately complex equipment with several design, construction, or operational interfaces.	Use defined specifications, competitive evaluation as appropriate, submittal tracking, schedule monitoring, testing, and documented closeout.
Enhanced	High-value, custom, long-lead, mission-critical, or high-risk equipment.	Apply formal stage gates, multidisciplinary evaluation, detailed schedule and risk controls, expediting, inspections, witnessed testing, logistics planning, and comprehensive turnover.

Not every activity or deliverable described in this Plan is required for every project. Items such as formal scorecards, extensive prequalification, factory surveillance, enhanced commercial security, detailed expediting, or comprehensive turnover packages will be used when required by the Owner, the contract, or the equipment's risk and complexity.

2. Collaborative Delivery and Procurement Approach

The team will use an integrated, collaborative approach that brings the Owner, designer, constructor, procurement personnel, operations representatives, and key suppliers into decisions at the appropriate time. This coordination will align equipment decisions with design development, permitting, site readiness, construction sequencing, startup, and long-term operations while preserving the responsibilities established by the applicable contracts.

2.1 Collaborative Delivery Practices

- **Early involvement.** Construction, procurement, operations, and supplier knowledge will inform equipment definitions, packaging, access, constructability, testing, and commissioning requirements.
- **Shared schedule.** Engineering deliverables, solicitations, awards, vendor data, fabrication, testing, delivery, and installation milestones will be linked in the integrated project schedule.
- **Progressive decisions.** Information will be developed and approved through defined gates so critical equipment can be released without waiting for completion of the entire design.
- **Transparent evaluation.** Assumptions, exceptions, risks, scoring, and recommendations will be documented and made available to authorized decision-makers.
- **Interface ownership.** Equipment boundaries and dependencies will be assigned, tracked, and resolved before they affect fabrication or field installation.
- **Continuous risk management.** Lead-time, supply-chain, escalation, logistics, and vendor-performance risks will be reviewed throughout the procurement cycle.

2.2 Procurement Methods

The project team will recommend the procurement method for each equipment package based on Owner requirements, schedule, market conditions, design maturity, commercial risk, and project complexity. Methods may include competitive bidding, prequalified competitive bidding, sole- or single-source procurement with documented justification, Owner-direct purchase, contractor purchase, or early release/limited notice to proceed. Owner-purchased equipment may be assigned to the construction contractor when appropriate, with responsibilities for custody, installation, testing, warranty, and risk of loss clearly defined.

3. Organization, Roles, and Decision Rights

Roles and contractual authorities will be confirmed for each project based on the Owner's delivery and contracting approach. The following framework presents typical functional responsibilities and will be adjusted as appropriate.

Role	Primary Responsibilities	Typical Decisions / Deliverables
Owner / Owner's Representative	Defines operational preferences, standards, funding, risk tolerance, and approval authority.	Approve procurement strategy, acceptable manufacturers, bid recommendation, major deviations, and award.
Project Manager	Integrates scope, schedule, budget, risk, communication, and decision management.	Authorize work within delegated limits; elevate exceptions and changes.
Engineer / Discipline Leads	Develop performance requirements, specifications, data sheets, interfaces, and technical evaluations.	Determine technical compliance and recommend disposition of exceptions.
Procurement Lead	Develop solicitation, manage bidder communications, commercial evaluation, award documentation, expediting, and records.	Confirm commercial completeness and procurement compliance.
Construction Manager / Contractor	Provide constructability, logistics, installation, testing, storage, and schedule input.	Confirm site readiness and installation requirements.
Operations and Maintenance	Provide standardization, reliability, maintainability, training, spares, and service-history input.	Accept O&M features and turnover requirements.
Supplier / Manufacturer	Provide compliant proposal, exceptions, schedule, drawings, calculations, testing, delivery, and field support.	Certify equipment performance and promptly disclose risks or changes.

3.1 Governance and Communications

Procurement status will be reviewed during regular project coordination meetings, with focused long-lead or supplier meetings as required. Formal communications affecting scope, price, schedule, or technical requirements will be routed through authorized channels. Decisions, approvals, action items, and deviations will be recorded in the applicable project

control log. No supplier-directed change will be implemented without approval under the project's change-control requirements.

4. Equipment Planning and Long-Lead Strategy

4.1 Early Equipment Register

When warranted by the project scope or required by the Owner, an Equipment Procurement Register will be established during planning or design and updated through closeout. Each package will be assigned an owner and tracked from requirements definition through final acceptance. Register content will be scaled to project needs and may include:

- Equipment package, system, quantity, and procurement responsibility
- Technical specification and data-sheet status
- Required-on-site date and current forecast delivery date
- Budget value and approved commitment, as applicable
- Approved manufacturers, bidders, and procurement method
- Solicitation, clarification, evaluation, approval, and award milestones
- Vendor data, shop drawing, fabrication, test, and shipping milestones
- Critical interfaces, constraints, risks, mitigation actions, and responsible parties
- Receipt, inspection, deficiency resolution, warranty, spares, training, and closeout status

4.2 Long-Lead Identification

At kickoff and at each design milestone, the team will screen equipment for long-lead status. An item will be treated as long-lead or schedule-critical when its total procurement cycle, including requirements definition, solicitation, evaluation, approval, vendor submittals, fabrication, testing, shipping, and site acceptance, approaches or exceeds the available float before the required installation date. Market intelligence will be validated through manufacturer or supplier outreach rather than relying solely on historical lead times.

4.3 Preliminary Long-Lead Candidates

Long-lead items vary by project type. The following representative categories will be confirmed, removed, or expanded to match the final project scope:

Potential Package	Early Actions	Key Interfaces / Risks
Major process equipment	Confirm capacity, duty point, materials, redundancy, controls, testing, and performance guarantees; obtain budgetary proposals and production schedules.	Hydraulics/process design, piping, foundations, utilities, access, controls, startup, and commissioning.
Electrical distribution and power equipment	Confirm ratings, system configuration, fault duty, controls, enclosure requirements, monitoring, and testing.	Utility service, protection, raceways, grounding, buildings, auxiliary systems, and equipment loads.
Mechanical and packaged systems	Define operating conditions, equipment arrangement, utility needs, acoustical/environmental criteria, controls, and service clearances.	Structural support, piping/ductwork, drainage, power, controls, access, and field assembly.
Controls, instrumentation, and communications	Establish architecture, I/O, protocols, cybersecurity requirements, panel arrangement, and testing plan.	Process equipment data, network paths, power, programming, integration testing, and Owner standards.
Pre-engineered buildings, fabricated structures, and specialty assemblies	Establish loading criteria, dimensions, materials, coatings, openings, connection details, and design-submittal schedule.	Site layout, foundations, utilities, permitting, transport limits, access, and installation sequence.
Specialty materials or custom-fabricated components	Verify design requirements, material availability, fabrication capacity, certifications, mockups, and testing.	Approved sources, substitutions, dimensional interfaces, coatings, logistics, and field tolerances.

4.4 Schedule Protection Measures

- Issue requests for information or budgetary quotations early to validate market availability and lead times.
- Separate procurement packages where an early release provides meaningful schedule benefit.
- Define the minimum design inputs required for release and clearly identify remaining assumptions.
- Reserve manufacturing capacity or authorize limited engineering when commercially appropriate and approved.
- Maintain alternate qualified suppliers or technical equivalents where standardization requirements permit.

- Link required vendor data dates to downstream engineering and construction activities.
- Use expediting and recovery plans when forecast milestones threaten required-on-site dates.

5. Equipment Selection and Evaluation Process

Equipment selection may follow the controlled stage-gate process below when appropriate for the package. The Owner will confirm applicable approval points and required deliverables. For routine or low-risk purchases, the steps may be combined or simplified while maintaining technical compliance and adequate decision records.

5.1 Stage-Gate Process

1. **Define requirements.** Confirm scope, system function, design criteria, applicable codes and standards, Owner standards, environmental conditions, interfaces, testing, documentation, warranty, spares, training, and required dates.
2. **Establish sourcing strategy.** Determine packaging, bidder qualifications, procurement method, approved manufacturers, evaluation criteria, commercial terms, and approval path.
3. **Prepare solicitation documents.** Develop specifications, data sheets, drawings, bid forms, schedule requirements, submittal requirements, quality provisions, and instructions for identifying deviations.
4. **Solicit and clarify.** Issue documents to qualified bidders, conduct pre-bid coordination as needed, provide equal information to bidders, and document responses and addenda.
5. **Evaluate proposals.** Perform completeness, technical, commercial, schedule, quality, lifecycle, and risk reviews; normalize proposals; and resolve material exceptions.
6. **Recommend and approve.** Prepare an evaluation summary and recommendation for award, identify remaining conditions, and obtain approvals required by the Owner and contract.
7. **Award and launch.** Finalize scope and commercial terms, issue the purchase order or subcontract, conduct a post-award kickoff, and baseline the vendor schedule and submittal register.
8. **Manage through acceptance.** Review vendor data, monitor fabrication, conduct tests and inspections, coordinate delivery and installation, resolve deficiencies, and complete turnover.

5.2 Evaluation Criteria

For complex or significant purchases, the evaluation may use mandatory pass/fail requirements and weighted best-value criteria. Weighting will be established before proposals are opened and tailored to the package and Owner requirements. Simpler purchases may use a documented compliance and price comparison. A sample scorecard is included in Appendix B.

Evaluation Area	Typical Considerations	Illustrative Weight
Technical compliance	Ratings, performance, standards, design margins, exceptions, and completeness	25-35%
System compatibility	Physical, electrical, controls, communications, protection, and construction interfaces	10-15%
Schedule	Engineering, submittal, fabrication, testing, shipment, and recovery capability	15-25%
Quality and experience	Quality program, relevant installations, testing capability, references, and performance history	10-15%
Lifecycle and maintainability	Reliability, efficiency, standardization, spares, serviceability, support, and expected life	10-15%
Commercial	Evaluated price, freight, escalation, taxes, payment, bonds, warranty, and contractual exceptions	15-25%
Risk	Supply chain, capacity, subcontractors, sole-source exposure, logistics, and unresolved deviations	Integrated / modifier

5.3 Technical Evaluation and Deviations

The engineer will prepare a compliance matrix comparing each proposal with the solicitation requirements. Exceptions, substitutions, omissions, and qualifications will be logged and classified by significance. Bidders may be asked to clarify

their proposals, but material scope or commercial changes will be managed consistently and in accordance with the solicitation rules. The final recommendation will identify the basis of selection, evaluated cost, schedule, material exceptions, risks, and conditions to be resolved before award.

6. Procurement Execution

6.1 Solicitation and Bid Management

- Use current, coordinated technical documents and clearly define proposal due dates and validity periods.
- Require bidders to provide manufacturing location, lead time, milestone schedule, exceptions, freight assumptions, commissioning support, warranty, and recommended spares.
- Control bidder questions, clarifications, and addenda through the designated procurement channel.
- Protect confidential and proprietary information and maintain an auditable procurement record.
- Complete technical and commercial alignment before award to reduce post-award change exposure.

6.2 Purchase Order Requirements

Purchase orders and subcontracts will incorporate the final technical scope, approved proposal clarifications, required documentation, key schedule milestones, delivery terms, warranty, and closeout deliverables. Additional provisions such as inspection and test plans, packaging requirements, bonds, commercial security, schedule remedies, or enhanced change controls will be included when required by the Owner, contract, or equipment risk. The governing order of precedence will be stated when needed to avoid ambiguity among specifications, data sheets, drawings, proposals, and clarification records.

6.3 Post-Award Kickoff and Baseline

A post-award kickoff will confirm scope, contacts, communications, design interfaces, submittals, hold and witness points, manufacturing milestones, testing, shipping, site conditions, invoicing, change control, and closeout requirements. The accepted supplier schedule and submittal register will become the baseline for progress measurement.

6.4 Expediting and Change Control

The procurement lead will obtain status at a frequency appropriate to each package's risk. Critical milestones may include design release, material purchase, drawing approval, fabrication start, component receipt, assembly, testing, shipment, and delivery. Forecast changes will be evaluated for project impact and supported by a recovery plan when required. Supplier changes affecting scope, ratings, materials, configuration, manufacturing location, schedule, or price will be documented and approved before implementation.

7. Vendor Data and Design Integration

Vendor information is a design and construction input and will be managed accordingly. Based on Owner requirements and project complexity, the team will establish either a formal Vendor Data Requirements List or a simplified submittal log identifying required documents, responsible reviewers, due dates, and final status.

- Priority data will be sequenced to support site work, foundations, structures, buildings, piping and utilities, electrical and controls design, access, lifting, and installation planning.
- Submittal reviews will assess compliance and interface coordination; review does not relieve the supplier of contractual responsibility for design or performance.
- Comments will be consolidated, classified, returned within agreed review periods, and tracked to closure.
- Approved data will be incorporated into coordinated design documents through document-control and change-management processes.
- Final certified drawings, calculations, manuals, settings data, test reports, and record information will be included in turnover requirements.

8. Quality Assurance, Testing, and Acceptance

Quality requirements and deliverables will be established by the Owner and incorporated into the solicitation as appropriate. Suppliers will provide applicable certifications, procedures, quality plans, inspection and test plans, and nonconformance controls. Document reviews and factory hold, witness, or surveillance points will be selected based on equipment criticality, complexity, and risk.

Phase	Controls
Design and submittals	Specification QA/QC, design calculations, certified drawings, material certifications, approved deviations, and interface checks.
Manufacturing	Quality plan review, production surveillance where warranted, nonconformance reporting, and milestone verification.
Factory testing	Approved procedures, calibrated instruments, witness/hold points, certified test reports, deficiency list, and release authorization.
Receiving	Shipping-document review, visual inspection, damage documentation, completeness check, preservation, and discrepancy resolution.
Field acceptance	Installation checks, field tests, functional testing, commissioning support, punch-list closure, and Owner acceptance.

9. Delivery, Storage, Installation, and Warranty

Delivery planning will begin before fabrication is complete. The supplier, procurement lead, and construction team will coordinate shipping configuration, route restrictions, permits, escorts, crane and rigging needs, unloading responsibilities, required notices, site access, laydown space, foundations, utilities, and weather limitations. Required-on-site dates will be validated against construction readiness to avoid both late delivery and premature receipt.

- Define packaging, moisture control, shock/tilt monitoring, special handling, and preservation requirements.
- Document custody, risk of loss, title transfer, insurance, and receiving responsibilities.
- Inspect shipments promptly and preserve evidence needed for freight or warranty claims.
- Maintain manufacturer-required storage conditions, periodic inspections, energization of heaters, and preservation logs.
- Coordinate installation supervision, field assembly, oil processing or other specialty services, testing, and commissioning.
- Align warranty commencement with delivery, installation, or acceptance and obtain extensions when early procurement would erode useful warranty coverage.
- Turn over recommended spares, special tools, training, manuals, test reports, certificates, and warranty contacts.

10. Procurement Risk Management

Procurement risks will be entered in the project risk register, assigned an owner, assessed for probability and impact, and reviewed until closed or accepted. The following table identifies representative risks and planned responses.

Risk	Potential Effect	Typical Mitigation
Lead-time growth or lost production slot	Late equipment and delayed energization	Early market check; timely release; reservation strategy; alternate supplier; milestone expediting; recovery plan.
Incomplete requirements at release	Change orders, redesign, or incompatible equipment	Minimum-release checklist; documented assumptions; interface freeze dates; controlled early-release scope.
Vendor data delay	Site, foundation, structural, utility, controls, or building design delayed	Prioritized data schedule; contractual dates; focused review; escalation and recovery plan.
Technical exception or substitution	Reduced performance or design rework	Compliance matrix; formal deviation review; lifecycle and interface assessment; Owner approval.
Price escalation or material volatility	Budget overrun	Proposal-validity management; escalation terms; early buy; allowances; competitive alternates.
Supplier capacity or financial weakness	Performance failure or default	Prequalification; references; financial/commercial review; bonds or security; alternate-source planning.
Logistics or site-readiness conflict	Damage, storage cost, or installation delay	Logistics plan; route survey; readiness checks; delivery window; protected storage and preservation.
Factory test failure or nonconformance	Rework and shipment delay	Approved test plan; witness points; early issue notice; corrective action and retest requirements.
Warranty gap	Owner exposure before beneficial use	Negotiate start date or extension; document preservation; maintain warranty and claim log.

11. Controls, Reporting, and Closeout

11.1 Project Controls and Reporting

Procurement reporting will be integrated with project schedule and cost controls to the extent required by the Owner and appropriate for the assignment. Reporting frequency and format will reflect the number and complexity of packages and will increase for critical items when needed. A procurement status report may summarize:

- Long-lead status and changes since the prior report
- Baseline and forecast milestones with variance and float
- Solicitations, evaluations, approvals, commitments, and forecast costs
- Vendor submittals, overdue data, fabrication progress, testing, and shipment
- Critical decisions, open deviations, risks, recovery actions, and responsible parties
- Upcoming Owner, engineer, contractor, and supplier actions

11.2 Key Performance Indicators

Indicator	Purpose
Packages awarded by required date	Measures timely procurement release and approval.
Forecast delivery versus required-on-site date	Provides early warning of schedule exposure.
On-time vendor data	Measures supplier support to engineering and construction.
Submittal review cycle time	Identifies review bottlenecks and supports recovery.
Open technical deviations / nonconformances	Tracks unresolved quality and compliance risk.
Committed and forecast cost versus budget	Controls procurement cost and anticipated exposure.

Indicator	Purpose
Closeout documentation complete	Measures readiness for acceptance and turnover.

11.3 Closeout

A package will be closed only after contractual equipment and services have been delivered; inspections, testing, and commissioning obligations are complete; deficiencies and claims are resolved; final payment requirements are satisfied; and required record documents, manuals, certificates, warranties, spares, special tools, software/licenses, and training records have been accepted. Lessons learned will be documented for application to subsequent packages and future projects.

Appendix A - Sample Equipment Procurement Register

The live register should be maintained in spreadsheet or project-controls software. The abbreviated format below illustrates the minimum decision and schedule fields.

ID	Package	Resp.	Required On Site	Current Stage	Forecast	Risk / Action
EQ-001	[Major process equipment]	[Owner/Contractor]	[DATE]	Requirements / Budgetary quotes	[DATE]	Confirm capacity, materials, duty, interfaces, and production availability.
EQ-002	[Electrical / power equipment]	[Owner/Contractor]	[DATE]	Specification development	[DATE]	Validate ratings, configuration, enclosure, controls, and testing requirements.
EQ-003	[Packaged system / modular building]	[Owner/Contractor]	[DATE]	Concept layout	[DATE]	Freeze footprint, utilities, openings, loads, access, and transport splits.
EQ-004	[Controls / instrumentation package]	[Owner/Contractor]	[DATE]	Architecture definition	[DATE]	Coordinate I/O, protocols, equipment data, cybersecurity, and testing.

Recommended Register Fields

Category	Fields
Identification	Equipment ID, package, system, description, quantity, WBS/cost code, procurement responsibility.
Requirements	Specification/data-sheet status, approved manufacturers, technical lead, required approvals, procurement method.
Schedule	Required-on-site date, solicitation, bid, evaluation, approval, award, vendor data, fabrication, FAT, ship, and delivery dates.
Commercial	Budget, estimate, proposal, evaluated price, committed amount, forecast, contingency, freight, escalation, change orders.
Controls	Current status, schedule variance, criticality, risk rating, issue/action, responsible party, due date, decision reference.
Closeout	Receipt, inspection, deficiencies, commissioning, manuals, training, spares, warranty, final acceptance, and final payment.

Appendix B - Sample Technical and Commercial Evaluation Scorecard

Mandatory requirements should be evaluated first. A bidder failing a mandatory requirement may be rejected or advanced only with a formally approved exception. Weighted criteria should be tailored and approved before proposal opening.

Criterion	Weight	Bidder A Score (1-5)	Bidder B Score (1-5)	Evaluator Notes / Reference
Technical compliance	30%			
System and design compatibility	10%			
Delivery schedule and recovery capability	20%			
Quality program and relevant experience	10%			
Reliability, maintainability, service, and lifecycle value	10%			
Evaluated commercial value	20%			
Weighted total	100%			

Scoring Guidance

Score	General Meaning
5 - Excellent	Materially exceeds requirements or provides documented added value with low execution risk.
4 - Very Good	Fully meets requirements and offers favorable features, schedule, or risk profile.
3 - Acceptable	Meets requirements with no material concerns.
2 - Marginal	Partially meets requirements; exceptions or risks require mitigation before award.
1 - Unacceptable	Does not meet a material requirement or presents unacceptable risk.

Evaluation Record

The final evaluation record should include the solicitation documents and addenda; bidder proposals; clarification questions and responses; technical compliance matrices; commercial normalization; scoring sheets; reference checks, if used; risk assessment; recommended conditions of award; approvals; and the final recommendation memorandum.

Planned Training Package

Continental Tire Mt. Vernon Substation MVS-7

We will coordinate a training program for Continental Tire's operations, maintenance, engineering, and electrical personnel covering the completed MVS-7 substation, MVS-6 tie connection, transferred plant feeders, and associated SCADA system alarms for new substation.

The program will include two repeated one-day sessions to accommodate different operating shifts. Each session will combine classroom instruction and hands-on field instruction using the installed equipment, final drawings, approved operating procedures, and completed SCADA configuration. Training will occur following successful commissioning and before final project acceptance.

Training Development and Coordination

We will develop one coordinated training package with input from Continental Tire, Tarlton, the equipment manufacturers, and the SCADA integrator. Preparation will include:

- Confirming attendee roles, experience levels, and training objectives.
- Developing the agenda and coordinating instructor participation.
- Incorporating final one-lines, equipment information and relay settings.
- Consolidating OEM operating and maintenance guidance.
- Preparing practical exercises and a participant knowledge check.
- Submitting the training package and operating procedures to Continental Tire for review before delivery.

Field Instruction and Practical Exercises

Field instruction will include equipment identification, normal inspection points, interpretation of relay and SCADA indications, and practical responses to selected equipment alarms and feeder trips. Energization, de-energization, switching, and lockout/tagout procedures will be demonstrated through approved walkthroughs, simulations, or de-energized equipment demonstrations.

Any live equipment operation will require Continental Tire's authorization and established operating procedures. Completion of training will not independently qualify, certify, or authorize personnel to perform switching.

Planned Daily Agenda

The following agenda will be repeated for each operating shift.

Time	Topic	Instructor
8:00–8:30	System overview, power flow, MVS-7 arrangement, MVS-6 tie, and transferred feeders	ArchPoint
8:30–9:45	Equipment operation and maintenance: transformers, switchgear, capacitor banks, electrical house, and battery system	Applicable OEM representatives
9:45–10:00	Break	—
10:00–11:00	Protection and controls: relay indications, trip logic, interlocks, event review, and troubleshooting	ArchPoint
11:00–12:00	SCADA alarms, trends, event records, user access	ArchPoint
12:00–12:30	Lunch	—
12:30–1:15	Approved normal and emergency operating procedures, switching responsibilities, and outage coordination	ArchPoint and Continental Tire
1:15–2:45	Field instruction: equipment identification, inspection points, local controls, relay displays, battery and transformer checks, and SCADA demonstrations	ArchPoint, OEMs, and SCADA integrator
2:45–3:00	Break	—
3:00–3:30	Troubleshooting exercises, knowledge check, questions, and closing review	ArchPoint

The final agenda may be adjusted with Continental Tire to reflect equipment complexity and participant needs while maintaining both classroom and field instruction.

Instructor Responsibilities

Participant	Planned responsibility
ArchPoint Engineering	Lead training development and delivery; explain system design, power flow, protection, operating interfaces, and troubleshooting; consolidate final materials and attendance records.
Transformer OEM	Explain transformer monitoring, alarms, cooling equipment, inspections, maintenance, and manufacturer-specific operating requirements.
Switchgear and electrical house OEM	Explain breaker operation, interlocks, equipment access, station service, battery/charger systems, HVAC, and hazard detection. Coordinate specialty suppliers where necessary.
Capacitor bank OEM	Explain operating modes, controller functions, alarms, interlocks, maintenance, and manufacturer-required discharge precautions.
MVS-6 switchgear OEM	Explain the new tie breaker, modified controls and protection interfaces, and maintenance requirements associated with the modification.
SCADA integrator	Demonstrate alarms, controls, event record, reporting, and user administration.
Continental Tire	Approve site operating procedures, identify operating authority, provide site-specific safety requirements, and arrange employee attendance and access.

Where one supplier covers multiple equipment packages, its instruction will be consolidated to avoid duplication.

Recordings and Final Materials

Both sessions will be recorded, including classroom instruction and field demonstrations where site conditions and Continental Tire's recording requirements permit. Recordings will capture instructor audio and presentation content and will be organized by session and topic.

The final coordinated package will include the consolidated presentation and participant handbook; system one-lines and equipment references; approved operating procedures and emergency response guidance; maintenance guides and OEM manuals; SCADA operating and administration guidance; recordings; attendance records and completed knowledge checks; and responses to outstanding training questions.

Electronic materials will be provided in organized PDF and commonly playable video formats. The proposed hard-copy allowance is one participant handbook per attendee, based on the confirmed roster, plus two complete reference binders for Continental Tire. Final materials will incorporate corrections identified during the training sessions.