Accident Prevention Plan (APP)

LONG RANGE DISCRIMINATION

RADAR (LRDR)

CLEAR AFS, ALASKA

Project Number: HQ0276-16-C-0011

Contract #:
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1.0 Signature Sheet

Plan Prepared by: ________________________________
Ray Pierce
Corporate Safety Director
Phone: 360-676-7215

Plan Concurrence: ________________________________
Kirk Waggoner
Safety Coordinator
Phone: 907 562-2336

Plan Approval: ________________________________
Terry Corrigan - Vice President
Phone: 360-676-7214

Plan Approval: ________________________________
Jon Bush - Senior Project Manager
Phone: 

Plan Approval: ________________________________
Doug Smith – Site Manager
Phone: 360-319-3925
2.0 Background Information

Contractor: Haskell Davis JV
6591 A Street, Suite 300
Anchorage, AK 99518
Contract Number: ?????
Project Name: LONG RANGE DISCRIMINATION RADAR (LRDR)

Description:
Haskell Davis JV will provide all services required for labor, materials, equipment and supervision to construct the LRDR Equipment Shelter (LES) and temporary array assemble at Clear Air Force Station, Alaska. The LES will be comprised of a multi-story structure to support the radar face and elements. The LES would support the array faces for the LRDR and will connect to the Mission Control Facility.

This LES will be an enclosed structural shell with means of access to the backside of the radar modules using array floors, catwalks, and other similar means. The LES will provide the environment needed for the radar equipment and systems to operate. This space will not be occupied except for maintenance activities.

LES subsystems:
- HVAC
- Radar process cooling and heating systems distribution
- Plumbing
- Power distribution
- Lighting
- Security
- Communications
- Fire protection and detection

Initial site activities will include laydown yard, trailers, temporary utilities and material procurement. Features of work will include pile driving, forming and concrete slab pour, backfilling, steel erection and welding, roofing and metal deck, exterior siding, demo temporary structure, sub mechanicals, start-up and commissioning.

2.1 Zero Accidents Zero Tolerance Policy

Haskell Davis JV embraces and practices a Zero Accidents, Zero Tolerance Policy. This policy is reflected throughout this Accident Prevention Plan and is expected throughout the employee ranks. Our goal for this project and every project is zero accidents. The
company President takes a personal and active interest in maintaining safety as the top priority for our company on every project.

Safety is not just a business priority at Haskell Davis JV; it is a core value that is part of our fundamental responsibility to our employees, our customers, and our community. We believe strongly that every employee should return home safely each day, without injury or illness, and be fully able to spend quality time with their family and friends.

Haskell Davis JV is firmly committed to the well-being of its employees and subcontractors by providing a safe working environment, by ensuring that all operations are conducted in strict compliance with applicable safety regulations, and by expecting every employee to plan their work and use common sense.

In addition to complying with Federal OSHA regulations and applicable state laws, Haskell Davis JV also recognizes specific safety requirements of the USACE and the Air Force.

Haskell Davis JV has maintained significantly better TRIR and DART rates than the industry average, illustrating the broad impact of our consistent safety culture and dedicated focus on continuous improvement.

Our Zero Accident, Zero Tolerance Policies are outlined below:

2.2 Safety Pre-Project/Pre-Task Planning

Safety person/personnel: While one person is designated as the Site Safety and Health Officer (SSHO) for a project, all employees on the project are expected to serve as safety officers. Employees are encouraged and authorized to take whatever actions are necessary to promote safety at the job site up to and including stopping work if necessary. See Section 4 of the APP for additional information on personnel requirements and expectations concerning safety. Pre-placement employee evaluation: Employees’ skills and training are considered prior to hiring or assigning duties. Through this evaluation, employees are placed in positions to best serve the project in achieving safe and efficient operations.

Pre-Task

Task hazard analysis: Activity hazard analyses are prepared in every stage of work. When additional hazards are noted or employee behavior is less than stellar, AHAs are updated and reviewed with all employees involved in relative tasks. The attitude of zero accidents and zero tolerance is emphasized and enforced.

Task training: Employees are assigned to tasks when they fully understand both the safety and production requirements of the task. If an employee is new to a task they are provided on-the-job-training or formal training as necessary to fully grasp these requirements. Additionally, each employee is required to attend/review activity hazard analyses and sign that they fully understand safety aspects for every given task on this project.

2.3 Safety Orientation and Training

Site orientation: All employees are required to attend a site orientation for this project.
Safety policies and procedures: Safety Policies and Procedures are prescribed in this APP. This APP forms the core and substance for the project orientation. Additionally, this APP is made available to all project employees for reference.

Project specific orientation: Project specific orientations for this project are given in concert with the site orientation.

**Emergency Contact Numbers**

Note: When calling the above number, it is imperative that the caller immediately advises the operator the closest building and exact location they are calling from.

Local Medical Facility

Fairbanks Memorial Hospital  
1650 Cowles Street, Fairbanks, AK 99701  
907-452-8181

Haskell Davis JV Corporate Office  
907-562-2336

Leslie England SSHO  
907-230-3755

Jon Bush, Project Manager  
907-230-1517

### 2.4 Alcohol & Substance Abuse Program (ASAP)

Our policy on illegal drug use, marijuana and alcohol in the workplace is zero tolerance of any detectable levels in body fluids. Haskell Davis JV has a vital interest in maintaining a safe, healthy and efficient workplace for the benefit of its employees, clients, and the public. The use of performance impairing drugs can cause avoidable injuries to employees, damage to property and significant productivity losses.

The recent legalizing possession of Marijuana for recreational use in some states does not modify our drug-free workplace policy. Marijuana remains illegal under federal law, and is classified as a Schedule I controlled substance under the Controlled Substances Act (CSA), 21 U.S.C. § 801-971.

Haskell/Davis JV wishes to ensure a safe and productive work environment, where employees are prohibited from:

- Unlawfully manufacturing, distributing, possessing or using controlled substances
- The misuse or abuse of prescribed medications
- Having detectable levels of illicit drugs or alcohol present in their bodies, during working hours
- Violations of federal and/or state laws relating to controlled substances

The only exception to this policy is the authorized possession, use and transportation of medication, prescribed by a physician and used according to prescription instructions, unless such use would pose a recognizable safety risk to the employee, other
employees or the public. Employees under the influence of legally prescribed medications which have hazard warnings relative to mental impairment shall not be authorized to operate heavy machinery, hand power tools or any equipment requiring mental alertness.

Unannounced searches of employees and their personal property for drugs or alcohol may be conducted for cause while on company property or the property of Haskell Davis JV customers whose policies mandate such actions. Entry onto Haskell Davis JV premises or jobsites is conditioned upon and constitutes consent to search. Employees are expected to cooperate in conducting such tests and searches. An employee’s refusal to consent will result in denial of access. Denial of access will result in employee termination due to unavailability for work.

Depending on the size, location and duration of out of town jobs, the Haskell/Davis JV program coordinator may be the Haskell Davis JV Corporate Safety Director or a responsible representative located at the jobsite.

For further details on our substance abuse policy refer to the Accident Prevention Program.

2.5 Smoking Policy

Smoking is permissible only in designated areas. Haskell Davis JV and its’ subcontractor employees shall follow CLIENT policies in place at the time of the work under this HSE plan.

2.6 Incident Management

All incidents are preventable. In order to achieve world class HSE performance, each incident that occurs must be reported, reviewed, and the lessons learned must be shared.

Any work-related safety incident, including first aid, must be reported immediately. The following notifications are required:

- Haskell Davis JV SSHO,
- CLIENT Project Coordinator or other designee.

Types of incidents where reporting is required include workplace injuries and illnesses, vehicle accidents, spills, environmental releases, near hits, major incidents (MIAs) and high potential incidents (HIPOs).

A detailed investigation shall be carried out for all serious or major incidents (injury, illness, or damage) and any minor accident or near-miss that had a high potential of being a major one. Less serious incidents shall be investigated with a degree of rigor appropriate to the potential for loss or injury. The principles employed are the same.

2.7 Mishap Reporting and Investigation (EM 385-1-1, 30 NOV 14)
A mishap is any unplanned, undesired event that occurs during the course of work being performed. The term “mishap” includes accidents, incidents and near misses. See Appendix Q and reporting thresholds and criteria in Section 01.D.03.

01.D.02
All mishaps occurring incidentally to an operation, project, or facility for which this manual (APP) is applicable shall be reported, investigated and analyzed as prescribed below and in accordance with ER 385-1-99.

a. Employees are responsible for reporting ALL mishaps immediately to their employer or supervisor.
b. Employers and supervisors are responsible for reporting all recordable mishaps to the GDA within 24-hours after notification from the affected employee. See also immediate notification requirements in Section 01.D.04 and 01.D.05.
c. No supervisor may decline to accept a report of any mishap from a subordinate

01.D.03
In addition to the reporting requirements identified above, the employer is required to report:

a. Property damage (exceeding $5,000 is recordable);
b. Days away injuries;
c. Days away illnesses;
d. Restricted/Transfer injuries.

01.D.04
Boards of investigation. Any accident that has, or appears to have, any of the consequences listed below shall be immediately reported to the GDA. These accidents shall be investigated in depth to identify all causes and to recommend hazard control measures. The GDA shall immediately notify the SOHO when any of these occurs and subsequent follow-up with official accident reports as prescribed by regulation.

a. Fatal injury/illness;
b. Permanent totally disabling injury/illness;
c. Permanent partial disabling injury/illness;
d. One (1) or more persons hospitalized as inpatients as a result of a single occurrence;
e. $500,000 or greater accidental property damage;
f. Three (3) or more individuals become ill or have a medical condition which is suspected to be related to a site condition, or a hazardous or toxic agent on the site'
g. NOT APPLICABLE
h. Contractor are responsible for notifying OSHA in accordance with 29 CFR 1904.39 within 8-hours when their employee(s) is fatally injured or 1 or more persons are hospitalized as inpatients as a result of a single occurrence.
Except for rescue and emergency measures, the mishap scene shall not be disturbed until it has been released by the investigating official.

01.D.07

The contractor is responsible for obtaining appropriate medical and emergency assistance and for notifying fire, law enforcement, and regulatory agencies. The contractor shall assist and cooperate fully with the GDA conducting the Government investigation(s) of any mishap.

01.D.08

Records of all first aid treatments shall be maintained and submitted to the GDA upon request.

a. Records shall include, at a minimum, employee’s name, job title, date and type of mishap, causes and corrective actions taken (i.e., AHA review, process changes, establishment of controls, personnel qualifications and training, etc.).

b. This data shall be reviewed and analyzed by the SSHO and/or SOHO for corrective action as appropriate.
2.8 Location Map
2.9 Area Map
## 2.10 Accident Experience (2017 OSHA 300 Log)

<table>
<thead>
<tr>
<th>Form 300 (Rev. 07/01/09)</th>
<th>Line</th>
<th>Case No.</th>
<th>Employee's name</th>
<th>Job title</th>
<th>Date of injury</th>
<th>Date of first report</th>
<th>Where, date, and condition of injury/illness</th>
<th>Nature of injury/illness</th>
<th>Date rehab. started</th>
<th>Date rehab. ended</th>
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Note: The form contains information regarding OSHA's Form 300, which is used to report work-related injuries and illnesses. Each line represents a separate incident, with details such as the employee's name, job title, date of injury, and nature of injury. The form is updated annually and is a required component of the OSHA 300 log for companies with 11 or more employees.
2.11 Definable Feature of Work

Each Definable Feature of Work (DFW) will require an AHA. Specific AHA’s will be submitted at a later date.
3.0 Statement of Safety and Health Policy

It is the policy of Haskell Davis JV to provide a safe and healthful environment, free from recognized hazards which may cause injury to employees, visitors, and the public. This is accomplished by maintaining a comprehensive safety and health program which involves all employees. Everyone who enters our job sites should actively support this program to prevent accidents and eliminate unsafe conditions.

Haskell Davis JV will conduct all of its activities in compliance with applicable standards, codes, regulations, and laws. Each and every employee understands that safety and health is not an additional job responsibility, but that it is an integral part of every task. If any function is not being performed safely, then it must be stopped, and altered so that it can be performed safely.

Each and every employee shall abide by established safety and health policies and procedures. It is the intent of Haskell Davis JV to accomplish this goal through training, education and promoting an environment of “Safety First”. The failure of any person to follow established policies and procedures will require the initiation of disciplinary procedures.

The most valuable resource is the people who work at Haskell Davis JV. We will do all that is reasonable to protect our people. Haskell Davis JV takes this obligation seriously and makes every effort to provide a safe and healthy work area to reduce the likelihood of accidents or serious injuries

4.0 Responsibilities and Lines of Authority

4.1 Primary SSHO - Leslie England

4.2 General Superintendent - Steve Thurneau

Superintendents are responsible for the following:

- Assuring accurate and complete activity hazard analyses are completed and communicated to workers for each activity.

- Conducting regular inspections of their work area, identify hazards or areas of environmental non-compliance and taking the appropriate action to correct identified hazards.

- Ensuring that planning has been accomplished for the work to be performed in a safe manner, before starting a work activity.

- Ensuring that correct tools and equipment are provided for the job. Tools and equipment must be free of defects and must carry current certifications as required.
• Provide leadership to improve all processes and achieve a safe and healthy workplace.

• Encourage improvement of safety each day in every work activity.

• Set priorities to promote safe work activities and emphasize, communicate, and recognize improving safety.

• *Lead by example*…!

Leslie (Les) England Qualifications
LES J. ENGLAND

P.O. BOX 2590 KENAI, ALASKA, 99611 PHONE: (907) 230-3755
EMAIL LENGLAND.LJ@GMAIL.COM

OBJECTIVE
My objective is to work on project sites and for contractors who believe in safety and are looking for a good site-safety and health officer to motivate and involve personnel in a positive, incident-free, safety culture. Having over 15 years of health and safety experience, on top of 30 years of journeyman craft experience in sheet metal, insulation, iron work and operator trades, I excel in intense and highly regulated environments. I am a dynamic problem solver, with excellent communication skills and proven ability to manage safety on large projects.

EDUCATION
Kenai Community College
Pursuing education/course in Petro-Chemical and Instrumentation

Kenai High School
High School Diploma

CERTIFICATIONS
- Safety in Motion Champion
- MSHA Instructor, Trainer
- Smith Driving Instructor
- Confined Space Instructor Including Rescue
- IVES Equipment Trainer, and Operator to include Fork Lift, Man Lift, Front End Loader, Rough Terrain Lift Truck, (ZOOM-BOOM) Boom Truck, Over Head Crane, Man-lift.
- Journeyman Sheet Metal worker, including estimating, procurement and management.
- Journeyman Iron Worker
- Journey Equipment Operator

PROFESSIONAL EXPERIENCE:

JULY 2018- Present: SafeLogic Alaska, LLC
Provide safety consultation services to various clients including Hamilton Construction, Unit Company and more.

FEBRUARY 2018-JULY 2018: SafeLogic Alaska, LLC (contract to Haskell Corporation)

Construction Site Safety Manager

Performed the roll of Site Safety Manager on the CPUP Project at the Andeavor Refinery, in Anacortes, WA for Haskell Corporation.

Construction Manager, HSE Manager

Managed the construction and HSE of a large tank farm constructed at Point Thompson for ExxonMobil. Was instrumental with all phases of drilling support. Started at the initial stages of planning for the logistics of materials and equipment to the hiring of employees to safety plan and project execution plan. This project ran with zero incidents zero spills zero injuries the entire project 600 days total. This project is now complete.

2013 to 2014 Construction SHE Manager, WorleyParsons, Houston, Texas

Managed safety of construction projects in Houston Texas area. This included writing policies, procedures and site specific safety plans that would meet the client, subcontractors, and WorleyParsons expectations. which I then implemented into the field successfully. I quickly developed a reputation for the ability to promote a good team atmosphere on construction projects, while keeping the integrity of the safety and health in place. I was asked to head the position of project of choice. This position is put in place to attract skilled craft in the Houston area. The competition in that area is high so the position of manager of project of choice is to promote safe friendly and productive atmosphere that attracted skilled craftsmen. I was very successful in this position. I left this position to move back to Alaska the Houston area culture did not fit for my family.

2011 to 2013 construction HSSE Supervisor, NANA Construction, Alaska

Successful in bringing world class safety to Nana Construction projects for clients to include BP, ConocoPhillips, and Hilcorp. Maintained and reported monthly HSE statistics to company upper-level managers, supervisors, and clients to include, tagging and loading indicator (observations, inspections, audits, JSA’s). Wrote and reviewed HSE Plans and job specific Job Hazard Analysis. Reviewed and updated company HSE standards ensuring regulatory compliance. Provided technical expertise for HSE Field Representatives and Project Managers. Performed HSE Field support activities to include, site specific training, inspections, and auditing. Worked closely with the Workers Comp department to ensure proper case management. Assisted in Industrial Hygiene support, noise, air sampling & monitoring. Trained employees on numerous HSE topics in both classroom and field settings.

2008 to 2011 HSSE & Risk Management Manager, NORCON, Inc. (a subsidiary of CH2M HILL), Alaska

Managed several large construction projects simultaneously for BP, ConocoPhillips, Tesoro Refinery and LINICAL Refinery. Reorganized the safety program to bring recordable rate from 6.2 to .50; Conducted management walkthrough & HSE walkthrough along with client representatives. Advised management about the potential hazards, unsafe equipment, and unsafe working conditions and carried out any remedial actions required to protect from such hazards. Provided guidelines to management about the safe work implementations in existing facilities such as gathering stations, substations, tank areas, etc; Identifying hazards, unsafe conditions, and unsafe behaviors and taking quick and prompt remedial actions to correct them.
2006 to 2008 Construction Occupational Safety & Health Supervisor, CH2MILL, North Slope, Alaska

Successfully supervised construction projects for many clients in the oil production and petrochemical refineries, asked to manage NORCON HSSE (a subsidiary of CH2MILL). Performed inspections, surveys, and program evaluations of areas and operations to identify at-risk potentials and assess integrations of risk management approach, safety equipment and procedures. Provided safety training to newly assigned personnel and supervisors. Prepared monthly reports for HSE identifying problems as well as solutions. Directly supervised HSE professionals. Inspected the workplace processes to ensure compliance with established safety standards.

REFERENCES

References available upon request.

---

CERTIFICATE

CLICKSAFETY®

certifies that

LESLIE ENGLAND

has successfully completed

OSHA 30-Hour Construction

and has earned 3 IACET CEUs and 30 Contact Hours.

This course was developed and presented by ClickSafety.com, Inc.

CLICKSAFETY

25801654  6/24/2018  30 HOURS

COMPLETION DATE  COURSE DURATION

STUDENT SIGNATURE

I confirm that I personally took the course listed above.

As an OSHA-Approved Online Outreach Training Provider, ClickSafety certifies that this Outreach Training Program course was conducted in accordance with the OSHA Outreach Training Program Requirements and Procedures. ClickSafety will document this date in the OSHA Outreach Training and Education. Upon successful completion of this document, ClickSafety will provide each student with a OSHA Outreach Card within 60 days of the completion date.
### COMPETENT PERSON DESIGNATION

<table>
<thead>
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<th>Job No.</th>
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<tbody>
<tr>
<td>CLEAR - LRDR</td>
<td>Leslie England</td>
<td>02 00007</td>
<td>XXX-XX-7107</td>
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</table>

It has been determined that the person named above has sufficient knowledge of: the systems, equipment, conditions and procedures, proper use, inspection, manufacturer’s recommendations and instructions, and maintenance applicable to the activities indicated below. Consequently, this person is hereby designated as a “Competent Person” per OSHA guidelines and delegated the responsibility and authority for coordinating the necessary activities and operations required to safely complete applicable work.

#### Competent Person Designations (Check as appropriate):

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<tr>
<th>Regulation/Responsibility</th>
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<td>6-24-18</td>
</tr>
<tr>
<td>Subpart L Scaffolds</td>
<td>1926.451</td>
<td>Scaffold Erection/Inspection</td>
<td></td>
<td></td>
<td>6-24-18</td>
</tr>
<tr>
<td>Subpart M Fall Protection</td>
<td>1926.502</td>
<td>Methods/Systems</td>
<td></td>
<td></td>
<td>6-24-18</td>
</tr>
<tr>
<td>Subpart N Cranes, Derricks, Hoists</td>
<td>1926.550</td>
<td>Inspection-General Personnel Hoists</td>
<td>1926.552</td>
<td></td>
<td>6-24-18</td>
</tr>
<tr>
<td>Subpart P Excavations</td>
<td>1926.650</td>
<td>General Provisions</td>
<td>1926.652</td>
<td>Protective Systems</td>
<td>6-24-18</td>
</tr>
<tr>
<td>Subpart Q Concrete and Masonry</td>
<td>1926.705</td>
<td>Lift-Slabs</td>
<td></td>
<td></td>
<td>6-24-18</td>
</tr>
<tr>
<td>Subpart R Steel Erection</td>
<td>1926.750</td>
<td>General Provisions</td>
<td></td>
<td></td>
<td>6-24-18</td>
</tr>
<tr>
<td>Subpart T Demolition</td>
<td>1926.850</td>
<td>General Provisions</td>
<td>1926.859</td>
<td>Mechanical Methods</td>
<td>6-24-18</td>
</tr>
<tr>
<td>Subpart X Ladders</td>
<td>1926.1053</td>
<td>Inspect</td>
<td></td>
<td></td>
<td>6-24-18</td>
</tr>
<tr>
<td>Subpart Z Toxic &amp; Hazardous Substances</td>
<td>1926.1100</td>
<td>Asbestos</td>
<td>1926.1127</td>
<td>Cadmium</td>
<td>6-24-18</td>
</tr>
<tr>
<td>Subpart J Permit-Required Confined Spaces</td>
<td>1910.146</td>
<td>General Provisions</td>
<td></td>
<td></td>
<td>6-24-18</td>
</tr>
<tr>
<td>Subpart N Powered Industrial Trucks</td>
<td>1910.178</td>
<td>Training/Operation</td>
<td></td>
<td></td>
<td>6-24-18</td>
</tr>
<tr>
<td>Subpart M Fall Protection</td>
<td>1926.502</td>
<td>Qualified Person</td>
<td></td>
<td></td>
<td>6-24-18</td>
</tr>
</tbody>
</table>

_E= Work Experience, A= Apprenticeship/Journey Program, T= Training Program, O= Other (OJT)_

---

**Signatures**

Employee Authority

Project Manager Authority

Date: 7-11-2018

Date: 07/12/2018

*An OSHA "competent person" is defined as "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" 1926.32(f). By virtue of their training and/or experience, a competent person is knowledgeable of applicable standards, is capable of identifying workplace hazards relating to the specific operation, and has the authority to correct them. Some standards add additional specific requirements which must also be met by the competent person.*
4.4 Disciplinary Action

Employees will be subject to disciplinary action for violations of safety rules. Such actions may include any, one or more, of the following depending on the severity of the violation.

Employees shall be provided effective training to assure a clear understanding of the infraction and the proper conduct under Haskell Davis JV guidelines. However, nothing in this policy or the Corporate Safety guidance will preclude management from terminating an employee or removing a subcontractor employee for a safety violation.

This is a progressive discipline system; however any serious safety violation may lead to an employee's termination without prior warning. Serious safety violations are those that could result in death or serious harm to themselves, other personnel, or members deems appropriate:

- Verbal warning with documentation in personnel or project file;
- Written warning outlining nature of offense and necessary corrective action with documentation in personnel file;
• Disciplinary suspension with documentation in personnel file or Termination
• Termination

Management, including superintendents, shall be subject to disciplinary action for the following reasons:

• Repeated safety rule violations by their employees;
• Failure to provide adequate training prior to job assignment;
• Failure to report accidents or provide medical attention to employees injured at work;
• Failure to control unsafe conditions or work practices;
• Failure to maintain good housekeeping standards or cleanliness at their projects.

4.5 Management Safety Accountability

Management is ultimately held responsible for construction safety. All accidents can be avoided. All management including job foremen all the way to the Corporate Safety Manager are tasked with staying abreast and accountable for safety on each and every project.

Superintendents and project managers are evaluated on safety records for their respective projects. Where safety proves to be outstanding or good, they are justly rewarded and recognized within the company for an outstanding safety record.

Where safety appears to be a recurring issue, they are encouraged to take additional training and their performance is duly noted. Safety infractions will always consider the management of the task as a contributing cause and paths will be sought to identify any management shortcomings and improve management procedures.

4.6 Pre-Task Safety Requirements

Haskell Davis JV uses a trifold Job Safety Analysis card as a pre-task planning tool. Daily JSA’s are required for all groups prior to performing field work. The talks should be specific to the work to be performed that day, e.g., permits, PPE requirements, hazard awareness, etc. These should be led by a work crew member as a conversation about the topic, not a presentation. Work shall not proceed without each crew completing and signing daily JSA’s. Copies of JSAs are to be submitted to the SSHO daily and are to be signed by all affected crew members. Crew members who are working independently shall complete an individual JSA. They may also sign on the JSA for their trade group if the content is appropriate for the tasks being performed by the independent crew member.
5.0 Training

New Employee Orientation

All new project employees shall receive a project safety and occupational health orientation prior to the start of work. The orientation shall consist of informing the employee of the known hazards associated with the project and company safety and health expectations. The content of this Accident Prevention plan shall be discussed and the plan will be made available for the employee’s review.

5.1 Below is an outline of the Haskell Davis JV New Hire Orientation:

Policy for Safety Orientation

Before a new employee or subcontractor may begin work they must participate in a Site Safety Orientation which explains the policies and mandatory safety requirements for working on a Haskell Davis JV construction project.

General Job Safety

The following information has been conveyed to me:

Safety Procedures

- Safety needs to be integrated into everything we do—think safe, don’t do anything you feel is unsafe.

- Attendance at daily or weekly safety meetings is required. Monday at 0700.

- How to obtain, use, and care for personal protective equipment.

  1. Appropriate clothing must be worn at all times on the jobsite.

  2. Work boots, 4” sleeves, and long-legged pants (No tank tops or shorts).

  3. **Hardhats and safety glasses must be worn at all times.** Exceptions must be approved.

  4. Reflective vest shall be worn when working outside.

- How to perform initial job assignments in a safe manner through job hazard analysis (JHA).

- Hazard Communication (HAZCOMM), jobsite postings, and environmental issues (SWPPP).

- Actions to take in an emergency, including exit routes from the site, and safe gathering areas.

- Employees are required to report to their supervisor immediately any and all unsafe conditions, injuries or illnesses, regardless of the degree of severity.
The location of first aid kits, fire extinguishers, and eyewash station.

Keep in mind that all employees are responsible for housekeeping.

Inspect all electrical equipment and cords daily before use. All power sources must be GFCI protected.

Daily inspection of all equipment prior to use. Equipment will be used according to manufacturers specifications.

Accident and injury reporting and employee rights and obligations regarding workers' compensation.

Operation, qualifications, and lockout/tag out of equipment.

Haskell Davis JV employees must undergo required drug testing prior to the first day of employment.

Profane language will not be tolerated.

Cell phone policy.

Site Specific Safety Procedures

Fall protection is required for any activity that exposes an employee to a fall of six or more feet, if employees need to use fall protection they must attend specific training.

Emergency phone numbers are located on each safety station positioned at the site entrance points.

No Smoking except in authorized areas.

Spill containment, clean-up, notification procedures. Spill kit on site.

SWPPP, report all spills and any water or liquids flowing off site.

Park only in authorized areas and observer posted speed limits on site as these are strictly enforced.

Maintain the security of the jobsite by securing tools in locked gang boxes, locking doors and gates.

Working around the public and traffic considerations.

Other site issues as needed.
Acts That Are Grounds for Immediate Dismissal

1. The use of alcohol or narcotics on the job or arrival on the job under the influence of these substances.
2. No gambling, fighting, inciting riots, practical joking, horseplay, or sexual/racial harassment.
3. Carrying firearms or dangerous weapons to the job site.
4. Theft of material, equipment, or supplies.
5. Unauthorized use of company vehicles, reckless driving, and operating tagged out equipment.
6. Repeated minor, or a major violation of safety regulations

This informational form provides an overview and is not intended to be an all-inclusive list. Haskell Davis JV reserves the right to revise any policy at its sole discretion, at any time, without prior notice.

All information in this orientation checklist was explained to me, and I agree to comply with Haskell Davis JV Safety policies.

Print Name______________________  Company___________________

Sign Name______________________  Date___________________

I explained all items in this orientation checklist to the employee.

Print Name______________________  Title___________________

Sign Name______________________  Date___________________

5.2 Personal Protective Equipment Training

All employees, subcontractors and visitors are required to wear personal protective equipment as outlined in Section 5 of the Safety and Health Requirements Manual E.M. 385-1-1 (Nov 2008 edition). Haskell Davis JV personnel will receive training as required for specialized protective equipment as needed.

- Employees must be trained in and shall demonstrate an understanding of the following aspects of PPE prior to use:
• selection (for specific hazard); donning, doffing and adjusting;
• limitations and useful life;
• inspection and testing; and
• proper care including maintenance, storage and disposal.

When the project management has reason to believe that any affected employee who has been trained does not have the understanding and skill required for the use of the PPE, Haskell Davis JV shall make certain that the employee receives the necessary re-training to acquire the appropriate skills.

Haskell Davis JV shall verify through written certification that each affected employee has received and understood the required training. The written certification shall identify the name of each employee trained, the date(s) of the training, and the subjects taught.

5.3 Activity Hazard Analysis Training
Prior to beginning a new control phase, training will be provided to all affected employees to include a review of the AHA to be implemented.

5.4 Operator Certifications
Where any heavy equipment is used for this project on site, certification for operators of machinery shall be as specified by OSHA or EM 385-1-1.

5.5 Emergency Response Training
Emergency Response Training: Management staff and supervisory personnel will be trained and certified in CPR and Basic First Aid if required by E.M. 385-1-1. Employees assigned emergency response duties will receive training as required by the scope of their duties.

Site and project safety officers are free to utilize the suggested topics, or develop lessons pertinent to work being performed or conditions existing at the time. Weekly safety meetings will frequently be used as a venue for reviewing AHAs prior to the start of a new work phase, to review recent incidents or near misses, and to address specific issues or problems identified during safety inspections, audits, or reviews. Field supervisors may conduct or request safety meetings at their discretion when they feel that extra emphasis needs to be given to certain safety concerns to ensure a safe and productive working environment. Supervisory Safety Meetings: All supervisory personnel (subcontractor or otherwise) involved with a given item of work are required to attend the Preparatory Phase Meeting for that work item. The Preparatory Phase meeting is used to address and resolve anticipated safety concerns prior to the start of work.
### 5.6 Mandatory Training:

<table>
<thead>
<tr>
<th>Position</th>
<th>Required Training</th>
<th>Intervals for Re-Certification/Re-Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Safety and Health Officer</td>
<td>30-Hour OSHA Construction Safety Training</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>Construction Safety Hazard Awareness Training for Contractors</td>
<td></td>
</tr>
<tr>
<td>Crane Operator</td>
<td>USACE EM 385-1-1, Section 16 and Appendix I</td>
<td>5 Years</td>
</tr>
<tr>
<td>Crane Operator (OEM rated capacity ≥250k lbs)</td>
<td>Current Crane Operator Certification</td>
<td>Per certifying entity (i.e., union, a government agency, or organization that tests and qualifies crane operators)</td>
</tr>
<tr>
<td>All Employees</td>
<td>Project Safety Orientation</td>
<td>First day on this project.</td>
</tr>
<tr>
<td>All Employees</td>
<td>Employee Orientation</td>
<td>Initial and As-Needed</td>
</tr>
<tr>
<td>All Employees</td>
<td>Fall Protection Training</td>
<td>As Needed/Required</td>
</tr>
<tr>
<td>All Employees</td>
<td>Confined Space Safety</td>
<td>As Needed/Required</td>
</tr>
<tr>
<td>All Employees</td>
<td>Asbestos</td>
<td>As Needed/Required</td>
</tr>
<tr>
<td>All Employees</td>
<td>Ladder</td>
<td>As Needed/Required</td>
</tr>
<tr>
<td>All Employees</td>
<td>Respiratory</td>
<td>As Needed/Required</td>
</tr>
<tr>
<td>All Employees</td>
<td>Hazardous Communications / HAZMAT</td>
<td>As Needed/Required</td>
</tr>
<tr>
<td>All Employees</td>
<td>PPE</td>
<td>As Needed/Required</td>
</tr>
<tr>
<td>Equipment Operator</td>
<td>Equipment Specific</td>
<td>Equipment Specific</td>
</tr>
</tbody>
</table>
6.0 Safety & Health Inspections

General

The SSHO Leslie (Les) England in conjunction with and various craft personnel will conduct weekly safety inspections. Areas examined during inspections may include, but are not limited to, the following:

- Overall site Conditions and Layout as it relates to Safety
- Housekeeping
- Fire Safety
- Compressed Gases
- Machinery Guarding
- Fall Protection
- Excavation and Shoring
- Lock out / Tag out
- Personal Protective Equipment (PPE)
- Welding and Cutting
- First Aid
- HazCom
- Accident Reporting
- Spill control
- Equipment Condition and Maintenance
- Signs and Postings
- Training

The SSHO will advise the Project Manager and General Foreman as applicable of deficiencies noted during daily inspections.

Deficiencies that are not corrected by close of business the same day shall be entered into a deficiency tracking system. Work crew foremen will inspect their work areas on a daily basis and correct observed safety deficiencies. Safety deficiencies that cannot be corrected with resources available to the foreman will be reported to the Project General Foreman, Superintendent, or SSHO.
Project staff, including engineers, quality control managers, surveyors, and general foreman, will observe and either correct or report safety deficiencies to the Site Safety and Health Officer (SSHO) during visits to the job site.

Monthly inspections by the Site Safety and Health Officer shall be recorded in the daily Construction Quality Control Reports. Safety Inspection shall be retained on site, with a copy forwarded to the Contracting Officer Representative.

6.1 Construction Machinery

Construction machinery shall be inspected daily, prior to use, by the operator.

Machinery operations and conditions shall be observed as the opportunity arises during Safety Officer and Superintendent daily inspections.

6.2 Personal Protective Equipment

Personal Protective Equipment shall be inspected prior to use by the user. If PPE is found to be unserviceable, replacement will be requested from the employee’s foreman or the Project General Foreman, Superintendent, or Safety Officer.

Slings and Rigging Gear

When slings and other rigging gear are used, it shall be inspected prior to use by riggers and/or foremen and removed from service if found unsuitable. Gear shall be inspected on a random basis during Safety Officer and Superintendent daily inspections.

6.3 Tools and Other Equipment

Extension cords, power tools, hand tools, welders and leads, cutting torches, and the like shall be inspected by the user and/or foreman prior to use. Tools and equipment, and especially extension cords, shall be inspected on a random basis during Safety Officer and Superintendent daily inspections, and random observations by other project staff.

6.4 Other external Inspections

If excavators are used, they will be inspected at intervals required by EM 385-1-1, Section 16.D. Inspections will be conducted by Haskell/Davis JV SSHO or by third party inspection services.

Senior Management may visit the site periodically on either an announced or unannounced basis.
<table>
<thead>
<tr>
<th>Area of Inspection</th>
<th>Interval</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Site Inspections</td>
<td>Daily</td>
<td>SSHO</td>
</tr>
<tr>
<td>Construction Machinery</td>
<td>Daily (when used)</td>
<td>Qualified Operator</td>
</tr>
<tr>
<td></td>
<td>Random / Intermittent</td>
<td>SSHO / Foreman / Superintendent</td>
</tr>
<tr>
<td>PPE</td>
<td>Before Every Use</td>
<td>User</td>
</tr>
<tr>
<td></td>
<td>Random / Intermittent</td>
<td>SSHO / Foreman / Superintendent</td>
</tr>
<tr>
<td>Slings and Rigging Gear</td>
<td>Before Every Use</td>
<td>Rigger</td>
</tr>
<tr>
<td></td>
<td>(EM 385-1-1, Section 15)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>As Specified by Manufacturer</td>
<td>Competent Person</td>
</tr>
<tr>
<td></td>
<td>Random / Intermittent</td>
<td>SSHO / Foreman / Superintendent</td>
</tr>
<tr>
<td>Tools and Other Equipment</td>
<td>Before Every Use</td>
<td>User</td>
</tr>
<tr>
<td></td>
<td>Random / Intermittent</td>
<td>SSHO / Foreman / Superintendent</td>
</tr>
<tr>
<td>Load Handling Equipment</td>
<td>Before Every Use</td>
<td>Certified Operator</td>
</tr>
<tr>
<td></td>
<td>per EM 385-1-1, Section 16.D and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Appendix I</td>
<td>Certified Inspection Agency</td>
</tr>
</tbody>
</table>
### 6.5 Job Site Inspection Form

**Haskell/Davis JV**

**Safety Audit**

Project: LONG RANGE DISCRIMINATION RADAR (LRDR)

Job No.:  
Date:  
Safety Manager:  
Project Manager:

<table>
<thead>
<tr>
<th>Inspection Criteria</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. General</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Emergency phone numbers and procedures posted?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. First aid supplies readily available?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. First aid supplies adequate for job manpower?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Required posters and signs posted and readable?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>B. Personal Protective Equipment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Hard hats worn by all personnel in work areas?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Eye and face protection worn as required?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Hearing protection worn as required?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Respiratory protection worn as required?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Safety harnesses and lanyards worn for fall protection?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Workers dressed properly for the job?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Personal protective equipment in good condition?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Safety supplies adequate for job manpower?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C. Housekeeping</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Walkways and stairs kept clear of material and debris?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Cords and hoses strung to prevent trip and fall hazard?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Are liquid spills cleaned up immediately?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Restrooms and eating areas clean?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Fabrication and work areas clean and orderly?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Site trailers and vaults clean and orderly?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Gang boxes clean and orderly?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Trash, scrap, and debris picked up and disposed of?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>D. Fire Protection</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Firefighting equipment well marked and accessible?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Employees trained to use fire-fighting equipment?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Fire extinguishers inspected monthly?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. Smoking prohibited where flammables are located?

5. Flammables stored and handled in approved containers?

6. Oily rags disposed of in an approved container?

7. Temp. heaters kept 20" away from combustible materials?

**E. Material Handling and Storage**

1. Materials stored neatly in stacks or piles?

2. Cylindrical materials racked or cribbed and blocked?

3. Loose materials containerized or palletized?

4. Aisle space maintained around stored materials?

5. Storage areas kept clear of scrap, debris, and trash?

6. Slings and chokers in good condition?

7. Chain falls and come-a-longs in good condition?

8. Cranes operated in a safe manner by operators?

9. Workers move from under suspended loads?

10. Workers know and use proper crane signals?

11. Crane hand signals posted on jobsite?

12. Workers attach tag lines to loads?

13. Hoisting hooks have safety latches?

14. Running cables inspected and in good condition?

15. Load limits marked on all hoisting rings?

**F. Tools**

1. Power tools have guards in place?

2. Power tools either grounded or double insulated?

3. Power tool cords and plugs in good condition?

4. Impact tools with mushroomed heads dressed as needed?

5. Broken tools repaired or replaced as needed?

**G. Welding and Cutting**

1. Gas cylinders stored upright and secured?

2. Oxygen cylinders segregated from fuel gas cylinders?

3. Full cylinders segregated from empty cylinders?

4. Caps secured on all cylinders not in use?

5. Welding leads in good condition?
6. Welding screens erected in high flash areas?
7. Welding blankets used to protect materials/equipment?
8. Fire watches posted as needed?
9. Proper permits issued (as required)?
10. Fire extinguishers kept close to hot work areas?

### Electrical

1. 120 volt tools and equipment tested and color-coded?
2. Extension cords heavy duty, 3-wire type?
3. Temporary lights equipped with bulb guards?
4. Sufficient lighting to work and move safely?
5. Lockouts used to de-energize operational systems?
6. Welders and stationary equipment properly grounded?

### Ladders

1. Straight ladders secured at top landing?
2. Straight ladders extend 36" above top landing?
3. Straight ladders have feet or blocked at bottom?
4. Straight ladders set up with a 4 to 1 slope?
5. Top step of stepladders not used as a step?
6. Climbing the back of stepladders prohibited?
7. Workers use the proper height ladder for the job?
8. Portable ladders used only by company employees?

### Scaffolds and Manlifts

1. All scaffold parts and hardware used as required?
2. All scaffold hardware and parts in good condition?
3. Scaffolds fully planked?
4. All scaffold planks cleaned?
5. Scaffolds have guardrails, midrails, and toe boards?
6. Wheels on rolling scaffolds locked during scaffold use?
7. Workers prohibited from riding rolling scaffolds?
8. Manlifts in good operating condition?
9. Only trained employees allowed to operate manlifts?
10. Outriggers extended when manlifts are in use?
11. Workers prohibited from exiting raised manlifts?
12. Workers only allowed to work from floor of basket?

13. Workers required to tie-off while basket is raised?

K. Handrails and Hole Covers
1. Perimeters and drop-offs protected by rails or cables?
2. Railings sturdy, continuous, and have midrails?
3. Railings replaced after temporary removal?
4. Floor holes protected by railings or hole covers?
5. Hole covers secured to prevent movement?
6. Hole covers marked to prevent accidental removal?
7. Hole covers replaced after temporary removal?

14. Only company employees allowed to operate manlifts?

L. Excavation and Trenching
1. Excavations 5’ or deeper shored, sloped, or boxed?
2. Workers stay within shored area?
3. Excavated spoil stored at safe distance from work?
4. Barricades placed on all open sides at end of shift?
5. Ladders placed every 50’ for entry and egress?
6. Excavations de-watered as needed?
7. Backfill placed as soon as possible?

M. Employee Communications
1. Do foremen communicate with their crews on job methods?
2. Do foremen react to employee safety recommendations?
3. Do foremen address unsafe actions and conditions?
4. Are safety meetings held weekly with all employees?

ATTACH ADDITIONAL COMMENTS TO BACK OF FORM

Inspection Completed By:
<table>
<thead>
<tr>
<th>Date Corrected</th>
<th>Description of the Deficiency</th>
<th>Responsible Person’s Name</th>
<th>Person Responsible for Resolution</th>
<th>Resolution Date</th>
</tr>
</thead>
</table>
LONG RANGE DISCRIMINATION RADAR (LRDR) – Accident Prevention Plan

7.0 Site Sanitation Plan

Haskell Davis JV maintains basic sanitation provisions for all employees on the project site as described in the following paragraphs and as required by OSHA regulations (29 CFR 1926) and the EM 385-1-1 Section 2.

Housekeeping

Disposal of rubbish, debris, and litter is covered in the Environmental Protection Plan (EPP).

Drinking Water

An adequate supply of drinking water shall be available at all times. Commercially sold bottled drinking water may be provided to workers for convenience. A waste receptacle will be available to dispose of empty plastic bottles.

Alternatively, an adequate supply of drinking water may be supplied in dispensing containers. Drinking water will be dispensed from containers designed, constructed and serviced to assure sanitary conditions and only approved potable water shall be used. Containers shall be marked as "Drinking Water", shall not be used for other purposes, and shall have a tap and be capable of being closed. Employees must use cups when drinking from portable water containers. The use of a common cup is prohibited. Disposable cups shall be provided and kept in sanitary containers before use. A waste receptacle will be provided for used cups.

1. Non-Potable Water

If applicable, outlets dispensing non-potable water shall be conspicuously posted "CAUTION - WATER UNSAFE FOR DRINKING, WASHING, OR COOKING"

Toilet Facilities

When sanitary sewers are not available, facilities such as chemical toilets or recirculation toilets, or similar units as approved by local governments shall be provided. Each toilet will be equipped with a seat and seat cover. Each toilet facility not specifically intended for females will be equipped with a urinal. Each seat in a toilet facility will have an adequate supply of toilet paper and toilet paper holder.

Only standard, commercially available toilet units will be supplied and these units must meet local standards for ventilation, screening, vent size, door with latch, and all similar requirements. On this job site standard portable toilets will be supplied in the ratio of one unit (seat) for each 40 workers as a minimum. Whenever possible, the standard indoor toilet facilities built into office trailers will be hooked up and provided for the office staff. These toilets may be locked from the inside, contain a toilet seat, and used by only one person at a time. As a minimum, one such unit will be supplied for every 15 employees, regardless of sex. All toilets will be routinely cleaned and serviced on a regular basis and the sewage will be disposed of by licensed professionals in accordance with local, State and Federal Health laws.
Haskell Davis JV will provide washing provisions at toilet facilities and these facilities will be maintained in a sanitary manner. Soap and water and drying means will be provided whenever running water is practical. When providing running water is not practical, hand sanitizers will be provided as a substitute.
8.0 Standard Pre-Lift Plan

All lifts must be planned to avoid procedures that could result in configurations where the operator cannot maintain safe control of the lift. The SLP Form 16-2 shall be used.

FORM 16-2
Standard Pre-Lift Crane Plan/Checklist

DATE: __/__/_____ Job Number: __________ Location: ________________
TIME: __________ Completed By (Competent Person): ________________

NOTE: Applies to Cranes, Derricks, Hoists and Power-Operated equipment that can be used to hoist, lower and/or horizontally move a suspended load (includes excavators, forklifts, Rough Terrain equipment, etc., when used with rigging).

<table>
<thead>
<tr>
<th>Crane Considerations</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Are the lift's within the crane's rated capacities? (based on boom height, radius)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Boom deflections considered?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Have all potential crane boom obstructions been identified?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Have Environmental Considerations been addressed? (Wind, Weather-Lightning)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Have electrical hazards been addressed (Overhead / Underground)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Clearance distances established?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Is a spotter required?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Public Utility contact required?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Crane swing radius properly barricaded and personnel advised of hazards?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments:

<table>
<thead>
<tr>
<th>Load</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Weights and Centers of Gravity (COG) have been Determined?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Anything Inside / Outside the loads that could shift during the lift?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Determine if the rigging needs protection from the loads?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 All anchor bolts, hold downs, or fasteners have been removed?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Potential for binding – are load cells required to verify the loads are free?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Attachment points rated to take load weight?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Are the loads structurally capable of being lifted? (bending &amp; twisting issues)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Is a critical lift plan required per the EM section 16.H?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments:
FORM 16-2 (cont'd)

Standard Pre-Lift Crane Plan/Checklist

<table>
<thead>
<tr>
<th>Rigging</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 All rigging has been inspected by a Qualified Rigger?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Have sling angles been calculated?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Are shackles correctly sized for the sling eyes?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Are softeners needed?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Personnel</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 The roles, responsibilities and qualifications for personnel have been defined? (Operator, Lift Supervisor, Rigger, Signal Person)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 A Pre-Lift meeting has been conducted?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Personnel trained per the EM?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area Preparation</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 The locations for the load landings has been selected and prepared?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Blocking and or Cribbing is available to set the loads on?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Travel paths have been determined and cordoned off?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Other personnel in the area have been notified of the lifts?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Have ground bearing support questions been addressed?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comments:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Crane Operator: __________________________ Date: ____________
Riggers: __________________________ Date: ____________
Signal Person: __________________________ Date: ____________
Others: __________________________ Date: ____________
Accident Prevention Program

Procedures

LONG RANGE DISCRIMINATION RADAR (LRDR)

CLEAR AFS, ALASKA

HQ0276-16-C-0011

The information contained in this manual is proprietary and may not be copied, distributed or divulged to individuals outside of Haskell Davis JV without the specific approval of Haskell Davis JV Senior Management.
The next section is a corporate Accident Prevention Program
POLICY STATEMENT

Safety is not just another priority at Haskell Davis JV; it is a core value that defines our fundamental responsibility to protect our employees, customers, and the community. We believe strongly that every employee should have the opportunity to return home safely each day, without injury or illness, and be able to enjoy quality time with their family and friends.

Haskell Davis JV is fully committed to providing and maintaining a safe working environment for our employees and we desire to conduct all work in full compliance with applicable regulations, customer guidelines, good common sense, and the provisions of our health and safety policies. We also develop site-specific safety plans to establish the safety rules for each project, taking into account the particular location, activities, and specific hazards of each project.

Senior management has committed resources to provide training and instruction for our employees and supervisors and to maintain our tools and equipment, in accordance with approved standards.

We firmly believe that no job is so important that it cannot be completed in a safe manner. All Company personnel, regardless of position, have the express authority to suspend any operation, which in their opinion constitutes a significant hazard to the life or health of a person, value of an asset, or the condition of the environment.

The Corporate Safety Manager will review and revise this policy as necessary, at regular intervals.

Josh Peppard
President - Davis Constructors & Engineers Inc.

Evan M. Haskell
President - Haskell Corporation
ACCESS TO RECORDS

1.0 Purpose

This section provides Haskell Davis JV’s policy regarding employee access to exposure and medical records, as regulated by 29CFR 1910.1020

2.0 Scope

The provisions of this policy apply to the authorized access to all records relating to an employee’s workplace health exposures and associated medical records.

3.0 Definitions

- **Access**: means the right and opportunity to examine and copy
- **Employee exposure record**: means a document or other record containing environmental or biological information related to the employee.
- **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.

4.0 Procedures

Haskell Davis JV shall provide access to all employee exposure and medical records, relating to the requesting employee, within 15 working days or make specific arrangements for additional time. Requests made by anyone other than the employee will require written authorization and consent, from the affected employee.

4.1. Associated Costs

Initial Requests: There shall be no cost or burden charged to the employee or authorized requester, for either the collection or submission of employee records.

Subsequent Requests: A reasonable fee for the cost of duplication may be imposed for additional requests for information that was previously provided.

Access Restrictions

With respect for exclusively original records, (x-ray films, etc.) Haskell Davis JV may restrict employee/representative access to local viewing or may make arrangements for a temporary transfer of custody.

With respect for requests made by a designated/authorized representative, without the employee’s consent, the requester shall specify in writing the particular record and occupational health need for access.

Printed copies of this policy are uncontrolled and may not reflect changes made after the above revision date.
With respect for access to significantly sensitive information, (terminal illness diagnosis, psychiatric opinions, etc.) which Haskell Davis JV believes would be detrimental to the health of the employee, Haskell Davis JV will restrict access to designated/authorized employee representatives.

4.2. Employee Exposure Records

Employee exposure record" means a record containing any of the following kinds of information:

- Workplace environmental reports pertaining to the employee’s exposure to a toxic substance or harmful physical agent;
- Specific reports of ‘similarly affected’ employees provided that the request does not invade the similarly affected employee’s right of privacy
- Biological monitoring results which directly assess the absorption of a toxic substance or harmful physical agent by body systems 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.

4.3. Medical Records

The requester may have access to the following types of employee medical records: *See Notes below.

- Original transcripts
- Summary findings
- Testing Reports

*Note: The physician may recommend that the employee or designated representative have access to the associated records under consultation, to allow discussion.

*Note: Medical records may protect the privacy of other parties, referenced in the medical records, without violating this policy.

4.4. Summary Analysis Documents

Haskell Davis JV will ensure that the submission of any related analysis, pertaining directly or indirectly to the requesting employee be free of personal identifiers, so as to provide factual documentation only that is non-discriminatory in nature. Summary Analysis Documents include the following types of records:

- Raw data lists of testing/sampling, related to groups of employees
- Spreadsheets or Database reports, with tables and graphs

4.5. Government Access

Haskell Davis JV will provide prompt access to relevant exposure and medical records to representatives of OSHA, the Department of Labor, State Labor Departments, in accordance with 29CFR 1913.10

Haskell Davis JV will post all written requests for significantly sensitive employee records in accordance with 29CFR 1913.10(d)
4.6. Record Retention
Medical records must be retained for the duration of employment plus 30 years.

4.7. Access to records
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 shall be removed before access is provided.

4.8. Employee information
Upon an employee's first entering into employment, and at least annually thereafter, information shall 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.

4.9. Transfer of Records
In the event that Haskell Davis JV is ceasing to do business, employee records subject to this policy shall be transferred to the successor employer. If Haskell Davis JV 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, affected current employees shall be notified of their rights of access to records at least three (3) months prior to the cessation of business.
ACCIDENT PREVENTION PROGRAM

ACCIDENT INVESTIGATION

ACCIDENT INVESTIGATION

1.0 Purpose

To ensure the accurate and timely investigation of workplace accidents

2.0 Scope

This policy applies to work performed by all departments, divisions, and work locations under the control of Haskell Davis JV, including Sub-contractors (where applicable).

3.0 Definitions

- **Accident**: means an undesirable event, which results in bodily injury or property damage
- **Incident**: means an undesirable event, which does not result in injury or property damage
- **Near Miss**: means an unplanned event that had the potential to cause an accident or incident
- **Injury**: means any physical trauma to the body, requiring medical treatment
- **First Aid**: means any physical trauma to the body, NOT requiring medical treatment
- **Disease**: means any physiological condition resulting from an exposure in the work place
- **Fatality**: means any work-related death (Natural Causes are excluded)
- **Report**: means a Verbal or Written notification of the above issues
- **Investigation**: means a formal process for determining cause of the above issues

4.0 Procedures

The supervisor or designated safety representative will initiate a formal investigation within two hours of first knowledge of any injury or incident, using the Haskell Davis JV Accident / Investigation report and implement corrective action as soon as practical.

4.1. Investigation

Contact the Home Office for assistance, if appropriate.

The safety representative or superintendent should complete the appropriate investigation reporting form (accident, incident, near miss), including the development of a timeline or sequence of events whenever possible- to help determine surface and root causes for the accident.

When an accident or an incident occurs and an employee is injured important information needs to be gathered. Remember you are gathering information to use in developing a sequence of steps that led up to the accident.

4.1.1. Investigation Guidelines

- Investigate while the facts are fresh
- Collect precise information about every person and object near the scene
• Inspect and record any changed physical characteristics of the accident site
• Preserve any physical evidence, such as potentially defective equipment
• Take photos to help preserve the scene (if allowed)
• Talk to the injured person
• Talk to any eyewitnesses (separately if possible)
• Ask simple open-ended questions, one question at a time, and attempt to have events related chronologically to ensure through coverage
• Distinguish a person’s actual knowledge from hearsay
• Ask when, where, who, how and what was said or done
• Avoid opinions, judgments or conclusions and be as objective as possible
• Avoid commenting on the information gathered, except to confirm or clarify data
• Stress getting the facts
• Do not comment on liability or fault during the investigation, but listen for clues in the conversation around you
• Unsolicited comments often have merit
• Review and finalize any notes immediately upon completion of your inspection and any interview or other communication with those involved
• Fill out the appropriate accident, incident, or near-miss form, giving an accurate account of the facts

4.1.2. Cause Analysis

Depending on the nature and severity of the event, Haskell Davis JV may elect to incorporate the Ishikawa Analysis (Fish Bone Diagram), Apollo Root Cause, or the 5 Why Analysis to assist in determining the underlying cause of an event.

• Contact the Home Office for assistance with Cause Analysis
• After the investigation has been completed the next step is to determine cause. This step may be rather involved because you are first analyzing events to discover “surface cause(s)” for the accident, and then, by asking “why” a number of times, attempting to identity their elated “root causes”.
• Remember, surface causes are usually pretty obvious and not too difficult to uncover. However, it may take more time to accurately determine the root cause that contributed to the conditions and practices associated with the accident.

4.1.3. Lessons Learned

• Once the sequence of events have been developed and the surface and root causes identified recommendations for corrective actions must be determined. Input for corrective actions should come from all participants because different people will see it from different angles and offer varying suggestions.
• Recommendations for corrective action should describe the engineering/management controls and/or interim measures that relate directly to the surface and root causes for the accident.
4.2. Reporting

Written reports should be completed within 24 hours of the incident and be submitted to client and corporate office.

Verbal report and follow-up – Most clients will require a post-accident follow-up that will review what happened and why it happened. Accident / Incident reporting shall be communicated in the timeframe specified per contract. Haskell Davis JV needs to take a very aggressive and proactive approach. All accidents are serious and our presentation needs to show our sincerity in addressing the lessons learned so that the same type of incident will not occur again. The way we communicate this to the client is vital. They need to know that a full investigation was conducted and we have an action plan in place. We need to show competence in all phases from incident occurrence management, through investigation process, determining root cause, establishing the lesson learned and “corrective action(s)” or recommendations to keep from repeating the incident. If additional follow up is expected someone must be designated in charge, a time frame established for this to happen, and final report when action is completed.

4.2.1. Presentation tips:

- Know the intended audience and purpose
- Have copies of the completed investigation report
- Have a logical sequence (practice beforehand)
- Use visual presentations
- Be confident
- Provide no surprises

4.2.2. Presentation Format:

- Scope of the Investigation
- What happened
- Why it happened
- Recommendations
- Lessons Learned
- Questions
### 8.1 Accident Investigation Form

#### SUMMARY INFORMATION

<table>
<thead>
<tr>
<th>General</th>
<th>Injury/Illness</th>
<th>Auto/Property</th>
<th>Environment</th>
<th>Incident/Near Miss</th>
<th>Other – Attach Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Haskell Davis</td>
<td></td>
<td></td>
<td>JV 1st Aid</td>
<td>Off Site 1st Aid</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date:</th>
<th>Time:</th>
<th>Day:</th>
<th>Shift:</th>
<th>Reported:</th>
</tr>
</thead>
</table>

#### Description of Incident. *(How the Incident occurred & sequence of events. Attach additional pages, if needed.)*

#### Direct Cause

- **Surface Cause(s):** What actions and/or conditions caused or led up to the event? *(Refer to Potential Cause Matrix)*
  
  - **Actions:**
    - 1. Procedures
    - 2. Tools/Equip
    - 3. Protective Systems
    - 4. Awareness

  - **Conditions:**
    - 5. Exposure
    - 6. Tools/Equip
    - 7. Protective Systems
    - 8. Workplace Layout

- **Contributing Factor(s):** What Human or System Factors influenced occurrence of the event? *(Refer to Root Cause Profile Chart)*
  
  - **Human Factors:**
    - 9. Capability
    - 10. Condition
    - 11. Behavior
    - 12. Knowledge/Skill

  - **System Factors:**
    - 13. Supervision
    - 14. Training
    - 15. Selection
    - 16. Planning
    - 17. Purchasing
    - 18. Maintenance
    - 19. Policies
    - 20. Communication

#### The underlying cause of this event is related to:

- [ ] Unsafe Condition
- [ ] Unsafe Action
- [ ] Management
- [ ] Other – Attach Explanation

#### Corrective Action Plan:

- **Corrective Action Plan:** What will be done to prevent a second Incident? *(Attach additional pages, if needed.)*
  
  - [ ] Re-Train
  - [ ] Re-Design
  - [ ] Re-Enforce
  - [ ] Other

#### Corrective Action

- Assigned to: __________________________
- Date: __________________________

#### Review

- **Completed By**
  
  - Name: __________________________
  - Date: __________________________
  - Title: __________________________
  - Phone: __________________________

- **Management Review**
  
  - Safety Manager: __________________________
  - Date: __________________________
  - Project Manager: __________________________
  - Date: __________________________
  - President: __________________________
  - Date: __________________________

- **Employee Acknowledgement**
  
  - Print Name: __________________________

---

*Printed copies of this policy are uncontrolled and may not reflect changes made after the above revision date*
# Accident Investigation

## Injury Information

The following sections may contain confidential employee information, please respect the privacy of the injured person by maintaining strict control of this form.

**Injured Person**

- **First**
- **M.I.**
- **Last**
- **Claim #**

**SSN:**

**Date Hired:**

**DOB:**

**Emergency Contact:**

**Phone:**

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Wage</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hrs/Day</td>
<td>Days/Wk</td>
<td>Hourly</td>
</tr>
<tr>
<td>Apprentice</td>
<td>Journeyman</td>
<td></td>
</tr>
</tbody>
</table>

- **Did this injury/illness originate or occur during the course of current employment?**
  - [ ] No
  - [ ] Yes
  - [ ] ?

- **Is this event related to a prior injury/illness or pre-existing condition?**
  - [ ] No
  - [ ] Yes
  - [ ] ?

- **Is the source, cause, or validity of this injury in question or doubt?**
  - [ ] No
  - [ ] Yes
  - [ ] ?

- **Did the injured person report this incident within 24-hrs and prior to medical treatment?**
  - [ ] No
  - [ ] Yes
  - [ ] ?

---

**List Any Witnesses**

---

**Activity**

**What was the employee doing just before the event?**

- **Action:**
- **Object:**

**Event**

**What actually caused the injury/illness?**

- **Event:**
- **Source:**

**What Type of injury/illness resulted from the event?**

- **Nature:**

**Body Part**

**What part of the body was affected or Injured? (indicate left or right)**

- **Head**
- **Torso**
- **Upper Limb**
- **Lower Limb**
- **Systems**

**Treatment**

- **What level of treatment was provided?**
  - [ ] On-Site First Aid
  - [ ] Off-Site First Aid
  - [ ] Off-Site Medical Aid
  - [ ] ER/9-1-1

- **Medical Facility Name:**
- **Provider Name:**
- **Phone:**
- **Address:**
- **State**
- **Zip**

**Treatment:**

**Follow Up Treatment Plan:**

- **Released to Job of Injury?**
  - [ ] No
  - [ ] Yes
  - **Date:**

- **Follow up Appointment?**
  - [ ] No
  - [ ] Yes
  - **Date:**

- **Restricted Work Activity?**
  - [ ] No
  - [ ] Yes
  - **Starting Date:**
  - **Estimated # of days:**

- **Day(s) Away from Work?**
  - [ ] No
  - [ ] Yes
  - **Starting Date:**
  - **Estimated # of days:**
<table>
<thead>
<tr>
<th>CODE</th>
<th>Category &amp; Description (Potential Cause Matrix)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>EXAMPLE</td>
</tr>
<tr>
<td>1.1</td>
<td>Description: Taking Shortcuts – Near shift end, worker was hurrying</td>
</tr>
</tbody>
</table>

Count the number of potential causes for each code

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>13</td>
<td>14</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td>17</td>
<td>18</td>
<td>19</td>
<td>20</td>
</tr>
</tbody>
</table>

Place a check in the corresponding boxes on Form IIIR-1
## Sequence of Events

**Establish the ‘planned’ and ‘actual’ sequence of events.**

<table>
<thead>
<tr>
<th><strong>Planned Activity</strong></th>
<th><strong>Actual Events</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Attach JSA / STA or describe below</td>
<td>Describe the events leading up to the event.</td>
</tr>
</tbody>
</table>

### Deviations from plan

| Description: |
| Description: |
| Description: |
| Description: |
| Description: |

### Potential Severity (of this or future events)

- [ ] LOW
- [ ] MEDIUM
- [ ] HIGH

### Potential for recurrence

- [ ] LOW
- [ ] MEDIUM
- [ ] HIGH

### Preventative Controls Assigned

- [ ] N/A
- [ ] YES
- [ ] NO

### Attachments:

- [ ] 5-Why Analysis
- [ ] Ishikawa Analysis
- [ ] Apollo Cause Map & Report
Employee Statement

Employee: ___________________________ DOB: ________________ SSN: xxx-xx-
Supervisor: ___________________________ Date / Time: ____________ /
Work Area: ___________________________

Details

What were you doing just before the incident / injury occurred? (List activities, tools in use, etc.)

________________________________________________________________________

What happened or went wrong? (what unexpected action/condition led to the incident / injury)

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Describe the incident / injury? (i.e.: dropped object, part of the body injured, etc.)

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

What specific object/thing/action caused the incident / injury? (machine, tool, environment, chemical, overexertion, etc.)

________________________________________________________________________

________________________________________________________________________

Was anyone else injured? ☐ Yes ☐ No

Did anyone witness the incident / injury? ☐ Yes ☐ No

Provide any additional details on the back of this form or on an attached sheet of paper.

Statement/Release: I certify that these facts are true and correct to the best of my knowledge. I hereby authorize the full release of all medical records or other information related to this incident, to my employer or their designated representative.

Signature of Employee ___________________________ Date of Report ___________________________
ACCIDENT PREVENTION PROGRAM

Witness Statement

Name: ______________________________ Craft ___________ Level: ___________
Work Area: _________________________ Supervisor: _________________________
Incident: __________________________

Details

Did you personally witness the incident / injury? ☐ Yes ☐ No
If NO, skip to the bottom, sign/date, and return.

Who else was in the immediate area?

What did you see/hear/observe?

Please provide a sketch of what you remember seeing on the back of this form.

Did you wish to remain anonymous? ☐ Yes ☐ No

Statement: I certify that these facts are true and correct to the best of my knowledge.

Signature of Witness ______________ Date of Report ______________

Provide any additional details on the back of this form or on an attached sheet of paper.

Printed copies of this policy are uncontrolled and may not reflect changes made after the above revision date.
Employee: __________________________ Craft: ________

Supervisor: __________________________ Date / Time: __________ / __________

Work Area: __________________________

Details

What was the employee’s work assignment? (Location, activities, tools in use, etc.)

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

What factors may have contributed to the event? (unexpected actions/conditions)

Unsafe Action □ Unsafe Condition □ Could be both, explain completely, use
back

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

What could be done to prevent future events like this? (Proactive suggestions.)

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Did you witness the incident / injury? □ Yes □ No

If this is an injury report, do you question the validity of how it occurred? □ Yes □ No

Provide any additional details on the back of this form or on an attached sheet of paper.

Statement: I certify that the above facts are true and correct to the best of my knowledge.

Signature of Supervisor __________________________ Date of Report __________________________

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## ACCIDENT PREVENTION PROGRAM

### Proximate Cause Table

<table>
<thead>
<tr>
<th>Direct Causes</th>
<th>Indirect Causes</th>
<th>Basic Causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Struck by/against</td>
<td>Failure to secure</td>
<td>No oversight</td>
</tr>
<tr>
<td>Falls</td>
<td>Guarding</td>
<td>Poor maintenance.</td>
</tr>
<tr>
<td>Caught in/between</td>
<td>Improper use</td>
<td>Training</td>
</tr>
<tr>
<td>Exertion</td>
<td>Unsafe position</td>
<td>Policies</td>
</tr>
<tr>
<td>Contact with….</td>
<td>Environmental</td>
<td>Stress</td>
</tr>
<tr>
<td>Impact (vehicle)</td>
<td>Defect</td>
<td>Engineering</td>
</tr>
</tbody>
</table>

*Printed copies of this policy are uncontrolled and may not reflect changes made after the above revision date*
## ACCIDENT PREVENTION PROGRAM

### Injury & Illness Profile

Use this table to identify potential incident / injury & illness cause paths.

### Surface Factors

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Taking shortcuts</td>
<td>2.1 Improper use of</td>
<td>3.1 Failure to use PPE</td>
<td>4.1 Lack of Awareness</td>
<td></td>
</tr>
<tr>
<td>1.2 Lack of Authorization</td>
<td>2.2 Inappropriate for Task</td>
<td>3.2 Improper use of PPE</td>
<td>4.2 Distractions</td>
<td></td>
</tr>
<tr>
<td>1.3 Violation of procedure</td>
<td>2.3 Using Broken/Defective/Incomplete</td>
<td>3.3 Failure to use Protective Systems</td>
<td>4.3 Change in process</td>
<td></td>
</tr>
<tr>
<td>1.4 Using wrong procedure</td>
<td>2.4 Exceeding Limitations of</td>
<td>3.4 Removal of Protective Systems (guards)</td>
<td>4.4 Routine/Repetitive Activity</td>
<td></td>
</tr>
<tr>
<td>1.5 Improper application of procedure</td>
<td>2.5 Unauthorized Modification of</td>
<td>3.5 Using Inadequate Protective Systems</td>
<td>4.5 Body Position</td>
<td></td>
</tr>
<tr>
<td>1.6 Other</td>
<td>2.6 Other</td>
<td>3.6 Other</td>
<td>4.6 Other</td>
<td></td>
</tr>
</tbody>
</table>

### Conditions

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1 Previously Unidentified Hazards</td>
<td>6.1 Broken/Defective</td>
<td>7.1 Inadequate Guards/Protection</td>
<td>8.1 Congested or Limited Space</td>
</tr>
<tr>
<td>5.2 General Environment (weather, etc.)</td>
<td>6.2 Inadequate</td>
<td>7.2 Defective Guards/Protection</td>
<td>8.2 Illumination/Ventilation/Sanitation</td>
</tr>
<tr>
<td>5.3 Acts of Violence</td>
<td>6.3 Incorrect/Wrong</td>
<td>7.3 Inadequate Warning Systems</td>
<td>8.3 Organization/Housekeeping</td>
</tr>
<tr>
<td>5.4 3rd Party Activity/Condition</td>
<td>6.4 Beyond Usable Service Life</td>
<td>7.4 Protective Devices not available</td>
<td>8.4 New/Unfamiliar work area</td>
</tr>
<tr>
<td>5.5 Significant External Event</td>
<td>6.5 Unauthorized Modification of</td>
<td>7.5 Exceeding Design Limitations</td>
<td>8.5 Access/Egress Restrictions</td>
</tr>
<tr>
<td>5.6 Other</td>
<td>6.6 Other</td>
<td>7.6 Other</td>
<td>8.6 Other</td>
</tr>
</tbody>
</table>

### Contributing Factors

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9.1 Physical Deficiency</td>
<td>10.1 Previous Injury/Illness</td>
<td>11.1 Aggressive</td>
<td>12.1 Lack of Skill</td>
<td></td>
</tr>
<tr>
<td>9.2 Sensory Deficiency</td>
<td>10.2 Anxiety/Stress</td>
<td>11.2 Overconfident</td>
<td>12.2 New Skill</td>
<td></td>
</tr>
<tr>
<td>9.3 Systemic Deficiency</td>
<td>10.3 Fatigue/tiredness</td>
<td>11.3 Negligent</td>
<td>12.3 Inexpert Skill</td>
<td></td>
</tr>
<tr>
<td>9.4 Exceeding Personal Limitations</td>
<td>10.4 Substance Abuse</td>
<td>11.4 Apprehensive</td>
<td>12.4 Repetitive Skill</td>
<td></td>
</tr>
<tr>
<td>9.5 Other</td>
<td>10.5 Other</td>
<td>11.5 Other</td>
<td>12.5 Other</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>13.1 Commitment</td>
<td>14.1 Need not recognized</td>
<td>15.1 Incomplete Background Check</td>
<td>16.1 Time Pressure</td>
<td></td>
</tr>
<tr>
<td>13.2 Chain of Command</td>
<td>14.2 Not Provided</td>
<td>15.2 Not qualified/Under qualified</td>
<td>16.2 Budget Pressure</td>
<td></td>
</tr>
<tr>
<td>13.3 Leadership/Supervision</td>
<td>14.3 Inadequate</td>
<td>15.3 Unaddressed Historical Issues</td>
<td>16.3 Lack of Resources</td>
<td></td>
</tr>
<tr>
<td>13.4 Failure to correct deficiencies</td>
<td>14.4 Negative Reinforcement</td>
<td>15.4 Substance Abuse</td>
<td>16.4 Accelerated Schedule</td>
<td></td>
</tr>
<tr>
<td>13.5 Other</td>
<td>14.5 Other</td>
<td>15.5 Other</td>
<td>16.5 Other</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>17.1 Wrong item/part</td>
<td>18.1 Lack of Maintenance</td>
<td>19.1 Lack of Policy</td>
<td>20.1 Communication Barriers</td>
</tr>
<tr>
<td>17.2 Substituted item/part</td>
<td>18.2 Inadequate Maintenance</td>
<td>19.2 Inadequate Policy</td>
<td>20.2 Lack of Communication</td>
</tr>
<tr>
<td>17.3 Shipping Delay</td>
<td>18.3 Exceeded Lifespan</td>
<td>19.3 Lack of Policy Enforcement</td>
<td>20.3 Conflicting Communications</td>
</tr>
<tr>
<td>17.4 Ordering Delay</td>
<td>18.4 Failure to Inspect</td>
<td>19.4 Changes to Policy</td>
<td>20.4 Communication method</td>
</tr>
<tr>
<td>17.5 Other</td>
<td>18.5 Other</td>
<td>19.5 Other</td>
<td>20.5 Other</td>
</tr>
</tbody>
</table>

### Responsibility:

|----------------|-------------|--------------|---------|

---

Printed copies of this policy are uncontrolled and may not reflect changes made after the above revision date.
Use the following tables to categorize injury and illness events

<table>
<thead>
<tr>
<th>Activity</th>
<th>Action</th>
<th>Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sitting</td>
<td>Holding</td>
<td>Tool</td>
</tr>
<tr>
<td>Standing</td>
<td>Using</td>
<td>Equipment</td>
</tr>
<tr>
<td>Walking</td>
<td>Positioning</td>
<td>Material</td>
</tr>
<tr>
<td>Climbing</td>
<td>Unknown/Other</td>
<td>Structure</td>
</tr>
</tbody>
</table>

What actually caused the injury/illness?

<table>
<thead>
<tr>
<th>Event</th>
<th>Event</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Struck by…</td>
<td>Slip/Trip/fall</td>
<td>Environment</td>
</tr>
<tr>
<td>Exposure to…</td>
<td>Fall to lower level</td>
<td>Tool</td>
</tr>
<tr>
<td>Contact with…</td>
<td>Overexertion</td>
<td>Vehicle/Equipment</td>
</tr>
<tr>
<td>Caught in/by…</td>
<td>Unknown/Other</td>
<td>Material/Debris/Waste</td>
</tr>
</tbody>
</table>

What Type of injury/illness resulted from the event?

<table>
<thead>
<tr>
<th>Injury</th>
<th>Injury</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amputation</td>
<td>Bruise/Contusion</td>
<td>Foreign body/Irritation</td>
</tr>
<tr>
<td>Abrasion / Irritation</td>
<td>Burn-Thermal</td>
<td>Fracture/Dislocation</td>
</tr>
<tr>
<td>Laceration / Puncture</td>
<td>Burn-Chemical</td>
<td>Sprain/Strain</td>
</tr>
<tr>
<td>Bite/Sting</td>
<td>Cold/Heat-Related</td>
<td>Multiple Injuries</td>
</tr>
</tbody>
</table>

What part of the body was affected or Injured? *(indicate left or right)*

<table>
<thead>
<tr>
<th>Body Part</th>
<th>Head</th>
<th>Torso</th>
<th>Upper Limb</th>
<th>Lower Limb</th>
<th>Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes</td>
<td>Eyes</td>
<td>Chest</td>
<td>Shoulder</td>
<td>Hip</td>
<td>Respiratory</td>
</tr>
<tr>
<td>Ears</td>
<td>Ears</td>
<td>Abdomen</td>
<td>Arm</td>
<td>Leg</td>
<td>Circulatory</td>
</tr>
<tr>
<td>Nose</td>
<td>Nose</td>
<td>Upper Back</td>
<td>Elbow</td>
<td>Knee</td>
<td>Digestive</td>
</tr>
<tr>
<td>Mouth</td>
<td>Mouth</td>
<td>Lower Back</td>
<td>Wrist</td>
<td>Ankle</td>
<td>Reproductive</td>
</tr>
<tr>
<td>Neck</td>
<td>Neck</td>
<td>Buttock</td>
<td>Hand</td>
<td>Foot</td>
<td>Nervous</td>
</tr>
<tr>
<td>Skull/Head</td>
<td>Skull/Head</td>
<td>Groin/Pelvis</td>
<td>Thumb</td>
<td>Heel</td>
<td>Skeletal</td>
</tr>
<tr>
<td>Chin/Jaw</td>
<td>Chin/Jaw</td>
<td>Side</td>
<td>Finger</td>
<td>Toe</td>
<td>Skin</td>
</tr>
<tr>
<td>Unknown/Other</td>
<td>Unknown/Other</td>
<td>Unknown/Other</td>
<td>Unknown/Other</td>
<td>Unknown/Other</td>
<td>Unknown/Other</td>
</tr>
</tbody>
</table>
1.0 Purpose

This policy is designed to provide a standardized structure for our site specific APP/IIPP plans, for the purpose of reducing the risk of personal injury related to our work activities.

2.0 Scope

This policy applies to all field construction activities for Haskell Davis JV.

3.0 Definitions

• SSP/APP/IIPP: means a site specific safety & health plan that is created for a particular project

4.0 Procedures

Due to the varied nature and type of work conducted by Haskell Davis JV, individual plans are used to address the specific needs of each project, regarding our responsibility for preventing accidents, injuries, and illnesses. The individual plans are collectively referred to as Site Specific Safety Plans, Accident Prevention Plans, or Injury & Illness Prevention Plans.

The essential outlines of all SSP/APP/IIPP include:

• Employee Orientation
• Description of our policies
• Review of JSA/STA process
• Hazard and Injury reporting/correction
• Proper use of Personal Protective Equipment
• Emergency Procedures
• Location of First Aid Kits and Fire Extinguishers
• Review of Hazardous Chemicals & SDS
• Specific Training Requirements
• Prohibited Practices
• Method of Communication
ACCIDENT REPORTING

1.0 Purpose

To ensure the accurate and timely reporting of workplace accidents

2.0 Scope

This policy applies to work performed by all departments, divisions, and work locations under the control of Haskell Davis JV, including Sub-contractors (where applicable).

3.0 Definitions

- **Accident**: means an undesirable event, which results in bodily injury or property damage
- **Incident**: means an undesirable event, which does not result in injury or property damage
- **Near Miss**: means an unplanned event that had the potential to cause an accident or incident
- **Injury**: means an physical trauma to the body, requiring medical treatment
- **First Aid**: means an physical trauma to the body, NOT requiring medical treatment
- **Disease**: means an physiological condition resulting from an exposure in the work place
- **Fatality**: means any work-related death (Natural Causes are excluded)
- **Report**: means a Verbal or Written notification of the above issues
- **Investigation**: means a formal process for determining cause of the above issues

4.0 Procedures

All accidents, injuries, industrial illnesses and significant near misses shall be reported to the supervisor or designated safety representative within one hour of first knowledge. Any necessary materials, tools or equipment will be available to assist in conducting an investigation

If an employee has reported an injury, which did not initially result in medical treatment and later decides to seek such treatment, they are required to notify Haskell Davis JV, prior to seeking or obtaining medical care.

In the event of an emergency or unexpected worsening of an employee’s condition, occurring during non-working hours, the employee shall notify Haskell Davis JV, of the change as soon as practical.

Employees are expected to report ALL injuries, and safety concerns no matter what, without fear of reprisal or negative consequence. A comment box shall be available at the Project Superintendents office or Site Safety and Health Officer (SSHO) office where employees may report safety and health hazards anonymously if they desire. Haskell Davis JV is committed to ensuring the safety of our employees and wishes to learn from every accident/injury event, so we can prevent future occurrences.

4.1. Responsibilities

4.1.1. Employee
ACCIDENT PREVENTION PROGRAM

ACCIDENT REPORTING

- Report all injuries immediately, to supervisor and safety representative.
- Cooperate with all reporting and investigation requirements
- Comply with recommendations of supervisor, safety representative, and doctor

4.1.2. Supervisor or Safety Representative (SSHO):

- Injuries resulting in a fatality or the hospitalization of one or more employees must be verbally reported to applicable regulatory agencies within 8 hours of their discovery.
- Unless specified otherwise by contract, all incidents must also be reported to our client in a timely manner but not longer than 24 hours after any incident.
- Provide or arrange transport of injured worker to medical treatment facility
- Accompany worker to treatment facility and coordinate with treating physician, regarding availability of light duty work and obtain a signed light duty work release if appropriate
- Perform an investigation and prepare written accident reports for internal use within 24 hours and as required by customer. Refer to the Accident Investigation chapter of this IIPP for the required forms and guidance.
- Develop, implement or recommend corrective action
- Share Lessons Learned with other crews, to avoid recurrence
- Cooperate with client investigations or reporting as needed. *Client requirements and expectations should be identified during mobilization

4.1.3. Management

- Review all written reports for accuracy and enter in database for trending
- Evaluate effectiveness of reporting and investigation process
- Provide assistance as needed to complete reports and investigations

4.1.4. Training

- SSHO’s are trained for incident response and incident investigation procedures. On project sites where there is no Safety Coordinator the Project Manager or their designee shall be trained to fulfil this role.
1.0 Purpose

Exposure to asbestos has been shown to cause lung cancer, asbestosis, mesothelioma, and cancer of the stomach and colon. The purpose of this program is to inform employees of the hazards of asbestos, how to identify where it is located, how to minimize exposures and the safe handling practices.

2.0 Scope

This policy applies to any employee who may be exposed to Asbestos during the course of their employment with Haskell Davis JV.

3.0 Definitions

**Accredited inspector** means any person meeting the accreditation requirements of the Federal Toxic Substance Control Act, Section 206(a)(1) and (3). 15 U.S.C. 2646(a)(1) and (3).

**Aggressive method** means removal or disturbance of building material by sanding, abrading, grinding or other method that breaks, crumbles, or disintegrates intact ACM.

**Amended water** means water to which surfactant (wetting agent) has been added to increase the ability of the liquid to penetrate ACM.

**Asbestos includes** chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any of these minerals that have been chemically treated and/or altered.

For purposes of this standard, “asbestos” includes PACM, as defined below.

**Asbestos abatement project** means an asbestos project involving three square feet or three linear feet, or more, of asbestos-containing material.

**Asbestos-containing material (ACM)** means any material containing more than 1% asbestos.

**Asbestos project** - includes the construction, demolition, repair, remodeling, maintenance or renovation of any public or private building or structure, mechanical piping equipment or system involving the demolition, removal, encapsulation, salvage, or disposal of material or outdoor activity releasing or likely to release asbestos fibers into the air.

**Authorized person** means any person authorized by the employer and required by work duties to be present in regulated areas.

**Building/facility/vessel owner** means any legal entity or person who owns any public or private building, vessel, structure, facility, or mechanical system or the remnants thereof, including the agent of such person, but does not include individuals who work on asbestos projects in their own single-family residences, no part of which is used for commercial purposes. Also included is any lessee, who exercises control over management and recordkeeping functions relating to a building, vessel, and/or facility in which activities covered by this standard takes place.

**Certified industrial hygienist (CIH)** means one certified in the practice of industrial hygiene by the American Board of Industrial Hygiene.
Class I asbestos work means activities involving the removal of thermal system insulation or surfacing ACM/PACM.

Class II asbestos work means activities involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

Class III asbestos work means repair and maintenance operations where “ACM,” including TSI and surfacing ACM and PACM, may be disturbed.

Class IV asbestos work means maintenance and custodial activities during which employees contact but do not disturb ACM or PACM and activities to clean up dust, waste and debris resulting from Class I, II, and III activities.

Clean room means an uncontaminated room having facilities for the storage of employees' street clothing and uncontaminated materials and equipment.

Closely resemble means that the major workplace conditions which have contributed to the levels of historic asbestos exposure are no more protective than conditions of the current workplace.

Competent person means, one who is capable of identifying existing asbestos, hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them. The competent person shall be certified as an asbestos supervisor for Class I and Class II work, and for Class III and Class IV work involving 3 square feet or 3 linear feet or more of asbestos-containing material. For Class III and Class IV work, involving less than 3 square feet or 3 linear feet, the competent person shall be trained in an operations and maintenance (O&M) course which meets the criteria of EPA (40 CFR 763.92(a)(2)).

Critical barrier means one or more layers of plastic sealed over all openings into a work area or any other similarly placed physical barrier sufficient to prevent airborne asbestos in a work area from migrating to an adjacent area.

Decontamination area means an enclosed area adjacent and connected to the regulated area and consisting of an equipment room, shower area, and clean room, which is used for the decontamination of workers, materials, and equipment contaminated with asbestos.

Demolition means the wrecking or taking out of any load-supporting structural member and any related razing, removing, or stripping of asbestos products. Where feasible, asbestos-containing materials shall be removed from all structures prior to the commencement of any demolition activity.

Department means the department of Labor & Industries.

Director means the director of the department of Labor & Industries or his/her authorized representative.

Director of NIOSH means the Director, National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designee.

Disturb or disturbance refers to activities that disrupt the matrix of ACM or PACM, crumble or pulverize ACM or PACM, or generate visible debris from ACM or PACM. This term includes activities that disrupt the matrix of ACM or PACM, render ACM or PACM friable, or generate visible debris. Disturbance includes cutting away small amounts of ACM or PACM, no greater than the amount that can be contained in one standard size glove bag or waste bag in order to access a building or vessel component. In no event shall the amount of ACM or PACM so disturbed exceed that which can be contained in one glove bag or waste bag which shall not exceed 60 inches in length and width.
Employee exposure means that exposure to airborne asbestos that would occur if the employee were not using respiratory protective equipment.

Equipment room (change room) means a contaminated room located within the decontamination area that is supplied with impermeable bags or containers for the disposal of contaminated protective clothing and equipment.

Fiber means a particulate form of asbestos, five micrometers or longer, with a length-to-diameter ratio of at least three to one.

Glove bag means not more than a 60 x 60 inch impervious plastic bag-like enclosure affixed around an asbestos-containing material, with glove-like appendages through which material and tools may be handled.

High-efficiency particulate air (HEPA) filter means a filter capable of trapping and retaining at least 99.97 percent of all monodispersed particles of 0.3 micrometers mean aerodynamic diameter or larger.

Homogeneous area means an area of surfacing material or thermal system insulation that is uniform in color and texture.

Industrial hygienist means a professional qualified by education, training, and experience to anticipate, recognize, evaluate and develop controls for occupational health hazards.

Intact means that the ACM has not crumbled, been pulverized, or otherwise deteriorated so that the asbestos is no longer likely to be bound with its matrix. Friable ACM that is disturbed, as defined in this part, is presumed to be no longer intact.

Modification for the purpose of this policy means a changed or altered procedure, material or component of a control system, which replaces a procedure, material or component of a required system. Omitting a procedure or component, or reducing or diminishing the stringency or strength of a material or component of the control system is not a “modification” for the purposes of.

Negative initial exposure assessment means a demonstration by the employer that employee exposure during an operation is expected to be consistently below the PELs.

PACM means “presumed asbestos-containing material.”

Presumed asbestos-containing material means thermal system insulation and surfacing material found in buildings, vessels, and vessel sections constructed no later than 1980. The designation of a material as “PACM” may be rebutted.

Project designer means a person who has successfully completed the training requirements for an abatement project designer established by 40 U.S.C. 763.90(g).

Regulated area means an area established by the employer to demarcate areas where Class I, II, and III asbestos work is conducted, and any adjoining area where debris and waste from such asbestos work accumulate; and a work area within which airborne concentrations of asbestos, exceed or can reasonably be expected to exceed the permissible exposure limit.

Removal means all operations where ACM and/or PACM is taken out or stripped from structures or substrates, and includes demolition operations.

Renovation means the modifying of any existing vessel, vessel section, structure, or portion thereof.

Repair means overhauling, rebuilding, reconstructing, or reconditioning of vessels, vessel sections, structures or substrates, including encapsulation or other repair of ACM or PACM attached to vessels, vessel sections, structures or substrates.
**Surfacing material** means material that is sprayed, troweled-on or otherwise applied to surfaces (such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, and other purposes).

**Surfacing ACM** means surfacing material which contains more than 1% asbestos.

**Thermal system insulation (TSI)** means ACM applied to pipes, fittings, boilers, breaching, tanks, ducts, or other structural components to prevent heat loss or gain.

**Thermal system insulation ACM** is thermal system insulation which contains more than 1% asbestos.

### 4.0 Responsibilities

Project Managers, Superintendents, General Foremen, Site Safety Managers have the responsibility to:

4.1

4.1.1. Determine if any aspect of a project includes handling asbestos by surveying materials before work begins.

4.1.2. Ensure that Sub-contractors handling asbestos are licensed by Washington Department of Labor and Industry, DOSH and have been reviewed by Haskell Davis JV Safety.

4.1.3. Ensure that all project employees have been given Asbestos Awareness training when there is a potential for exposure to Asbestos Containing Materials (ACM)

4.1.4. Report damaged asbestos containing materials to the client project coordinator for repair. All damaged asbestos materials must be repaired or encapsulated to prevent release of fibers as soon as possible.

### 5.0 Procedures

5.1. **Awareness Training**

Asbestos awareness training is required for employees whose work activities may bring them into contact with asbestos containing material (ACM) or presumed asbestos containing material (PACM) but who do not disturb the ACM or PACM during their work activities. The training must be documented and renewed annually for affected employees.

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 crawlspace, and between walls. Many Haskell Davis JV clients have systems which contain Asbestos insulation and materials. Haskell Davis JV will consult with client coordinators to determine if there is a potential for exposure to our employees.

5.2. **Permissible Exposure Limits**

No employee will be exposed to asbestos fibers without approved respiratory protection if airborne concentrations equal or exceed 0.1 asbestos fibers per cubic centimeter (0.1 f/cc) in an eight (8) hour
time weighted average. Fibers are defined as 5 micrometers or longer, with a length to diameter ratio of at least 3 to 1.

The excursion limit for asbestos is 1.0 fiber per cubic centimeter (1f/cc) for 30 minutes.

5.3. Signage
Signs and labels shall identify when Asbestos 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.

5.4. Identification
The following refinery materials are presumed to be asbestos containing (PACM) and will be handled according to DOSH standards unless analysis, labeling, P&ID’s, or MSDS prove otherwise:

5.5. Asbestos Projects Nearby
If Haskell Davis JV employees or sub-contractors working immediately adjacent to a Class I asbestos jobs are exposed or likely to be exposed to asbestos due to the inadequate containment of such job, they shall be removed from the area until the enclosure breach is repaired and an industrial hygienist has stated that it is safe to return to the affected area.

6.0 Procedures
It is Haskell Davis JV policy to avoid all contact with asbestos and asbestos-related materials. It can be expected that we could potentially come into contact with asbestos or asbestos-related material during projects performed in process facilities such as Oil Refineries, Power Plants, Pulp and Paper Mills. This is not an all-inclusive list of potential asbestos containing facilities.

No employee untrained or unprotected will be allowed in an area when asbestos is being removed.

On all projects, be alert for existing materials that could contain asbestos.

Should you come across asbestos contaminated material or presumed asbestos containing materials (PACM), do not proceed with removal, and notify your supervisor immediately before proceeding.

Asbestos removal is governmentally regulated to protect your health. Very specific rules exist governing the removal process and disposal.

The removal of asbestos materials will be done only by professionals trained and certified for asbestos abatement and removal.

Personal protective equipment for working around asbestos includes a disposable, full body covering and full face respirator with the proper cartridge.

Under certain circumstances, our service may be required along with the asbestos removal process. The designated workers will be trained and educated by the asbestos abatement contractor to assist. Special personal protective equipment will be issued and must be worn at all times.
BLINDING

1.0 Purpose

The purpose of this policy is to establish the proper procedures for the correct installation and removal of blinds, which is vital to the establishment of a safe working environment.

2.0 Scope

The Haskell Davis JV blinding policy applies to all situations requiring the installation or removal of piping blinds in refining, chemical, or other similar facilities. Where a client policy differs from this policy, the more stringent policy shall prevail.

3.0 Definitions

- **Blind**: a physical plate that can be bolted between flanges to seal off a section of piping
- **Blind List**:

4.0 Procedures

Blinds generally provide the most effective method of guaranteeing that a liquid or vapor will be safely contained and not transferred through a line or equipment involved.

Prior to any blind removal or installation, it is necessary to make sure that the permits required to do the job have been obtained. Always work with the unit operator or the client’s designated representative. If a blind list is available, the supervisor shall obtain a copy of it. If no blind list is available, the supervisor shall get with the unit operator or the client’s representative to identify all of the blinds that will be installed or removed and the sequence that this will be done.

The crew supervisor shall tag any blinds installed by Haskell Davis JV with their name and date on the tag. A blind number shall also be on the tag. A Haskell Davis JV blind list/log shall be kept of all the blinds that are installed. The blind list will include the blind number, the location and system, and the name of the unit operator or client’s representative that directed the installation or removal of the blind.

Prior to installing or removing a blind, the supervisor will discuss the condition of the line that will be worked on with the unit operator and obtain or verify the following information:

- What product was in the line?
- Has the line been completely drained and depressurized? -VERIFY
- Has the line been steamed or flushed?
- Is the line warm to the touch?
- Is the line under a nitrogen or inert gas purge?
• Does work on the line require any special protective clothing such as acid gear, rubber gloves, face shield, Fresh Air Respirators, etc.?
• Have the process unit operator show you the drain and have them verify that the drain is not plugged.
• If working at an elevated position, flag off the area below, so that the installation or removal of a blind will not create a hazard for anyone walking or working below.
• Communicate with others working in the area of any potential hazard.

4.1. Blinding Sequence

1. Loosen the studs and break the seal on the flange before removing them. Remember to always break the seal away from your face. If there is any pressure or product in the line, immediately bolt up the flange and contact the unit operator. Follow their instructions before proceeding further.
2. Remove one less than one half of the studs. If possible, leave the studs in place on the bottom half of the flange.
3. Wedge open the flange, leaving enough room for the blind to be installed.
4. Remove the old gasket, making sure that the flange surface is clean. Never put your fingers between the flanges. Always use scrapers to clean the flange surface, being careful not scratch or gouge the surface.
5. When installing the blind with gaskets, place an anti-seizing lubricating compound such as “Never-Seez” on the flange side of the gasket, not the blind side.
6. When preparing to remove the blind to put the line back in service, contact the unit operator for the proper gasket specifications. Spread the flanges enough to remove the blind and be certain that all of the old gaskets have been removed and cleaned before inserting the correct type gasket for service.
7. Insert studs in the flanges before removing the wedges. Place anti seize compound on one side of each stud. When a stud can only be removed from one direction, always anti seize compound on the end of the stud, which comes out last.
8. While keeping fingers clear, knock the wedges out. Always use extreme caution. Always notify your partner or others in the area in case the wedge flies out. It is advisable to wear gloves for all blinding work.
9. Make sure that flange faces are square. If not, remove two studs and install drift pins. Tighten one stud in each side of the flange. Remove the drift pins and four-bolt the flange.
10. One bolt thread minimum must be showing and no more than four threads maximum.
11. Tighten studs in a crisscross pattern until all studs are tight. Check all studs one last time.
12. Contact the unit operator for a hammer test when the blinds have been removed. Clean up the job site and dispose of all old gaskets.
1.0 Purpose

The Haskell Davis JV has adopted a policy for the safety and health of its employees who may find themselves at risk for exposure to Bloodborne Pathogens (BBP). This policy is to establish procedures in compliance with WAC 296-62-08001 and to establish controls to protect employees, who may become involved in a “first response” situation involving injuries, from the hazards of exposure to Bloodborne pathogens.

2.0 Scope

NOTE: It must be clearly understood that currently there are no employees within the company that are required to administer first aid as a condition of employment or part of their job description. Any employee (including Safety Representatives) that may choose to administer first aid does so as a “Good-Samaritan” only and may be afforded any legal protection offered under those regulations and while acting in that capacity.

3.0 Definitions

- **Blood**: means human blood, human blood components, and products made from human blood
- **Bloodborne Pathogens**: means pathogenic microorganisms that are present in human blood and can cause disease in humans. Including; but are not limited to (HBV) & (HIV)
- **Contaminated**: means the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.
- **Contaminated sharps**: means any contaminated object that can penetrate the skin including, but not limited to, needles, broken glass, and objects.
- **Decontamination**: means the use of a physical or chemical agent to remove, inactivate, or destroy Bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles
- **Exposure Incident**: means a specific event involving direct contact with potentially infectious body fluids or contaminated materials
- **HBV**: means hepatitis B virus.
- **HIV**: means human immunodeficiency virus.
- **Universal Precautions**: means a set of barrier controls between the rescuer and injured person

4.0 Procedures

It is the policy of Haskell Davis JV to treat all bodily fluids as potentially contaminated substances.

4.1. Exposure Determination
Personnel in the following classifications may be exposed to blood borne pathogens in performance of
t heir jobs.

- Site Safety Representatives (SSHO)
- Superintendents and Foreman (Note: Haskell Davis JV policy is to provide First aid and CPR
  trained supervision on each job site. On smaller jobs where there is no full time safety person,
  one of these individuals may be designated as the site safety representative. Only the
  designated site safety representative is considered occupationally exposed.)

Providing emergency first aid treatment (applying dressings) to bleeding traumatic injuries that may
occur on the job.

- Providing Cardio-Pulmonary Resuscitation.
- Inadvertent contact with an infected person’s blood or bodily fluids.

This exposure determination shall be made without regard to the use of personal protective equipment.

4.2. Exposure Control

Universal precautions will be used to prevent contact with blood or other potentially infectious
materials, including all body fluids. When differentiation between body fluid types is difficult or
impossible, all body fluids shall be considered potentially infectious materials. For the purposes of this
policy, all human blood and certain human body fluids are treated as if known to be infectious for HIV,
HBV, and other Bloodborne pathogens

Engineering and work practice controls will be used to eliminate or minimize employee exposure where
feasible. Where occupational exposure remains after institution of these controls, personal protective
equipment shall also be used.

Exposed employees shall wash their hands and any other skin with soap and water, or flush mucous
membranes with water immediately or as soon as feasible following contact of such body areas with
blood or other potentially infectious materials.

If washroom facilities are not immediately available, anti-bacterial towelettes such as Vionex are readily
available in all first-aid and blood borne pathogen kits.

Food and drink shall not be kept in refrigerators, freezers, shelves, cabinets, or on countertops or bench
tops where blood or other potentially infectious materials are present. For example, the designated first
aid room or area would be off limits for the storage or consumption of food or drink.

All procedures involving blood or other potentially infectious materials shall be performed in such a
manner as to minimize splashing, spraying, spattering, and generation of droplets of these substances.

4.3. Personal Protective Equipment

Disposable nitrile gloves will be provided and worn by employees when treating bleeding injuries.
Resuscitation bags, pocket masks or mouthpieces will be provided and used for mouth to mouth resuscitation. When there is occupational exposure, the employee shall be provided, at no cost to the employee, appropriate personal protective equipment such as, but not limited to, gloves, gowns, laboratory coats, face shields or masks and eye protection, and mouthpieces, resuscitation bags, pocket masks, or other ventilation devices.

4.4. Housekeeping

All equipment and surfaces which have been in contact with blood or other potentially infectious material will be decontaminated as soon as feasible, using an appropriate disinfectant such as Clorox bleach.

Contaminated waste such as used dressings, Band-Aids, disposable gowns; aprons and gloves will be collected and placed into properly marked, sealed plastic bio-bags for disposal at a proper facility.

4.5. Training

Employees shall receive initial and annual refresher training to include as part of their orientation. It shall include.

- An explanation of the epidemiology, modes of transmission and symptoms of HIV and HBV.
- Hazard recognition and safe work practices.
- Exposure incident definition and reporting requirements.
- Opportunity for questions and discussion.

Training records shall be maintained for 3 years from the date on which the training occurred.

4.6. Exposure Incident Evaluation and Follow-Up

Following any report of an exposure incident, the exposed employee will be provided with a confidential medical evaluation and follow-up report including:

- Documentation of the route(s) of exposure
- Circumstances under which the exposure occurred
- Identification and documentation related to the source individual

*Source individual’s blood will be tested for HBV/HIV as soon as feasible after exposure*

The exposed individual will be advised of the source individual’s test results and informed of applicable laws and regulations concerning disclosure of identity and infectious status of the source individual.

Exposed individual will be provided with blood testing, post exposure counseling and evaluation of any related illness or conditions.

Exposure incidents will be reported using forms and procedures specified in Accident/Injury/Incident Reporting section of the Haskell Davis JV Safety Program.
All employees who have an exposure incident will be advised of their right to receive Hepatitis B immunization at no cost to them at a reasonable time and place. Employees who decline immunization will complete a vaccination declination form.

4.7. Safe Practices

Hand washing facilities will be provided at each job site. This may consist of; running water, soap and disposable towels; antiseptic hand cleanser and disposable towels; or antiseptic wipes.

Employees will wash their hands as soon as feasible after removal of gloves or other personal protective equipment- regardless of visible condition of the rescuers’ skin.

Employees will wash hands and any other skin with soap and water, or flush mucous membranes with water immediately or as soon a feasible following contact with blood or other potentially infectious materials.

4.8. Medical Records

Employee medical records are confidential and shall not be disclosed without the employee’s express written consent, to any person within or outside the workplace. Exceptions include delivery to state and federal agencies as required in their rules governing Occupational Exposure to Bloodborne Pathogens.

Medical records shall include only:

- The name and the social security number of employees involved
- A copy of the employee’s hepatitis B vaccination status, including the dates of all hepatitis B vaccinations and any medical records relative to the employee’s ability to receive the vaccination.

Haskell Davis JV shall maintain the required record for at least the duration of employment plus 30 years in accordance with 29 CFR 1910.1020

4.9. Annual Review

This policy will be evaluated annually for content and effectiveness and updated in accordance with current regulations. A copy of the Exposure Control Plan is accessible to employees in accordance with 29 CFR 1910.1020(e).
CHAIN, AIR AND ELECTRIC HOISTS

1.0 Purpose

To provide procedures and requirements for the safe use, inspection and maintenance of chain, air and electric hoists used at all Haskell Davis JV project sites.

2.0 Scope

This policy applies to any employee who will operate Chain, Electric or Air Hoists during the course of their employment with Haskell Davis JV.

3.0 Procedures

3.1. Construction, operation and maintenance

Chain and electric hoists shall be of what is known as "all steel construction." No cast iron shall be used in parts subject to tension except drums, bearings or brake shoes.

The chains shall be made of the best quality steel or iron with welded links.

Chain and electric hoists shall have a factor of safety of at least five.

Chain and electric hoists shall be equipped with an approved device which will automatically lock the load when hoisting is stopped.

Electric hoists shall be provided with an approved limit stop to prevent the hoist block from traveling too far in case the operating handle is not released in time.

3.2. Air hoists.

To prevent piston rod lock nuts from becoming loose and allowing rod to drop when supporting a load, lock nut shall be secured to piston rod by a castellated nut and cotter-pin.

A clevis or other means shall be used to prevent hoists cylinder becoming detached from hanger.

3.3. Overhead Hoists

The safe working load of the overhead hoist, as determined by the manufacturer, shall be indicated on the hoist, and this safe working load shall not be exceeded.

The supporting structure to which the hoist is attached shall have a safe working load that meets or exceeds that of the hoist.

The support shall be arranged so as to provide for free movement of the hoist and shall not restrict the hoist from lining itself up with the load.
The hoist shall be installed only in locations that will permit the operator to stand clear of the load at all times.

Air hoists shall be connected to an air supply of sufficient capacity and pressure to safely operate the hoist. All air hoses supplying air shall be positively connected to prevent their becoming disconnected during use.

All overhead hoists in use shall meet the applicable requirements for construction, design, installation, testing, inspection, maintenance, and operation, as prescribed by the manufacturer.

3.4. Chain Falls and Pull-Lifts (Come Along)

Chain falls and pull-lifts shall be clearly marked to show the capacity and the capacity shall not be exceeded.

Chain falls shall be regularly inspected to ensure that they are safe, particular attention being given to the lift chain, pinion, sheaves and hooks for distortion and wear. Pull-lifts shall be regularly inspected to ensure that they are safe, particular attention being given to the ratchet, pawl, chain and hooks for distortion and wear.

Straps, shackles, and the beam or overhead structure to which a chain fall or pull-lift is secured shall be of adequate strength to support the weight of load plus gear. The upper hook shall be moused or otherwise secured against coming free of its support.

Scaffolding shall not be used as a point of attachment for lifting devices such as tackles, chain falls, and pull-lifts unless the scaffolding is specifically designed for that purpose.
COLD WEATHER EXPOSURE

1.0 Purpose

To provide a safe and healthful working environment and protect Haskell Davis JV employees who perform work in cold weather environments.

2.0 Scope

This policy applies to employees working in outdoor environments, and selected indoor environments, where there is an elevated risk of suffering from a cold-related illness.

3.0 Definitions

- **Acclimatization**: means the body’s temporary adaptation to work in the heat that occurs gradually as a person is exposed to it.
- **Chilblains**: means a condition where the capillary-bed of an employee’s affected skin is significantly damaged.
- **Cold Related Illness (CRI)**: means a serious medical condition resulting from the body’s inability to cope with a particular decrease in body heat, and includes hypothermia, frostbite, and similar illnesses.
- **Frostbite**: refers to a condition where skin or body parts become frozen or semi-frozen (related to gangrene).
- **Hypothermia**: refers to the condition of having an unusually low body temperature.
- **Trench foot/Immersion Foot**: refers to a condition related to prolonged exposure of the feet to wet and cold.

4.0 Procedures

It is the policy of Haskell Davis JV that all affected employees are required to comply with the Cold Weather Exposure policy and are encouraged to actively participate in identifying ways to reduce the risk of experiencing cold related illness in the workplace.

4.1. Hazard Evaluation

Haskell Davis JV will evaluate potential construction sites and outdoor workplaces, where cold weather exposure risk may exist, to identify and evaluate CRI hazards. The following is a list of where we might expect hazards to occur:

- WA, OR, CA, MT, ID: Seasonal (October-May)
- All work in the State of Alaska
- Working on or near chillers or cooler equipment/facilities
Wind Chill Chart
Haskell Davis JV supervisors will be aware of the daily wind speed and temperature

4.2. General Provisions
Haskell Davis JV will consider the following recommendations, to protect workers from cold stress:

- Schedule maintenance and repair jobs in cold areas for warmer months
- Schedule cold jobs for the warmer part of the day
- Reduce the physical demands of workers, using equipment
- Use relief workers or assign extra workers for long, demanding jobs
- Provide warm liquids to workers
- Provide warm areas for use during break periods
- Monitor workers who are at risk of cold stress
- Provide cold stress training that includes information about:
  - Worker risk
  - Prevention
  - Symptoms
  - The importance of monitoring yourself and coworkers for symptoms
  - Treatment
  - Personal protective equipment

4.3. General Expectations
Workers should avoid exposure to extremely cold temperatures when possible. When cold environments or temperatures cannot be avoided, workers should follow these recommendations to protect themselves from cold stress:

- Wear appropriate clothing.
  - Wear several layers of loose clothing- layering provides better insulation. Avoid tight clothing, which reduces blood circulation
  - When choosing clothing, be aware that some clothing may also restrict physical movement, resulting in a hazardous situation
- Make sure to protect the ears, face, hands and feet in extremely cold weather
  - Boots should be waterproof and insulated
ACCIDENT PREVENTION PROGRAM
COLD WEATHER EXPOSURE

- Wear a hard-hat liner; it will keep your whole body warmer
- Wear wool-based protection next to hands, feet, face/head
- Move into warm locations during work breaks
- Limit the amount of time outside on extremely cold days
- Carry extra cold weather gear, such as socks, gloves, hats, jacket, blankets, a change of clothes and a thermos of hot liquid
- Avoid touching cold metal surfaces with bare skin
- Monitor your own physical condition and that of your coworkers

4.4. First Aid awareness and actions in the event of a cold related illness:

The following chart helps employees recognize the main types of cold related illnesses, signs, symptoms, and the appropriate treatment to reduce the effects of the cold related illness. This chart will be posted in the employee job shack.

4.4.1. Signs & Symptoms

<table>
<thead>
<tr>
<th>Condition</th>
<th>Symptoms</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chilblains</td>
<td>Redness</td>
<td>Avoid scratching</td>
</tr>
<tr>
<td></td>
<td>Itching</td>
<td>Slowly warm the skin</td>
</tr>
<tr>
<td></td>
<td>Possible blistering</td>
<td>Use corticosteroid creams to relieve itching</td>
</tr>
<tr>
<td></td>
<td>Inflammation</td>
<td>Keep blisters and ulcers clean and covered</td>
</tr>
<tr>
<td></td>
<td>Reddening of the skin</td>
<td>Remove shoes/boots and wet socks</td>
</tr>
<tr>
<td></td>
<td>Numbness</td>
<td>Dry their feet gently</td>
</tr>
<tr>
<td></td>
<td>Leg cramps</td>
<td>Avoid walking on feet, as it may cause tissue damage</td>
</tr>
<tr>
<td></td>
<td>Swelling</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tingling pain</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blisters or ulcers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bleeding under the skin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gangrene (the foot may turn dark purple, blue, or gray)</td>
<td></td>
</tr>
<tr>
<td>Trench Foot</td>
<td>Reddening of the skin</td>
<td>Alert the supervisor and request medical assistance.</td>
</tr>
<tr>
<td></td>
<td>Numbness</td>
<td>Move the victim into a warm room or shelter.</td>
</tr>
<tr>
<td></td>
<td>Leg cramps</td>
<td>Remove their wet clothing.</td>
</tr>
<tr>
<td></td>
<td>Swelling</td>
<td>Warm the center of their body first-chest, neck, head, and groin-using an electric blanket, if available; or use skin-to-skin contact under loose, dry layers of blankets, clothing, towels, or sheets.</td>
</tr>
<tr>
<td></td>
<td>Tingling pain</td>
<td>Warm beverages may help increase the body temperature, but do not give alcoholic beverages.</td>
</tr>
<tr>
<td></td>
<td>Blisters or ulcers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bleeding under the skin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gangrene (the foot may turn dark purple, blue, or gray)</td>
<td></td>
</tr>
<tr>
<td>Hypothermia</td>
<td>Early Symptoms</td>
<td></td>
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<tr>
<td></td>
<td>Shivering</td>
<td></td>
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<tr>
<td></td>
<td>Fatigue</td>
<td></td>
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<tr>
<td></td>
<td>Loss of coordination</td>
<td></td>
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<tr>
<td></td>
<td>Confusion and disorientation</td>
<td></td>
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<tr>
<td></td>
<td>Late Symptoms</td>
<td></td>
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<tr>
<td></td>
<td>No shivering</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blue skin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dilated pupils</td>
<td></td>
</tr>
</tbody>
</table>
• Slowed pulse and breathing
• Loss of consciousness

Do not try to give beverages to an unconscious person.

• After their body temperature has increased, keep the victim dry and wrapped in a warm blanket, including the head and neck.
• If victim has no pulse, begin cardiopulmonary resuscitation (CPR).

Frostbite

• Reduced blood flow
• Numbness
• Tingling or stinging
• Aching
• Bluish or pail, waxy skin

• Get into a warm room as soon as possible.
• Unless absolutely necessary, do not walk on frostbitten feet or toes—this increases the damage.
• Immerse the affected area in warm—not hot—water (the temperature should be comfortable to the touch for unaffected parts of the body).
• Warm the affected area using body heat; for example, the heat of an armpit can be used to warm frostbitten fingers.
• Do not rub or massage the frostbitten area; doing so may cause more damage
• Do not use a heating pad, heat lamp, or the heat of a stove, fireplace, or radiator for warming. Affected areas are numb and can be easily burned
COMPETENT PERSONS

1.0 Purpose

To provide guidance for complying with Haskell Davis JV and Federal Regulations requiring written designation of personnel competent to perform certain functions.

2.0 Scope

This policy applies to all Haskell Davis JV worksites and employees.

3.0 Definitions

- Competent Person: An employee capable of identifying existing and predictable hazards in the surroundings or working conditions that are unsanitary, hazardous, or dangerous to all personnel and who has authorization to take prompt corrective measure to eliminate them.

4.0 Procedures

The Competent Person must have immediate knowledge of the subject, either by years of experience in the specific field, formal education, or specialized training pertaining to:

- Job activity being performed
- Operation and use of specific equipment
- Potential hazards associated with specific jobs
- Safety, health and environmental standards

4.1. Making designations

All Competent Person designations must be approved by the project manager or his/her designee and the project safety supervisor/safety representative.

4.2. Designated activities

The following activities are performed by a Competent Person:

- Perform inspections on, and maintain all lifting equipment
- Supervise erection, alteration and dismantling of scaffolding
- Perform and maintain the electrical Assured Grounding Program
- Inspect excavations and shoring
- Assign qualified equipment operators
- Perform atmospheric tests and issue permits for confined space entry
- Supervise tag and lock-out procedures
- Inspect and calibrate air analyzing equipment

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Printed copies of this policy are uncontrolled and may not reflect changes made after above revision date.
ACCIDENT PREVENTION PROGRAM

COMPETENT PERSONS

- Perform carbon monoxide monitoring operations
- Supervise asbestos and lead abatement activities
- Perform ladder inspections
- Perform fire extinguishers inspections
- Perform life line inspections
- Perform harness/lanyard inspections

4.3. Records

Written records of Competent Person designations shall be recorded on the Competent Person Designation form. These records shall be kept on file at the project safety office or designated project location.

4.4. Instructions

The Competent Person designation relates to a very specific aspect of various OSHA regulations that require employers to evaluate and designate one or more individuals for the purpose of ensuring that the OSHA requirements are met in a consistent and effective manner at each workplace. This designation should not be confused with or as a replacement for other methods of verifying employee competency levels or abilities to perform specific tasks/job activities.

It is important to limit the designation of Competent Persons to the lowest number of persons actually needed to fully satisfy the OSHA requirements, without jeopardizing safety, quality, or production.

While it is common for Superintendents and General Foremen to be designated as Competent Persons, although qualified individuals may be found at all levels of employment within the company.

Complete all sections of form F-114.1, including:

- **Project:** Indicate the project(s) the designation(s) will apply to
- **Job #:** Indicate job number or enter the current year to cover multiple work locations
- **Employee:** Enter the employee’s full name and the last four digits of their SSN as indicated
- **Competencies:** Use check boxes to indicate designated competencies
- **Verification:**
  - Review any existing documentation or credentials
  - Obtain photo-copies of certificates or wallet cards
- **Substantiation:**
  - Review Haskell Davis JV policy for the particular competencies
  - Review the specific OSHA language for clarification of competencies
  - Review any relative client policies or procedures
  - If substantiating with experience, indicate years of experience
  - If substantiating with Union, indicate apprentice/journey status
- **Validation:**
  - Provide an effective date for all competencies
  - Have employee sign acceptance /acknowledgement of responsibility
o Have Project Manager sign final authorization/designation
## COMPETENT PERSON DESIGNATION

<table>
<thead>
<tr>
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### ACCIDENT PREVENTION PROGRAM

**COMPETENT PERSONS**

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<td><strong>Mobile Equipment</strong></td>
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<td>Rought terrain forklift</td>
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I certify that the listed employees are competent persons, as defined and required by specific OSHA standards. They are individual(s) 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.

__________________________  ________________________________
Name (print)  Company Name

__________________________  ________________________________
Contractor Signature  Date
1.0 Purpose

The purpose of this policy and procedure is to establish procedures for the protection of Haskell Davis JV employees working with or on compressed air equipment.

Background
Air compressors are used for a variety of applications at Haskell Davis JV. Air compressor storage tanks store excess air that is generated from the compressor, providing a convenient and readily accessible air source.

Because of the air pressure within these storage tanks, potential dangers can develop if certain practices and precautions are not followed. This safety policy and program provides guidelines for the safe use of air compressor storage tanks. It lists training requirements, guidelines for locating drains and traps, and requirements for gauges and valves.

2.0 Scope

The following policy and procedures pertain to the use of compressed air in Haskell Davis JV fabrication shops and on all projects in the field.

3.0 Definitions

Air Distribution Lines – Rigid piping or flexible hose used to distribute compressed air to equipment and machinery
Air receivers / Air Compressor Storage Tank - Pressurized vessel that stores air generated from an air compressor
Drain Valve - A valve that is installed at the lowest point of an air compressor storage tank to provide for the removal of accumulated oil and water
Pressure regulation Devices - Valves, gauges and other regulating devices designed to prevent over pressurization of a compressed air system
Trap - A device which uses venting head pressure to purge the tank from condensed water

4.0 Procedure

4.1. General safety requirements for compressed air

The following precautions pertain to all use of compressed air:

4.1.1. All pipes, hoses, and fittings must have a rating of the maximum pressure of the compressor. Compressed air pipelines should be identified (psi) as to maximum working pressure.
4.1.2. Air supply shutoff valves should be located (as near as possible) at the point-of-operation.

4.1.3. Air hoses should be kept free of grease and oil to reduce the possibility of deterioration.

4.1.4. Hoses should not be strung across floors or aisles where they are liable to cause personnel to trip and fall. When possible, air supply hoses should be suspended overhead, or otherwise located to afford efficient access and protection against damage.

4.1.5. Hose ends must be secured to prevent whipping if an accidental cut or break occurs.

4.1.6. Pneumatic impact tools, such as riveting guns, should never be pointed at a person.

4.1.7. Before a pneumatic tool is disconnected (unless it has quick disconnect plugs), the air supply must be turned off at the control valve and the tool bled.

4.1.8. Compressed air must not be used under any circumstances to clean dirt and dust from clothing or off a person’s skin.

4.1.9. Compressed air shall not be used for cleaning purposes except where the pressure is reduced to less than 30 psi. and effective chip guarding and personal protective equipment is implemented.

4.1.10. Goggles, face shields or other eye protection must be worn by personnel using compressed air for cleaning equipment.

4.1.11. Static electricity can be generated through the use of pneumatic tools. This type of equipment must be grounded or bonded if it is used where fuel, flammable vapors or explosive atmospheres are present.

4.2. Safety Requirements for Operating & Maintaining Compressed Air Machinery:

All components of compressed air systems shall be inspected regularly by qualified and trained employees. Maintenance superintendents shall check with state and/or insurance companies to determine if they require their own inspection of this equipment.

Operators need to be aware of the following:

4.2.1. Air receivers:

The maximum allowable working pressures of air receivers should never be exceeded except when being tested. Only hydrostatically tested and approved tanks shall be used as air receivers.

4.2.1.1. Air tanks and receivers should be equipped with inspection openings, and tanks over 36 inches in diameter should have a manhole. Pipe lug openings should be provided on tanks with volumes of less than five cubic feet.

4.2.1.2. The intake and exhaust pipes of small tanks, similar to those used in garages, should be made removable for interior inspections.

4.2.1.3. No tank or receiver should be altered or modified by unauthorized persons.

4.2.1.4. Air receivers should be fitted with a drain cock that is located at the bottom of the receiver.

4.2.1.5. Receivers shall be drained frequently to prevent accumulation of liquid inside the unit. Receivers having automatic drain systems are exempt from this Requirement.
4.2.1.6. Air tanks should be located so that the entire outside surfaces can be easily inspected. Air tanks should not be buried or placed where they cannot be seen for frequent inspection.

4.2.1.7. Each air receiver shall be equipped with at least one pressure gauge and an ASME safety valve of the proper design.

4.2.1.8. A safety (spring loaded) release valve shall be installed to prevent the receiver from exceeding the maximum allowable working pressure.

4.2.1.9. Only qualified personnel should be permitted to repair air tanks, and all work must be done according to established safety standards.

4.2.2. Air Distribution Lines:

4.2.2.1. Air lines should be made of high quality materials, fitted with secure connections.

4.2.2.2. Only standard fittings should be used on air lines.

4.2.2.3. Operators should avoid bending or kinking air hoses.

4.2.2.4. Air hoses should not be placed where they will create tripping hazards.

4.2.2.5. Hoses should be checked to make sure they are properly connected to pipe outlets before use.

4.2.2.6. Air lines should be inspected frequently for defects, and any defective equipment repaired or replaced immediately.

4.2.2.7. Compressed air lines should be identified as to maximum working pressures (psi), by tagging or marking pipeline outlets.

4.2.3. Pressure regulation Devices

4.2.3.1. Only qualified personnel should be allowed to repair or adjust pressure regulating equipment.

4.2.3.2. Valves, gauges and other regulating devices should be installed on compressor equipment in such a way that cannot be made inoperative.

4.2.3.3. Air tank safety valves should be set no less than 15 psi or 10 percent (whichever is greater) above the operating pressure of the compressor but never higher than the maximum allowable working pressure of the air receiver.

4.2.3.4. Air lines between the compressor and receiver should usually not be equipped with stop valves. Where stop valves are necessary and authorized, ASME safety valves should be installed between the stop valves and the compressor.

4.2.3.5. The Safety valves should be set to blow at pressures slightly above those necessary to pop the receiver safety valves.

4.2.3.6. Blow off valves should be located on the equipment and shielded so sudden blow offs will not cause personnel injuries or equipment damage.

4.2.3.7. Case iron seat or disk safety valves should be ASME approved and stamped for intended service application.

4.2.3.8. If the design of a safety or a relief valve is such that liquid can collect on the discharge side of the disk, the valve should be equipped with a drain at the lowest point where liquid can collect.
4.2.3.9. Safety valves exposed to freezing temperatures should be located so water cannot collect in the valves. Frozen valves must be thawed and drained before operating the compressor.

4.2.3.10. All safety valves shall be tested frequently and at regular intervals to determine whether they are in good operating condition. Safety valves, indicating/controlling devices, and other safety appliances need to be constructed, located, and installed so they cannot be rendered inoperative by any means.

4.2.4. Air Compressor Operation

4.2.4.1. Air compressor equipment should be operated only by authorized and trained personnel.

4.2.4.2. The air intake should be from a clean, outside, fresh air source. Screens or filters can be used to clean the air.

4.2.4.3. Air compressors should never be operated at speeds faster than the manufacturers’ recommendation.

4.2.4.4. Equipment should not become overheated.

4.2.4.5. Moving parts, such as compressor flywheels, pulleys, and belts that could be hazardous should be effectively guarded.

4.2.5. Compressed Air Equipment Maintenance

4.2.5.1. Only authorized and trained personnel should service and maintain air compressor equipment.

4.2.5.2. Exposed, non-current-carrying, metal parts of compressor should be effectively grounded.

4.2.5.3. Low flash point lubricants should not be used on compressors because of its high operating temperatures that could cause a fire or explosion.

4.2.5.4. Equipment should not be over lubricated.

4.2.5.5. Gasoline or diesel fuel powered compressors shall not be used indoors.

4.2.5.6. Equipment placed outside but near buildings should have the exhausts directed away from doors, windows and fresh air intakes.

4.2.5.7. Soapy water of lye solutions can be used to clean compressor parts of carbon deposits, but kerosene or other flammable substances should not be used. Frequent cleaning is necessary to keep compressors in good working condition.

4.2.5.8. The air systems should be completely purged after each cleaning.

4.2.5.9. During maintenance work, the switches of electrically operated compressors should be locked open and tagged to prevent accidental starting.

4.2.5.10. Portable electric compressors should be disconnected from the power supply before performing maintenance.
CONCRETE WORK

1.0 Purpose

This policy sets forth requirements to protect all Haskell Davis JV employees from the hazards associated with concrete and masonry construction operations performed in workplaces covered under 29 CFR Part 1926 -- Subpart Q.

The policy establishes requirements for protecting employees from accidents and injuries resulting from the:

- Premature removal of formwork
- Failure to brace masonry walls
- Failure to support precast panel
- Inadvertent operation of equipment
- Failure to guard reinforcing steel

2.0 Scope

This policy applies to employees and Sub-contractors engaged in concrete related construction, demolition, alteration, or repair, at client jobsites.

3.0 Definitions

- Anchored Bridging:
- Bull float: means a tool used to spread out and smooth concrete.
- Formwork: means the total system of support for freshly placed or partially cured concrete, including the mold or sheeting (form) that is in contact with the concrete as well as all supporting members including shores, re-shores, hardware, braces, and related hardware.
- Lift slab: means a method of concrete construction in which floor, and roof slabs are cast on or at ground level and, using jacks, lifted into position.
- Limited access zone: means an area alongside a masonry wall, which is under construction, and which is clearly demarcated to limit access by employees.
- Precast concrete: means concrete members (such as walls, panels, slabs, columns, and beams) which have been formed, cast, and cured prior to final placement in a structure.
- Re-shoring: means the construction operation in which shoring equipment (also called re-shores or re-shoring equipment) is placed, as the original forms and shores are removed, in order to support partially cured concrete and construction loads.
- Shore: means a supporting member that resists a compressive force imposed by a load.
- Vertical slip forms: means forms which are jacked vertically during the placement of concrete
- Jacking operation: means the task of lifting a slab (or group of slabs vertically from one location to another (e.g., from the casting location to a temporary (parked) location, or to its final location).
location in the structure), during the construction of a building/structure where the lift-slab process is being used.

- **Competent person**: means 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.

### 4.0 Procedures

It is the policy of Haskell Davis JV that all concrete activities are completed in accordance with

#### 4.1. GENERAL REQUIREMENTS

- No construction loads shall be placed on a concrete structure or portion of a concrete structure unless the employer determines that the structure or portion of the structure is capable of supporting the loads, based on:
  - Information received from a person who is qualified in structural design
  - Confirmation of curing, per ASTM Standards from a certified testing facility
- All protruding reinforcing steel, onto and into which employees could fall, shall be guarded to eliminate the hazard of impalement.
- No employee (except those essential to the post-tensioning operations) shall be permitted to be behind the jack during tensioning operations.
- Signs and barriers shall be erected to limit employee access to the post-tensioning area during tensioning operations.
- No employee shall be permitted to ride concrete buckets.
- No employee shall be permitted to work under concrete buckets while buckets are being elevated or lowered into position.
- To the extent practical, concrete buckets shall be routed so that no employee, or the fewest number of employees, is exposed to the hazards associated with falling concrete buckets.
- Rubber boots and gloves shall be used when working with concrete. Boot uppers and glove cuffs should be duct taped to the pant legs and shirt sleeves, respectively, to eliminate exposure.
- No employee shall be permitted to apply a cement, sand, and water mixture through a pneumatic hose unless the employee is wearing protective head and face equipment.

#### 4.2. EQUIPMENT and TOOL requirements

| Concrete mixers |
|-----------------
| - Concrete mixers with one cubic yard or larger loading skips shall be equipped with the following: |
| | - A mechanical device to clear the skip of materials; **and** |
| | - Guardrails installed on each side of the skip |

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<th>Power concrete trowels</th>
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<td>- Powered and rotating type concrete troweling machines that are manually guided shall be equipped with a control switch that will automatically shut off the power whenever the hands of the operator are removed from the equipment handles.</td>
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<th>Concrete buggies</th>
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*Printed copies of this policy are uncontrolled and may not reflect changes made after above revision date*
• Concrete buggy handles shall not extend beyond the wheels on either side of the buggy.

**Concrete pumping systems**

- Concrete pumping systems using discharge pipes shall be provided with pipe supports designed for 100 percent overload.
- Compressed air hoses used on concrete pumping system shall be provided with positive fail-safe joint connectors to prevent separation of sections when pressurized.

**Concrete buckets**

- Concrete buckets equipped with hydraulic or pneumatic gates shall have positive safety latches or similar safety devices installed to prevent premature or accidental dumping.
- Concrete buckets shall be designed to prevent concrete from hanging up on top and sides.

**Tremies**

- Sections of tremies and similar concrete conveyances shall be secured with wire rope (or equivalent materials) in addition to the regular couplings or connections.

**Bull floats**

- Bull float handles used where they might contact energized electrical conductors, shall be constructed of nonconductive material or insulated with a nonconductive sheath that’s electrical and mechanical characteristics provide the equivalent protection of a handle constructed of nonconductive material.

**Masonry saws**

- Masonry saw shall be guarded with a semicircular enclosure over the blade.
- A method for retaining blade fragments shall be incorporated in the design of the semicircular enclosure.

### 4.3. Lockout Tagout procedures

No employee shall be permitted to perform maintenance or repair activity on equipment (such as compressors mixers, screens or pumps used for concrete and masonry construction activities) where the inadvertent operation of the equipment could occur and cause injury, unless all potentially hazardous energy sources have been locked out and tagged, in accordance with Haskell Davis JV Safety Policy. Tags shall read “Do Not Start” or similar language to indicate that the equipment is not to be operated.

### 4.4. CAST-IN-PLACE CONCRETE

**General Requirements for Formwork**

Formwork shall be designed, fabricated, erected, supported, braced and maintained so that it will be capable of supporting without failure all vertical and lateral loads that may reasonably be anticipated to be applied to the formwork. Formwork which is designed, fabricated, erected, supported, braced and maintained in conformance with the Appendix to this section will be deemed to meet the requirements of this paragraph.

Drawings or plans, including all revisions, for the jack layout, formwork (including shoring equipment), working decks, and scaffolds, shall be available at the jobsite.

**Shoring and Re-shoring**

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All Shoring equipment (including equipment used in re-shoring operations) shall be inspected prior to erection to determine that the equipment meets the requirements specified in the formwork drawings.

Shoring equipment found to be damaged such that its strength is reduced to less than that required by Sections 6 and 7 of the American National Standard for Construction and Demolition Operations Concrete and Masonry Work, ANSI A10.9-1983, shall not be used for shoring.

Erected shoring equipment shall be inspected immediately prior to, during, and immediately after concrete placement.

Shoring equipment that is found to be damaged or weakened after erection, such that its strength is reduced to less than that required by Sections 6 and 7 of the American National Standard for Construction and Demolition Operations Concrete and Masonry Work, ANSI A10.9-1983, shall be immediately reinforced.

The sills for shoring shall be sound, rigid, and capable of carrying the maximum intended load.

All base plates, shore heads, extension devices, and adjustment screws shall be in firm contact, and secured when necessary, with the foundation and the form.

Eccentric loads on shore heads and similar members shall be prohibited unless these members have been designed for such loading.

Whenever single post shores are used one on top of another (tiered), the following specific requirements must be met, in addition to the general requirements for formwork:

- The design of the shoring shall be prepared by a qualified designer and the erected shoring shall be inspected by an engineer qualified in structural design.
- The single post shores shall be vertically aligned.
- The single post shores shall be spliced to prevent misalignment.
- The single post shores shall be an adequately braced in two mutually perpendicular directions at the splice level. Each tier shall also be diagonally braced in the same two directions.
- Adjustment of single post shores to raise formwork shall not be made after the placement of concrete.
- Re-shoring shall 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 shall be:

- Specifically designed for that purpose; and
- Adequately braced where not encased in concrete.

Forms shall be designed to prevent excessive distortion of the structure during the jacking operation.

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All vertical slip forms shall be provided with scaffolds or work platforms where employees are required to work or pass.

Jacks and vertical supports shall be positioned in such a manner that the loads do not exceed the rated capacity of the jacks.

The jacks or other lifting devices shall be provided with mechanical dogs or other automatic holding devices to support the slip forms whenever failure of the power supply or lifting mechanism occurs.

The form structure shall be maintained within all design tolerances specified for plumb during the jacking operation.

The predetermined safe rate of lift shall not be exceeded.

Reinforcing Steel

Reinforcing steel for walls, piers, columns, and similar vertical structures shall be adequately supported to prevent overturning and to prevent collapse.

Employers shall 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.

Removal of Formwork

Forms and shores (except those used for slabs on grade and slip forms) shall not be removed until the employer determines that the concrete has gained sufficient strength to support its weight and superimposed loads. Such determination shall 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 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.

Re-shoring shall not be removed until the concrete being supported has attained adequate strength to support its weight and all loads in place upon it.

4.5. PRECAST CONCRETE

Precast concrete wall units, structural framing, and tilt-up wall panels shall be adequately supported to prevent overturning and to prevent collapse until permanent connections are completed.

Lifting inserts which are embedded or otherwise attached to tilt-up precast concrete members shall be capable of supporting at least two times the maximum intended load applied or transmitted to them.
Lifting inserts which are embedded or otherwise attached to precast concrete members, other than the tilt-up members, shall be capable of supporting at least four times the maximum intended load applied or transmitted to them.

Lifting hardware shall be capable of supporting at least five times the maximum intended load applied transmitted to the lifting hardware.

No employee shall be permitted under precast concrete members being lifted or tilted into position except those employees required for the erection of those members.

4.6. LIFT-SLAB OPERATIONS

It is the standard policy for Haskell Davis JV to sub-contract this type of concrete work, however, the following guidelines shall be observed during lift-slab operations within the control of Haskell Davis JV.

Planning

Lift-slab operations shall be designed and planned by a registered professional engineer who has experience in lift-slab construction.

Such plans and designs shall be implemented by the employer and shall include detailed instructions and sketches indicating the prescribed method of erection.

These plans and designs shall also include provisions for ensuring lateral stability of the structure during construction.

Equipment

Jacking equipment shall be capable of supporting at least two and one-half times the load being lifted and the equipment shall not be over loaded. All jacks must meet the following limitations:

- Jacks/lifting units shall be marked to indicate their rated capacity
- Jacks/lifting units shall not be loaded beyond their rated capacity

For the purpose of this provision, jacking equipment includes any load bearing component which is used to carry out the lifting operation(s).

Such equipment includes, but is not limited, to the following:

- Threaded rods
- Lifting attachments
- Lifting nuts
- Hook-up collars
- T-caps
- Shear heads
- Columns
- Footings

Printed copies of this policy are uncontrolled and may not reflect changes made after above revision date
Jacks/lifting units shall be designed and installed so that they will neither lift nor continue to lift when they are loaded in excess of their rated capacity.

Jacks/lifting units shall have a safety device installed which will cause the jacks/lifting units to support the load in any position in the event any jack lifting unit malfunctions or loses its lifting ability.

Jacking operations shall be synchronized in such a manner to ensure even and uniform lifting of the slab. During lifting, all points at which the slab is supported shall be kept within ½ inch of that needed to maintain the slab in a level position.

If leveling is automatically controlled, a device shall be installed that will stop the operation when the ½ inch tolerance set forth in paragraph (g) of this section is exceeded or where there is a malfunction in the jacking (lifting) system.

If leveling is maintained by manual controls, such controls shall be located in a central location and attended by a competent person who is in progress. In addition to meeting the definition in Section V-J of this policy, the competent person must be experienced in the lifting operation and with the lifting equipment being used.

The maximum number of manually controlled jacks/lifting units on one slab shall be limited to a number that will permit the operator to maintain the slab level within specified tolerances of paragraph (g) of this section, but in no case shall that number exceed 14.

When making temporary connections to support slabs, wedges shall be secured by tack welding, or an equivalent method of securing the wedges to prevent them from falling out of position. Lifting rods may not be released until the wedges at that column have been secured.

All welding on temporary and permanent connections shall be performed by a certified welder, familiar with the welding requirements specified in the plans and specifications for the lift-slab operation.

Load transfer from jacks/lifting units to building columns shall not be executed until the welds on the column shear plates (weld blocks) are cooled to air temperature.

Jacks/lifting units shall be positively secured to building columns so that they do not become dislodged or dislocated.

Equipment shall be designed and installed so that the lifting rods cannot slip out of position, or locking or blocking devices used so that a positive connection between the lifting rods and attachments will prevent components from disengaging during lifting operations.
Execution

Non-Essential Employees are to vacate the building/structure during jacking operations unless an independent registered professional engineer, other than the engineer who designed and planned the lifting operation, has determined that the building/structure has been sufficiently reinforced to insure the integrity of the building/structure. One method to comply with this provision is to ensure that continuous bottom steel is provided in every slab and in both directions through every wall or column head area. (Column head area means the distance between lines that are one and one-half times the thickness of the slab or drop panel. These lines are located outside opposite faces of the outer edges of the shear head sections. The amount of bottom steel shall be established by assuming loss of support at a given lifting jack and then determining the steel necessary to carry, by catenary action over the span between surrounding supports, the slab service dead load plus any service dead and live loads likely to be acting on the slab during jacking. In addition, the surrounding supports must be capable of resisting any additional load transferred to them as a result of the loss of support at the lifting jack considered.

NOTE: Due to the hazardous nature of this work, only those employees, who are essential to the jacking operation, shall be permitted in the structure while any jacking operation is taking place unless the building/structure has been reinforced sufficiently to ensure its integrity during erection.

The phrase "reinforced sufficiently to ensure its integrity" means that a registered professional engineer, independent of the engineer who designed and planned the lifting operation, has determined from the plans that if there is a loss of support at any jack location, that loss will be confined to that location and the structure as a whole will remain stable.

Under no circumstances shall any employee who is not essential to the jacking operation be permitted to pass near or immediately beneath a slab while it is being lifted.

A jacking operation begins when a slab or group of slabs is lifted, and ends when the slabs are secured (with either temporary connections or permanent connections).
CONFINED SPACES

1.0 Purpose

It is management’s responsibility to ensure the health and safety of our employees while performing work in confined spaces and to provide the necessary training for our supervisors and craft personnel as to the hazards associated with this type of work, while maintaining full compliance with State and Federal safety regulations.

2.0 Scope

This program applies to all Haskell Davis JV projects, including their Sub-contractors and shall be used prior to entry into any confined space.

3.0 Definitions

The following definitions establish the essential understanding of ‘confined space’ work for Haskell Davis JV. Without exception, all ‘confined spaces’ will fit into one definition or the other.

- **NPCS- Non-Permit Confined Space**: means a space that:
  - Is large enough for an employee to enter and perform assigned work
  - has limited means or restricted means of entry or exit
  - Is not designed for continuous occupancy

- **PRCS- Permit Required Confined Space**: means a space that meets the definition of a NPCS and has one or more of the following characteristics:
  - Contains or has the potential to contain a hazardous atmosphere
  - Contains a material that has the potential for engulfing an entrant
  - Has an internal configuration that might cause an entrant to be entrapped or asphyxiated by inwardly converging walls or by a floor that slopes downward and tapers to smaller cross section
  - Contains any other recognized serious safety or health hazards

- **Acceptable entry conditions**: The conditions that must exist in a Confined Space to allow entry and ensure that employees involved can safely enter into and perform work within the space.

- **Attendant**: Means a trained individual stationed outside one or more permit required confined spaces, who monitors the authorized entrants and who performs only those duties assigned to ensure the safety of the workers within the confined space.

- **Authorized entrant**: A trained employee who is authorized to enter a permit space.
• **Blanking or blinding**: The absolute closure of a pipe, line, or duct by the installation of a solid plate (such as a spectacle blind or a skillet blind) or line-cap, which is capable of withstanding the maximum potential pressure of the pipe, line, or duct without leakage.

• **Emergency**: Any occurrence (including any failure of hazard control or monitoring equipment) or an event either internal or external to the confined space that could endanger entrants.

• **Entry**: The action by which a person passes through an opening into a confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant’s body breaks the plane of an opening into the space.

• **Entry permit**: The written or printed document that is provided by the employer to allow and control entry into a permit space.

• **Entry Supervisor**: The person (such as the Construction Superintendent, foreman, etc.) responsible for determining if acceptable entry conditions are present at a confined space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this section.

  - **NOTE**: An entry Supervisor also may serve as an attendant or as an Authorized Entrant, as long as that person is trained and equipped as required by this section for each role he or she fills. Also the duties of Entry Supervisor may be passed on from one individual to another during the course of an entry operation.

• **Hazardous Atmosphere**: An atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (that is escape, unaided from a confined work space), injury or acute illness from one or more of the following causes:

  - Flammable gas, vapor or mist in excess of 10% of its lower explosive limit (LEL).
  - Airborne combustible dust at concentration that meets or exceeds its LEL;
    - **NOTE**: This concentration may be approximated as a condition in which the dust obscures vision at a distance of five (5) feet or less.
  - Atmospheric oxygen concentration below 19.5% or above 23.5%.
  - Atmospheric concentration of any substance, which could result in employee exposure in excess of its permissible exposure, limit a defined by OSHA.
  - Any other atmospheric condition that is immediately dangerous to life or health (IDLH).

• **Inert Entry**: The action by which a person passes through an opening into a confined space that has been filled or is filled with an inert gas such as nitrogen. This constitutes an IDLH environment where proper set-up and execution of work and safety systems is critical. In many process facilities where Haskell Davis JV performs work, Inert Entries are used for the unloading and loading of potentially pyrophoric catalyst, packing or desiccants. These entries are done in nitrogen environments.

• **Isolation**: The process by which all potential energy sources are removed from or controlled within a Confined Space. Isolation may include such means as: Blanking and Blinding, or removal of sections of lines, pipes, or ducts; use of a double block and bleed system; lock-out and tag-out of electrical energy sources; or blocking or disconnecting all mechanical linkages.

• **Oxygen deficient atmospheres**: Oxygen deficient atmospheres are deemed to exist if the atmosphere contains **less than 19.5%** by volume.
• **Oxygen enriched atmospheres**: Oxygen enriched atmospheres are deemed to exist if the atmosphere contains **more than 23.5%** by volume.

• **Prohibited condition**: Any condition in a confined space that is not allowed by the permit during which entry is authorized.

• **Rescue service**: The personnel designated to rescue employees from confined spaces.

• **Retrieval system**: The equipment (including retrieval line, full body harness, wristlets, if appropriate, and a lifting device, or anchor) used for non-entry rescue of persons from spaces.

• **Testing**: The process by which the hazards that may confront entrants of a permit space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit.

### 4.0 Procedures

It is the policy of Haskell Davis JV to ensure the safety of all personnel during the completion of work in NPCS or PRCS. This policy establishes the minimum standard for establishing acceptable entry conditions that will protect all personnel who may enter a confined workspace, which includes compliance with applicable State and Federal safety regulations.

This policy includes, but is not limited to provisions for: permitting, atmospheric testing, ventilation requirements, isolation requirements, hazard evaluation, personal protective equipment (PPE), entry planning, emergency and rescue procedures, employee training and exposure monitoring.

Haskell Davis JV shall provide all the necessary equipment for ventilating, testing, monitoring, communications, lighting, barriers or shields, safe ingress/egress, rescue equipment, and any PPE at no cost to employees. Haskell Davis JV shall maintain that equipment properly, and ensure that employees use that equipment properly.

#### 4.1. Training

Training shall be provided for all employees whose duties include working in or around a Confined or Inert Space. Haskell Davis JV shall document that the required training has been accomplished. The documentation shall include employee name, trainer signature/initiais, and dates of training. Training documentation shall be made available to affected employees & their authorized representative.

Prior to work in permit required spaces, or any space that is IDLH, employees shall be trained of their duties as Entry Supervisor, authorized entrant, and as confined space attendant. The initial training shall be performed during the Haskell Davis JV new hire/rehire orientation. Additional training shall be conducted annually for affected employees, prior to a change in assigned duties, if a new hazard has been created or hazardous changes have occurred. All training shall be documented.

#### 4.2. Hazard Analysis

The SSHO and General Foreman or their designee shall perform a written Hazard Assessment specific to the vessel being entered and the work being undertaken. The Hazard Assessment must to address all the risks associated with the work such as: setting up for an inert entry, necessary equipment at the...
work site, access and egress to the equipment, provisions for adequate lighting, control of employee
access, lifting and rigging activities, removal of vessel internals, and installation of warning signs.

The SSHO, General Foreman or their designee will communicate the Hazard Assessment to all affected
personnel.

4.3. Preparation of confined spaces

The entry Supervisor shall check that the following steps have been taken to prepare the space before
anyone enters.

1. Notify any and all affected departments of service interruption.
2. All confined space work areas must be isolated by posting a danger sign or other equally
effective means. The space shall be purged, flushed or ventilated as necessary to eliminate
or control atmospheric hazards. Utilize barriers or other means to protect entrance to
unauthorized personnel.
3. Coordinate entry operations with the host employer, when both host employer and
contractor personnel will be working in or near confined space and inform the host
employer of any hazards confronted or created.
5. Before entering a confined space, the content must be drained and clean-out doors opened
where provided. Further, all lines / pipes supplying the confined space must be isolated
inoperable which may include, but not limited to, blinding or securing valves by means of a
double block and bleed in the closed position.
6. Prior to issuing the CONFINED SPACE ENTRY PERMIT, the owner or user of the confined
space must furnish a Safety Data Sheet (SDS) for each of the chemicals, which were recently
used in the confined space.
7. Ensure pedestrian, vehicle, or other barriers as necessary to protect entrants from external
hazards are in place; and
8. Verify that conditions in the permit space are acceptable for entry throughout the duration of
an authorized entry
9. Prior to issuance of the permit, appropriate tests of the atmosphere must be made by
authorized supervisory personnel from outside the confined space to determine if:
   a. Oxygen concentration must be between 19.5 – 23.5 percent by volume.
   b. Flammable gases and vapors, which must be lower than 10 percent of the lower
      explosive limit (LEL).
   c. Potentially toxic air contaminants cannot meet or exceed its PEL.

These tests, for the above conditions, must be done in the order given. Tests must be made with
appropriate monitoring equipment. The authorized supervisory personnel required to monitor the
atmosphere must be trained in proper use, calibration and care of monitoring instruments and must
remain at the site until all monitoring is completed.
Any employee who enters the space, or that employee's authorized representative, shall be provided an opportunity to observe the pre-entry testing.

Any affected entrant or that employee's authorized representative may request that the space be reevaluated because the entrant or representative has reason to believe that the evaluation of that space may not have been adequate.

If the tests indicate the atmosphere is safe, but the work may produce a hazardous atmosphere from such processes as cutting, welding or use of cleaners and solvents, entry without appropriate respiratory protection will only be permitted subject to additional atmospheric testing and monitoring by authorized personnel.

If tests indicate that the atmosphere is unsafe, the confined space must be ventilated until the hazardous atmosphere is removed, prior to employee entry.

Entrants may participate in, or shall at least review any air monitoring results, prior to entry.

If after ventilating the space, tests indicate a non-respirable atmosphere (less than 19.5 percent or above 23.5 percent oxygen) or levels of toxic contaminants hazardous to health, no person will be allowed to enter unless equipped with an approved air-line respirator or a self-contained breathing apparatus (SCBA), safety harness and lifeline and has been properly trained in that use of the equipment.

Verify that the Entry Supervisor, attendant and all entrants have current training.

A form of communication has been established with the entry team.

An attendant is located outside the space for the duration of the entry operation.

A rescue plan is in place and at least one employee on site is trained in first-aid CPR.

### 4.4. Entry Requirements

A properly completed Confined Space Entry Permit must be posted at the entrance to the space BEFORE anyone is allowed to enter. If the client/confined space owner issues a permit, a Haskell Davis JV permit will not need to be issued in parallel, as long as all Federal and State regulations are met as defined by CFR 1910.146 and WAC 296-62-145 and is approved by the site Safety Supervisor. All entrants shall read and understand the requirements of the permit.

Atmospheric testing before entry as defined in sections 7 through 10 of Preparation of Confined Spaces.

Personal Protective equipment such as but not limited to basic PPE, coveralls, impervious gloves, boots, face, and eye protection must be worn as required by the nature of the operation to be performed. Specific clothing may be required if the contaminant can cause dermatitis, chemical burns, or be absorbed through the skin. All necessary PPE shall be provided to the employee at no cost to them.
Permits shall expire when a predetermined time listed on the permit has elapsed or when work is completed. Permits may be canceled at any time if conditions in the space change and it becomes unsafe to enter.

If multiple employers work inside the same space, they shall coordinate with each other as to the nature of their work, the intended duration of that work so that they shall not endanger employees of the other employer.

In potentially explosive or flammable atmosphere, non-sparking tools and portable vapor proof electric lighting, not exceeding 12 volts must be used. Smoking, open flames, cutting and welding will be prohibited.

Entry requirements shall be reviewed when it has been determined that a hazard was not covered on the permit, if conditions inside or outside the permit change, employee complaints, if there has been an injury or a near miss, or there has been an unauthorized entry.

A list of other operational equipment that might be used with this program, but not limited to, is as follows:

- A calibrated combustible gas/oxygen/toxic survey meter or individual meters to sample for combustible atmospheres and oxygen deficiency.
- Supplied air-breathing (SAR) apparatus, such as a self-contained respirator with full face piece operating in pressure demand mode (SCBA), or TYPE-C supplied-air respirator with full face piece operating in pressure demand mode with an emergency bottle must be worn in atmospheres immediately dangerous to life and health (IDLH).
- A supplied air TYPE-C respirator, in either continuous flow or pressure demand mode, may be used in areas, which are not immediately hazardous to life and from which the wearer can escape.
- Harness and lifelines: Harness should be capable of retrieving an inert body in an upright position. A full body harness with a single lifting ring attached in the upper back, or with dual lifting rings attached to the shoulder straps, is recommended in open areas. Where egress through narrow openings is necessary, wristlets with attached lifting rings may be required instead of a body harness. Sufficient lifelines of minimum one-half inch manila rope may be required to provide constant connection between the worker in the confined space and the attendant outside.
- Ventilation: A portable blower with a minimum of 600 CFM 1.5 inches of static pressure may be required to supply air and ventilate the confined space prior to and during occupancy.

4.5. Emergency and Rescue Procedures

Planning for an emergency is a top priority for confined space entry work. A rescue team must be designated for all confined space entry operations. The rescue team may include trained Haskell Davis JV personnel, an outside rescue service agency, or client personnel trained for emergency rescue within their specific facility. The Entry Supervisor is required to make the determination of the rescue team.
make up and list it on the entry permit. Only personnel trained in rescue may enter the space for the purpose of rescue. Whenever a confined space entry poses an IDLH atmosphere, rescue services and systems MUST be on site and at the ready to respond. If outside agencies are designated for emergency services they shall be noted on the site specific safety plan and contacted to ensure rescue abilities.

In the event of a sudden life-threatening or otherwise potentially dangerous situation requiring immediate action which involves entry into a confined space as defined in this program, and in the absence of time to complete testing and ventilation procedures, the atmosphere will be considered as unsafe to enter without the use on approved air-supplied breathing device.

Communication procedure(s) must be established prior to any confined space entry between the attendant and the authorized entrants. The options for communication include but are not limited to radio, voice, and whistle or emergency air horn.

The attendant must be able to initiate rescue procedures if necessary by calling for assistance on the radio, emergency air horn, emergency alarm, or emergency telephone numbers within the facility. The attendant shall never attempt rescue or enter in the confined space.

The preferred way of leaving a space, when conditions deteriorate is self-rescue, where entrants evacuate the space with no assistance- at the first sign of trouble.

To facilitate non-entry rescue, all employees performing work inside a confined space shall be required to use a full body harness attached to a lifeline secured outside the confined space and the other end secured to the back D ring of the harness. State and Federal regulations allow two (2) exceptions to this requirement as follows:

- If such equipment will increase the overall risk of injury to the workers within the confined space
- If the use of such equipment would not assist in rescue- An example of this would be working from scaffolding within a confined space or towers and vessels with internal baffles.

Employees injured inside a confined space and transported to an outside medical facility shall have the Safety Data Sheet (SDS) pertaining to any potential exposure transported with them to the facility.

The Entry Supervisor, the attendant, all authorized entrants and any other personnel that may be associated with the confined space entry work, shall have a clear understanding of the emergency procedures relating to the entry, as well as emergency procedures that may occur outside the confined space that would require immediate evacuation of the confined space. The required rescue equipment shall be specified on the Entry Permit and in place prior to entry.

### 4.6. Duties of Confined Space Entry Team

#### 4.6.1. Entry Supervisor

The Entry Supervisor is the person that ensures that conditions are safe. Before entry, the supervisor verifies that the permit is filled out completely and that all steps are listed on it are taken and then signs
the permit. The Entry Supervisor or their designee shall be responsible for ensuring that all entrants are out of the Permit Space then close out the permit at the end of each shift or when the work has been completed.

4.6.2. Attendant

The attendant is a trained individual stationed outside one or more Confined Space openings, who monitors the authorized entrants and who performs only those duties assigned within this policy and procedure. The attendant duties include the following:

1. Locates the nearest emergency alarm system to the particular confined space being entered.
2. Maintains a clear understanding of the emergency procedures specific to his or her location.
3. If an incident occurs to workers inside the confined space, the primary function of the attendant is to get help.

ATTENDANTS ARE NOT AUTHORIZED TO ATTEMPT ENTRY RESCUE

4. Maintain a continuous and accurate count of authorized entrants working within the confined space and ensure that an entrant roster is accurate, while refusing to allow unauthorized entrants into the confined space.
5. Obtains any necessary information about the hazards that may be encountered within the confined space and understands all of the conditions of the confined space entry permit and has signed the permit.
6. Maintains communication with the entrants.
7. Only under extreme circumstances shall a confined space attendant monitor more than 1 confined space. This provision shall be planned prior to entry activities.

4.6.3. Authorized Entrant

The authorized entrant is an individual that has received training, testing, and medical certifications (respiratory use etc.) associated with working in a confined space and who has been assigned to do so by their supervisor and approved by the Entry Supervisor. The duties of the authorized entrant include but are not limited to the following:

1. Have a clear understanding of the required PPE (its use and limitations) while performing work within the confined space.
2. Ensures that he/she has complete understanding of the permit requirements, hazards associated with the work, emergency procedures, rescue procedures, communication systems/procedures, work scope and the required tools.
3. Maintain communication with the Attendant to enable the Attendant to monitor the conditions within the confined space and to evacuate the space if the conditions warrant.
4. Alerting the Attendant whenever the Entrant recognizes any of the entry team members with warning signs or symptoms of heat stress, fatigue or any other condition that may lead to injury.
5. Exit the confined space as safely and quickly as possible whenever they are instructed to do so by the Attendant, the Entry Supervisor or the Safety Department, or if an air quality monitor
within the confined space goes into the alarm mode, any other evacuation is sounded, or if any conditions within the space change from when the permit was first issued.

6. Inform Supervision and the client of any problems encountered or associated with the confined space entry.

**4.7. Recordkeeping**

All necessary records shall be maintained for a minimum of 1 year. The permit required confined space program shall be reviewed annually and the program shall be revised as necessary.

**4.8. Reclassification of PRCS**

A space classified as a permit-required confined space may be reclassified as a non-permit confined space under the following procedures:

1. If the permit space poses no actual or potential atmospheric hazards and if all hazards within the space are eliminated without entry into the space, the permit space may be reclassified as a non-permit confined space for as long as the non-atmospheric hazards remain eliminated.

2. If it is necessary to enter the permit space to eliminate hazards, such entry shall be performed under PRCS policy. If testing and inspection during that entry demonstrate that the hazards within the permit space have been eliminated, the permit space may be reclassified as a non-permit confined space for as long as the hazards remain eliminated.

**NOTE:** Control of atmospheric hazards through forced air ventilation does not constitute elimination of the hazards.

3. The Entry Supervisor shall document the basis for determining that all hazards in a permit space have been eliminated through a certification that contains the date, the location of the space, and the signature of the person making the determination. The certification shall be made available to each employee entering the space or to that employee’s authorized representative.

4. If hazards arise within a permit space that has been declassified to a non-permit space, each employee in the space shall exit the space. The Entry Supervisor shall then reevaluate the space and determine whether it must be reclassified as a permit space.

**4.9. Procedure Review**

This confined space procedure shall be reviewed annually using canceled permits and other pertinent documents within 1 year after each entry. The program will be revised as necessary, to ensure that employees participating in entry operations are protected from permit space hazards.
1.0 Purpose

To establish basic rules pertaining to employee conduct, performance, and responsibilities so that all personnel can conduct themselves according to certain rules of good behavior and good conduct.

The purpose of these rules is not to restrict the rights of anyone, but rather to help people work together harmoniously according to the standards we have established for efficient and courteous service for our customers.

2.0 Scope

The content of this policy applies to all Haskell Davis JV employees. This policy may also apply to Sub-contractors.

3.0 Definitions

- **Verbal Warning**: means a communication of violation to an employee, this may be documented in the supervisors logs, on JSA/STA, or timesheet
- **Written Warning**: means a formal record of violation will be created and put in the employees’ personnel file
- **Termination**: means the employee will be removed from the worksite for a set period of time.

4.0 Procedures

It is Haskell Davis JV’s commitment to provide to all of our employees, including Sub-contractors a safe working environment. To achieve this goal, compliance to the safety rules and procedures are a mandatory requirement and are considered a condition of employment for employees at all levels.

Employees and Sub-contractors found to be in non-compliance with the safety procedures and policies of Haskell Davis JV, our clients and General and Prime Contractors, shall be counseled to discuss the infraction and to inform the individual(s) of the rule or procedure that was violated and the corrective action to be taken. Discipline may be Verbal, Written, up to and including termination of employment.

It shall be the responsibility of Project Managers, the Safety Department, Superintendents, and Foremen to enforce the program. Any discipline system may not be followed in all situations. Haskell Davis JV’s management shall determine on a case-by-case basis, whether to follow these guidelines or depart from it, depending on the circumstances of the case. Generally the Haskell Davis JVs discipline policy is a progressive one consisting of 1) Verbal Warning (this is documented in the employee file) 2) Written Warning 3) Termination from project.
Physical inspections of work areas shall be conducted to ensure compliance with safety rules and policies.

4.1. Verbal Warnings

Safety violations, which may result in a verbal warning on the first offense, a written, reprimand on the second offense and termination on the third offense include but are not limited to:

- Failure to wear all required personal protective equipment (PPE)
- Failure to handle or operate tools in a safe manner

4.2. Written Warnings

Safety violations, which may result in a written, reprimand on the first offense and termination on the second offense include but are not limited to:

- Violation of a safety regulation; including but not limited to:
- Failure to follow proper fall protection procedures
- Failure to inspect or follow proper scaffold procedures such as tagging system, inspections and modifications
- Violation of company or client permit procedures

Violation of company or client safety rule which have the potential for causing immediate injury or creating an imminent danger situation such as but not limited to:

- Horseplay/Drugs/Alcohol/Harassment
- Improper use of tools/Equipment
- Failure to follow safety instructions
- Failure to report unsafe conditions
- Failure to report job related injuries
- Failure to comply with flagged off or barricaded areas -such as but not limited to:
  o Crane and overhead lift areas
  o Supplied air work
  o Asbestos or lead abatement areas
  o Radiation zones
  o Confined Spaces
  o Excavations/Trenches
- Failure to use required personal protective equipment (PPE) -such as but not limited to:
  o Safety Glasses
  o Hard Hats
  o Respiratory equipment
  o Acid gear

4.3. Immediate Termination
Safety violations, which may result in immediate termination on the first offense, include but are not limited to:

- Violations of company or client permitting procedures such as but not limited to:
  - Confined space entry
  - Hot work
  - Mobile entry
- Gross or deliberate violation of safety rules, practices or directions
- Violation of company or client Drug and Alcohol Policy
- Possessing firearms or explosives on company or client property without authorization
- Provoking or instigating a fight or fighting during working hours on company or client property
- Smoking in a restricted area
- Violation of Lockout Tagout procedures
- Deliberately falsifying company records and statements of injury or illness
- Violation of special procedures
- Sleeping on the job
8.2 DISCIPLINARY ACTION FORM

Issued to: ___________________________________________ SSN: ______________________
(Printed Name)

Issued by: ___________________________________________ DATE: ______________________
(Printed Name)

TYPE: ☐ Safety Violation ☐ Policy Violation ☐ Other

ACTION: ☐ Verbal ☐ Written ☐ Suspension ☐ Termination

Description of violation:

____________________________________________________

____________________________________________________

Action Plan:

____________________________________________________

____________________________________________________

Did employee deliberately violate a written company policy? ☐ Yes ☐ No
Was employee aware of the policy? ☐ Yes ☐ No
Has employee violated this policy before? ☐ Yes ☐ No

EMPLOYEE ACKNOWLEDGEMENT

I agree with the statements on this form and understand that continued violation of the rule(s) listed above will result in further disciplinary measures, up to and including termination of employment.

Employee: ___________________________________________ DATE: _________________
(Signature)

Distribution: Employee File ☐ Individual ☐ Craft Steward ☐ Client

Printed copies of this policy are uncontrolled and may not reflect changes made after the above revision date.
ELECTRICAL SAFETY

1.0 Purpose

To provide essential guidance for working safely with portable electrical tools, cords, and associated equipment, including general access to electrical circuits (outlets) in a ‘user’ capacity

2.0 Scope

This policy applies to all Haskell Davis JV work locations and employees

3.0 Definitions

3.1.1. **GFCI- Ground Fault Circuit Interrupter:** means an independent in-line device that is capable of detecting electrical over-current situations and stopping the flow of electricity between the source and a tool

3.1.2. **AGP-Assured Grounding Program:** means a systematic approach to the inspection and testing of electrical devices, to ensure integrity and reliability of the components

3.1.3. **Authorized** – In order to be authorized to perform any task consisting of a specific operation on a specific piece of electrical equipment, personnel must receive documented training and a demonstration of competency.

4.0 Procedures

4.1. Procedure

4.1.1. Each job site will implement an effective assured equipment grounding program in accordance with DOSH/OSHA requirements. All employees will be trained in the requirements of the electrical safety program. The job site superintendent is designated as being competent and responsible for overseeing implementation of this program. If Ground Fault Circuit Interrupters (GFCI) are used, they may replace the assured grounding requirements.

4.1.2. Haskell Davis JV does not perform electrical work, as such, none of our employees is a “Qualified Employee” with respect to this policy.

4.1.3. Safety-related work practices shall be employed to prevent electric shock or other injuries resulting from either direct or indirect electrical contacts, when work is performed near or on equipment or circuits which are or may be energized. The specific safety-related work practices shall be consistent with the nature and extent of the associated electrical hazards. No employees shall work in proximity to any part of an electrical power circuit that the employee could contact the electrical power circuit in the course of the work, unless the employee is protected against electrical shock by de-energizing the circuit and grounding it or by guarding it effectively by insulation or other means.

4.1.4. Portable ladders shall have non-conductive side rails.
4.1.5. Conductive items of jewelry or clothing shall not be worn unless they are rendered non-conductive by covering, wrapping or other insulating means.

4.1.6. Any electrical system, conductors and parts of electrical equipment that have been de-energized but have not been locked or tagged out shall be treated as live parts.

4.1.7. No work shall be performed, no materials shall be piled, stored or otherwise handled, no scaffolding or structures shall be erected or dismantled, nor any tools, machinery or equipment operated within the specified minimum distances from any energized high voltage electrical conductor capable of energizing the material or equipment; except where the electrical distribution and transmission lines have been de-energized and visibly grounded at point of work, or where insulating barriers not a part of or an attachment to the equipment have been erected to prevent physical contact with the lines or equipment. Equipment shall be operated proximate to, under, over, by, or near energized conductors only in accordance with the following:

4.1.7.1. For lines rated 50 kV or less, minimum clearance between the lines and any part of the equipment or load shall be ten feet.

4.1.7.2. For lines rated over 50 kV, minimum clearance between the lines and the equipment or load shall be ten feet plus 0.4 inch for each kV.

4.1.7.3. For services over 50 kV, twice the length of the line insulator but never less than ten feet.

4.1.8. Explosion proof electrical equipment, rated for hazardous environments shall be used when performing work in areas that have the potential to develop flammable or explosive atmospheres, such as but not limited to confined spaces. Any equipment or structure that has the potential to develop a static charge such as storage tanks shall be grounded.

4.1.9. All cord sets shall have double insulation (SO cord or better), weather and sun resistant with a ground conductor, free of splices. Temporary lighting shall be equipped with guards over the bulbs.

4.1.10. Qualified electricians shall be the only employees authorized to perform maintenance and repair on electrical equipment. Field repairs or tampering with any electrical equipment by unauthorized employees shall not be allowed. Employees shall not wear rings, watches or other conductive materials when working with electrical equipment.

4.1.11. Haskell Davis JV personnel (other than qualified electrical workers), shall only perform specific tasks on the specific types of equipment for which they are authorized and competent to perform.

4.2. Training

4.2.1. Employees shall be trained in and familiar with the safety-related work practices that pertain to their respective job assignments. For a person to be considered an “authorized person”, he or she shall:

4.2.1.1. Be trained to identify and understand the relationship between electrical hazards and possible injury.
4.2.1.2. b. Be trained in the safety-related work practices, safety procedures, and other personnel safety requirements as necessary to provide protection from the electrical hazards associated with their job assignment and the tasks they are required to perform.

4.2.2. General electrical safety refresher training shall take place no less often than once every three years.

4.3. Assured Grounding Program

4.3.1. All 120-volt, single phase, 15 ampere and 20 ampere receptacle outlets on construction sites, which are not part of the permanent wiring of the building or structure and which are in use by employees, shall have approved ground fault circuit interrupters for personnel protection.

4.3.2. All electrical tool, cords and equipment connected to a GFCI shall be connected at the power source. GFCI breakers shall be tested prior to use.

4.3.3. Continuity circuitry testing will be performed following any repairs to the following equipment:

4.3.3.1. Cord sets and receptacles not part of the permanent wiring of buildings or structures
4.3.3.2. All electrical equipment and tools used in connection with processes of construction or alterations

4.3.4. This program does not apply to “double insulated” systems or tools which need not be tested

4.4. Energized parts

4.4.1. This section applies to work performed on exposed live parts (involving either direct contact or by means of tools or materials) or near enough to them for employees to be exposed to any hazard they present. If exposed live parts are not de-energized (i.e., for reasons of increased or additional hazards or infeasibility), other safety-related work practices shall be used to protect employees who may be exposed to the electrical hazards involved. Such work practices shall protect employees against contact with energized circuit parts directly with any part of their body or indirectly through some other conductive object.

4.4.2. Employees may not enter spaces containing exposed energized parts unless illumination is provided that enables the employees to work safely. Protective shields, protective barriers or insulating materials as necessary shall be provided.

4.4.3. Only qualified persons may work on electric circuit parts or equipment that have not been de-energized under the procedures of paragraph (b) of this section. Such persons shall be capable of working safely on energized circuits and shall be familiar with the proper use of special precautionary techniques, personal protective equipment, insulating and shielding materials, and insulated tools.

4.5. Testing
4.5.1. All equipment will be tested before first use for grounding and continuity of the circuitry.
4.5.2. Equipment returned to service following repairs shall be tested for continuity before being used.
4.5.3. Each item subject to testing shall be done at intervals not exceeding 3 months.

4.6. Inspection

4.6.1. Electrical equipment will be visually inspected each day for any external defects, including deformed or missing connection pins/prongs, insulation damage and indications of possible internal damage. Equipment noted as defective or suspect will be tagged “Do Not Use” and will not be used until repaired, re-tested and results recorded.

4.7. Portable Electric Tools

4.7.1. Portable electric power tools shall be equipped with an assured ground, or may be of the double insulated type. Double insulated tools shall be labeled as “Double Insulated” or contain a double square □- meaning the same.
4.7.2. Portable electric tools shall be visibly marked as approved by an underwriting agency such as Underwriters Laboratories, Inc., or Factory Mutual Engineering Corp.
4.7.3. Power tools shall be disconnected from their power source while changing attachments or while performing maintenance or repairs.
4.7.4. Electrical tools shall not be used where the hazard of fire or explosion exists.
4.7.5. Qualified personnel shall make all repairs to electrical tools and cords. Repairs in tool-end power cords require replacement of the entire power cord (new ends are not allowed).
4.7.6. Personnel shall be familiar with the safe operation of portable electrical tools and shall use required personal protective equipment.
4.7.7. Employees may never yank the cord to disconnect it from the receptacle or to hoist or lower tools.

4.8. Operations Near Energized Overhead Lines or Equipment

4.8.1. If work is to be performed near overhead lines, the lines shall be de-energized and grounded, or other protective measures shall be provided before work is started. If the lines are to be de-energized, arrangements shall be made with the person or organization that operates or controls the electric circuits involved to de-energize and ground them. If protective measures, such as guarding, isolating, or insulating, are provided, these precautions shall prevent employees from contacting such lines directly with any part of their body or indirectly through conductive materials, tools, or equipment.
4.8.2. "Qualified persons." Haskell Davis JV does not perform electrical work, as such, none of our employees is a “Qualified Employee” with respect to this policy.
4.8.3. When a qualified person is working in the vicinity of overhead lines, whether in an elevated position or on the ground, the person may not approach or take any conductive object without an approved insulating handle closer to exposed energized parts than shown in Table S-5 unless:
4.8.4. The person is insulated from the energized part (gloves, with sleeves if necessary, rated for the voltage involved are considered to be insulation of the person from the energized part on which work is performed), or
4.8.5. The energized part is insulated both from all other conductive objects at a different potential and from the person, or
4.8.6. The person is insulated from all conductive objects at a potential different from that of the energized part.

TABLE S-5 - APPROACH DISTANCES FOR QUALIFIED EMPLOYEES - ALTERNATING CURRENT

<table>
<thead>
<tr>
<th>Voltage range (phase to phase)</th>
<th>Minimum approach distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>300V and less</td>
<td>Avoid Contact</td>
</tr>
<tr>
<td>Over 300V, not over 750V</td>
<td>1 ft. 0 in. (30.5 cm).</td>
</tr>
<tr>
<td>Over 750V, not over 2kV</td>
<td>1 ft. 6 in. (46 cm).</td>
</tr>
<tr>
<td>Over 2kV, not over 15kV</td>
<td>2 ft. 0 in. (61 cm).</td>
</tr>
<tr>
<td>Over 15kV, not over 37kV</td>
<td>3 ft. 0 in. (91 cm).</td>
</tr>
<tr>
<td>Over 37kV, not over 87.5kV</td>
<td>3 ft. 6 in. (107 cm).</td>
</tr>
<tr>
<td>Over 87.5kV, not over 121kV</td>
<td>4 ft. 0 in. (122 cm).</td>
</tr>
<tr>
<td>Over 121kV, not over 140kV</td>
<td>4 ft. 6 in. (137 cm).</td>
</tr>
</tbody>
</table>

4.8.7. When an unqualified person is working in an elevated position near overhead lines, the location shall be such that the person and the longest conductive object he or she may contact cannot come closer to any unguarded, energized overhead line than the following distances:
4.8.8. For voltages to ground 50kV or below - 10 feet;
4.8.9. For voltages to ground over 50kV - 10 feet plus 4 inches for every 10kV over 50kV.
4.8.10. Any vehicle or mechanical equipment capable of having parts of its structure elevated near energized overhead lines shall be operated so that a clearance of 10 ft. is maintained. If the voltage is higher than 50kV, the clearance shall be increased 4 in. for every 10kV over that voltage.

4.9. Lockout Tagout

4.9.1. While any employee is exposed to contact with parts of electric equipment or circuits which have been de-energized, the circuits energizing the parts shall be locked out, tagged out or both.
4.9.2. Any required Lockout Tagout procedures (for repairs) shall follow the requirements of Haskell Davis JV Safety Policy LOCKOUT TAGOUT.
1.0 PURPOSE

Haskell Davis JV has developed this Environmental Management plan to support our efforts in providing high quality services to our clients while ensuring a safe and healthy workplace for our employees and acting as a responsible member of the community.

This plan was designed to limit the environmental impact of our work and reduce potential risks that our operations may pose to individuals or the environment. The plan also provides the means for ensuring a high level of environmental responsibility, stewardship, and accountability.

2.0 Scope

The content and conditions of this plan apply to all field construction and installation operations. This includes every aspect of our work, from mobilization and groundbreaking to the delivery of completed products. In addition to our direct processes and activities, all ancillary field operations related to the completion of our work also fall within the scope of this plan, including administrative activities, subcontractor involvement, vendor/supplier support, and waste management.

2.1. Policy Statement

Haskell Davis JV believes that protection of the environment is paramount to the successful completion of our projects and will take appropriate measures to protect the condition of the air, land and water we work on or near. We will also take appropriate steps to protect our employees when dealing with environmental risks.

Through improvement, and through the education of our employees, Haskell Davis JV will continually raise the environmental awareness of our corporate culture in order to ensure that the protection of the environment is an integral part of our collective activities.

2.2. Primary Concerns

The plan is designed to identify and manage all potentially adverse environmental risks to air, land, water, and life, which could result from our construction processes. Specifically, the plan strives to:

- Control and monitor consumption of priority resources
- Minimize and control the production of wastes
- Limit or prevent adverse effects to the environment
- Recycle, reuse, and reduce where feasible

1.5 Potential Waste Streams:

- Gasoline/Diesel (fuels)
- Hydraulic oil (lubricants)
3.0 RESPONSIBILITIES

The ultimate responsibility for safety and health rests with the president of Haskell Davis JV. In order to ensure the effective application of the Environmental Management Plan, specific responsibilities have been delegated as follows.

3.1. Management

The Home Office Project Manager and/or Corporate Safety Manager are responsible for establishing and overseeing the plan at each location. Management will remain fully aware of all activity related to environmental compliance throughout the project.

3.2. Supervision

The Superintendent and/or Site Safety Manager are responsible for the implementation, daily enforcement and monitoring of the plan, with support and guidance from the Home Office.

3.3. Employees

Haskell Davis JV employees and subcontractors are required to report any environmental spill, concern, or hazard to their supervisor immediately. Employees may assist with mitigation, if properly trained and protected.

3.4. Emergency Contact List

The following people may be contacted at any time for information or direction, regarding environmental compliance on Haskell Davis JV Projects. Please try to contact one of the onsite contacts first, shaded section, as they will be most familiar with existing site conditions.

<table>
<thead>
<tr>
<th>Contact</th>
<th>Position</th>
<th>Office</th>
<th>Cell</th>
<th>EMAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evan Haskell</td>
<td>President</td>
<td>734-1200</td>
<td></td>
<td><a href="mailto:ehaskell@haskellcorp.com">ehaskell@haskellcorp.com</a></td>
</tr>
<tr>
<td>Terry Corrigan</td>
<td>Vice-President</td>
<td>734-1200 x3214</td>
<td>360-739-8501</td>
<td><a href="mailto:tcorrigan@haskellcorp.com">tcorrigan@haskellcorp.com</a></td>
</tr>
<tr>
<td>Ray Pierce</td>
<td>Safety Manager</td>
<td>734-1200 x3215</td>
<td>360-739-4558</td>
<td><a href="mailto:rpierce@haskellcorp.com">rpierce@haskellcorp.com</a></td>
</tr>
</tbody>
</table>

3.5. On Site Assistance

A contact list for environmental concerns shall be developed for every project.

4.0 Procedure

4.1. Hazard Evaluation

Environmental Risks will be evaluated systematically, by project phase, to identify both the presence and potential severity of each particular environmental concern. The Home Office Project Manager and
Corporate Safety Manager will develop a preliminary Environmental Hazard Review and estimate the potential for initial implementation at the site. Subsequent reviews of the site environmental risks will be conducted by the Site Superintendent and/or SSHO, throughout the project.

4.2. Environmental Hazard Review

- Identified Environmental Concern
- Risk Evaluation (Probability-Duration-Severity)
- Method of Observation
- Method of Control
- Location of Risk

4.3. Hazard Management

The following control methods, for protecting sensitive resource areas and mitigating identified environmental concerns, will be initiated or installed as indicated on the Environmental Hazard Review.

4.4. Global Controls

Global controls will be provided to address general environmental concerns on the project. These controls will be monitored and supplemented with Local Controls as needed.

- Provide awareness training to all site workers
- Require chemical list and SDS
- Provide Sanitary Services
- Establish Housekeeping Policy
- Waste Collection Services
- Dedicated Storage Areas

4.5. Local Controls (examples)

Local controls will be used to address immediate environmental risks and will be appropriate and effective to control or mitigate any potential release. For example; drip pans below fueling areas should be capable of containing the potential spillage or overfill of the fueling activity, silt fencing should be capable of withstanding expected rainfall and erosion conditions.

- Drip Pans and Spill Containment Kits
- SWP Silt Fencing
- Vehicle Wash Stations
- Special waste disposal

4.6. Unexpected Environmental Releases

In the event of an unexpected release or environmental threat, the Haskell Davis JV Superintendent will immediately assess the situation and either initiate an onsite response or contact the appropriate 3rd-party resource.
4.7. Initial Reporting
Any identifiable release of a hazardous/environmentally sensitive substance will require immediate notification to the appropriate Federal, State and Local representatives in addition to project owner representatives.

4.8. Onsite Resource Response:
Haskell Davis JV employees and subcontractors are expected to address minor environmental events as they occur, using available spill containment and collection materials and equipment. Typical materials and equipment include; poly-sheeting, sorbent pads/socks/booms, waste disposal bags/drums.

4.9. 3rd-Party Resource Response:
Large spills and significant environmental releases will be handled by qualified 3rd-party resources. Haskell Davis JV employees and subcontractors will assist the cleanup efforts, provided they have appropriate training and protective gear. Haskell Davis JV shall identify the appropriate local entities that shall act as qualified responders for possible environmental threats.

4.10. Disposal
All wastes associated with an environmental release event will either be collected in appropriate containers for off-site disposal in accordance with current regulations or filtered/treated on-site with qualified oversight. *Legal, off-site disposal is the preferred method of handling environmental wastes.

4.11. Confirmation of Cleanup:
Effective cleanup of small/minor environmental releases will be evaluated by the Haskell Davis JV Superintendent and appropriate owner representatives on a case-by-case basis. This will typically involve visual assessment of soil/surface water conditions.

Effective cleanup of large/major environmental releases will be made by Haskell Davis JV Superintendent, appropriate governmental and owner representatives and will typically be confirmed by soil/water sampling and analysis.

4.12. Compliance Audits
The Superintendent and/or SSHO will conduct a weekly audit of any environmental incidents and ongoing site practices, including the activities of sub-contractors. The audit will consist of completion of a site-wide Environmental Checklist and subsequent follow-up of any open action items.

4.13. Performance Reporting
The Superintendent and/or SSHO will prepare a monthly summary report of all weekly audit findings and follow-up actions for submission to the home office for review. The monthly summary will be made available to employees, subcontractors, and client representatives.

The home office Project Manager will review the monthly compliance report, which is to be submitted by the 5th of each month. The Superintendent will follow-up on any identified issue that is not marked as complete or closed within 2 business days.

4.15. Recordkeeping

A copy of this plan and all environmental hazard assessments, program audits, corrective actions, and other related information will be maintained for a period of 5-years.

4.16. TRAINING AND INSTRUCTION

During initial orientation, employees and subcontractors will receive specific information regarding identified environmental hazards or concerns as well as any project specific training that may be required. Employees and subcontractors will be advised as to the nature of the hazards and the global or local controls that are to be in place to mitigate the hazards, as well as their personal responsibility for complying with the plan.
5.0 PLAN APPROVALS

By signing below, I attest that I have read and understand this plan and agree to abide by its content.

SSH0		Signature		Date

Project Manager	Signature		Date

Client Sponsor	Signature		Date

Sub-Contractor Acknowledgement:

Subcontractors are required to provide a separate project-based environmental plan that is tailored to their specific scope of work, provided that their plan meets or exceeds this plan and current Federal/State guidelines. Small-scale or short-duration subcontractors may elect to sign below in agreement to the conditions of the Haskell Davis JV environmental plan, in lieu of providing a separate plan for their work on this project.

Company		by		Signature		Date
1.0 Purpose

To ensure that our employees have proper guidance on the protection requirements for working in or around excavations

2.0 Scope

This policy applies to all Haskell Davis JV jobsites and employees including sub-contractors.

3.0 Definitions

- **Benching**: A method of protecting employees from cave-ins by excavating the sides to form one or more horizontal levels or steps, usually with vertical or near vertical surfaces between levels
- **Competent Person**: A person 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 the authority to take prompt corrective measures to correct them
- **Excavation**: Any man made cut, cavity, trench or depression in an earth surface, formed by intentional earth removal
- **Protective System**: A method of protecting employee from cave-ins, from material that could fall or roll from an excavation face or into an excavation, or from the collapse of adjacent structures. Protective systems include support systems, shield systems, sloping and benching systems, and other systems that provide the necessary protection
- **Shield**: A structure that is able to withstand the forces imposed on it by a cave-in and thereby protect employee within the structure. Shields can be permanent structures or portable and moved along as work progresses. Shields used in trenches are usually referred to as “trench boxes” or “trench shields”
- **Shoring (Shoring System)**: A structure such as a metal hydraulic, mechanical or timber shoring system that supports the sides of an excavation and which is designed to prevent cave-ins
- **Sloping (Sloping System)**: A method of protecting employees from cave-ins by excavating soil at an appropriate angle of incline that will prevent a cave-in
- **Trench**: A narrow excavation (in relation to its length). In general the depth is greater than the width, but the width is no greater than 15 feet at the bottom

4.0 Procedures

The customer’s contract coordinator and the Haskell Davis JV Site Supervisor shall control all trenching and excavation work performed at customer/client facilities. All surface encumbrances that are located so as to create a hazard to employees shall be removed or supported, as necessary to safeguard employees.
4.1. Underground Utilities
The estimated location of utility installations, such as sewer, telephone, fuel, electric, waterlines or any other underground installations that may be expected to be encountered during excavation work, shall be determined prior to opening an excavation. Any necessary customer/client permits will be obtained prior to digging. Haskell Davis JV will complete the Base Civil Engineering Work Clearance Request form AF IMT 103.

When excavation operations approach the estimated location of underground installations, the exact location of the installations shall be determined by safe and acceptable means. While the excavation is open, underground installations shall be protected, supported or removed as necessary to safeguard employees.

4.2. Access and Egress
A stairway, ladder, ramp or other safe means of egress shall be located in trench excavations that are 4 feet or more in depth as to require no more than 25 feet of lateral travel for employees.

4.3. Inspections
Daily inspections of excavations, the adjacent area and protective systems shall be made by a competent person for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions. The competent person, prior to the start of work shall perform an inspection. Inspections shall be performed as needed throughout the shift. Inspections shall also be performed after every rainstorm or other hazard-increasing occurrence. These inspections are only required when employee exposure can be reasonably anticipated.

Where there is evidence of a situation that could result in a cave-in, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions, exposed employees shall be removed from the hazardous area until the necessary precautions have been taken to ensure safety.

4.4. Exposure to Vehicle Traffic
Employees exposed to vehicle traffic shall wear a warning vest made from high visibility material. When mobile equipment is operated adjacent to an excavation, or when such equipment is required to approach the edge of the excavation and the operator does not have a clear and direct view of the edge of the excavation, a warning system shall be used such as barricades, hand signals, or stop logs.

No employee shall be permitted underneath loads handled by lifting or digging equipment. Employees shall be required to stand away from any vehicle that is being loaded or unloaded to avoid being struck by falling material.

4.5. Hazardous Atmospheres
Where oxygen deficient atmospheres (atmospheres containing less than 19.5 percent oxygen) or hazardous atmosphere exists or could be reasonably expected to exist, such as areas where hazardous
substances are stored nearby, the atmosphere in the excavation shall be tested by a competent person before employees enter excavations greater than 4 feet in depth.

Adequate precautions shall be taken to prevent employee exposure to atmospheres containing less than 19.5 percent oxygen and other hazardous atmospheres. Precautions such as providing ventilation or respiratory protection. When controls are used that are intended to reduce the level of atmospheric contaminants to acceptable levels, testing shall be conducted as often as necessary to ensure that the atmosphere remains safe.

4.6. Emergency rescue equipment
Emergency rescue equipment, such as breathing apparatus, a safety harness and line, or a basket stretcher, shall be readily available where hazardous atmospheric conditions exist or may reasonably be expected to develop during work in an excavation. This equipment shall be attended when in use.

Employees entering bell-bottom pier holes, or other similar deep and confined footing excavations, shall wear a harness with a lifeline securely attached to it. The lifeline shall be separate from any line used to handle materials, and shall be individually attended at all times while the employee wearing the lifeline is in the excavation.

Whenever internal combustion engine-driven equipment is operated inside a shaft, a ventilation system shall be provided and operated in accordance with Section 4.13.

4.7. Protection from Water Hazards
Employees shall not work in excavations in which there is accumulated water, or in excavations where there is water accumulating. The precautions necessary to protect employees against the hazards posed by water accumulation vary with each situation, but could include special support or shield systems to protect from cave-ins, water removal equipment or use of a safety harness and lifeline.

4.8. Stability of Adjacent Structures
Where the stability of adjoining buildings, walls or other structures is endangered by excavation operations, support systems such as shoring, bracing or underpinning shall be provided to ensure the stability of such structures.

Excavation below the level of the base of any foundation or retaining wall that could be reasonably expected to pose a hazard to employees shall not be permitted except when one or more of the following criteria is met:

- A support system, such as underpinning, is provided to ensure the safety of employees and the stability of the structure
- The excavation is in stable rock
- A registered professional engineer has approved the determination that the structure is sufficiently removed from the excavation so as to be unaffected by the excavation activity, or poses a hazard to employees
Sidewalks, pavements, and appurtenant structures shall not be undermined unless a support system or another method of protection is provided.

4.9. Protection of Employees from Loose Rock or Soil
All excavated materials are to be placed not closer than 24 inches (2ft) from the edge of an excavation or trench.

Adequate protection shall be provided to protect employees from loose rock or soil that could pose a hazard. Such protection shall consist of scaling to remove loose material; installation of protective barricades at intervals as necessary or other means that provide equivalent protection.

4.10. Fall Protection
Walkways shall be provided where employees or equipment are required or permitted to cross over excavations. Guardrails which comply with chapter 296-155 WAC, Part C-1 shall be provided where walkways are 4 feet or more above lower levels.

(b) Adequate barrier physical protection shall be provided at all remotely located excavations. All wells, pits, shafts, etc., shall be barricaded or covered. Upon completion of exploration and similar operations, temporary wells, pits, shafts, etc., shall be backfilled.

4.10.1. Fall protection is not required at excavations when employees are:

4.10.1.1. Directly involved with the excavation process and on the ground at the top edge of the excavation; or
4.10.1.2. Working at an excavation site where appropriate sloping of side walls has been implemented as the excavation protective system.

4.10.2. Fall protection is required for employees standing in or working in the affected area of a trench or excavation exposed to a fall hazard of ten feet or more and:

4.10.2.1. The employees are not directly involved with the excavation process; or
4.10.2.2. The employees are on the protective system or any other structure in the excavation.

4.10.3. Persons considered directly involved in the excavation process include:

4.10.3.1. Foreman of the crew.
4.10.3.2. Signal person.
4.10.3.3. Employee hooking on pipe or other materials.
4.10.3.4. Grade person.
4.10.3.5. State, county, or city inspectors inspecting the excavation or trench.
4.10.3.6. An engineer or other professional conducting a quality-assurance inspection.

4.11. Protective Systems
Each employee in an excavation shall be protected from cave-ins by an adequate protective system designed in accordance with this section except when:

Printed copies of this policy are uncontrolled and may not reflect changes made after the above revision date
• Excavations are made entirely in stable rock; or
• Excavations are less than 4 feet in depth and examination of the ground by a competent person provides no indication of a potential cave-in.

Protective systems shall have the capacity to resist without failure all loads that are intended, or could reasonably be expected to be applied or transmitted to the system.

4.11.1. Design of sloping and benching systems

The slopes and configurations of sloping and benching systems shall be selected and constructed in accordance with requirements of OSHA CFR1926.652 or WAC 296-155-650

4.11.2. Design of support systems, shield systems and other protective systems

Designs of support systems, shield systems and other protective systems shall be selected and constructed by the project manager or his designee in accordance with requirements set forth in CFR 1926.652 or WAC 296-155-650 Appendices C and D.

• **Option 1** Design of support systems, shield systems, or other protective systems, that are drawn from manufacturer’s tabulated data shall be in accordance with all specifications, recommendations and limitations issued by the manufacturer.

• **Option 2** Design by a Registered Professional Engineer. Support systems, shield systems, and other protective systems shall be approved by a Registered Professional Engineer. The designs shall be in written form and shall include the following:
  o A plan shall indicating the sizes, types and configurations of the material to be used in the system
  o The identity of the professional engineer

At least one copy of the design shall be maintained at the job site during the construction of the protective system.

4.12. Soil Classification

Soil classification system is a method of categorizing soil and rock deposits in a hierarchy of Stable Rock, Type A, Type B, and Type C, in decreasing order of stability. The categories are determined based on an analysis of the properties and performance characteristics of the deposits and the environmental conditions of exposure.

4.12.1. Stable rock

Stable Rock is defined as: natural solid mineral matter that can be excavated with vertical sides and remain intact while exposed.

4.12.2. Type A

These are cohesive soils with an unconfined, compressive strength of 1.5 ton per square foot (tsf) or greater. Examples of cohesive soils are: clay, silty clay, sandy clay, and sandy clay loam. Cemented soils such as caliche and hardpan are also considered Type A.
However, no soil is Type A if any of the following are true/present:

- The soil is fissured/significantly cracked
- The soil is subject to vibration from heavy traffic, pile driving, similar effects
- The soil has been previously disturbed
- The soil is part of a sloped, layered system where the layers dip into the excavation on a slope of four horizontal to one vertical (4h:1v) or greater
- The material is subject to other factors that would require it to be classified as a less stable material

4.12.3. Type B
- Cohesive soil with an unconfined compressive strength greater than 0.5 tsf but less than 1.5 tsf
- Granular cohesionless soils including: angular gravel (similar to crushed rock), silt, silt loam, sandy loam and in some cases silty clay loam and sandy clay loam.
- Previously disturbed soils except those, which would otherwise be classified as Type C soil
- Soil that meets the unconfined compressive strength or cementation requirements for Type A but is fissured or subject to vibration
- Dry rock that is not stable
- Material that is part of a sloped, layered system where the layers dip into the excavation on a slope less steep than four horizontal to one vertical (4h:1v), but only if the material would otherwise be classified as Type B

4.12.4. Type C
- Cohesive soil with an unconfined compressive strength of 0.5 tsf or less
- Granular soils including gravel, sand and sandy loam
- Submerged rock that is not stable

Material in a sloped, layered system where the layers dip into the excavation or a slope of four horizontal to one vertical (4h:1v) or steeper.

4.13. Mechanical Ventilation Systems
When local exhaust ventilation is used, the system (including exhaust fans, jets, ducts, hoods, separators, and all necessary appurtenances) shall be designed, constructed, installed, inspected, tested, maintained, and operated so as to ensure the required protection by maintaining a volume and velocity of exhaust air sufficient to gather dusts, fumes, mists, vapors, or gases from the equipment or processes, and to convey them to suitable points of safe disposal, thereby preventing their dispersion in harmful quantities into the atmosphere of work rooms or other places where persons are employed.

When general mechanical ventilation is used, the volume and distribution of air shall be sufficient to dilute airborne contaminant concentrations in employees' breathing zones to safe levels.

The exhaust system shall be in operation continually during all operations for which it is designed. The system shall continue to operate for some time after the cessation of said operations, the length of time to depend upon the individual circumstances and effectiveness of the ventilation system.


The air outlet from every dust separator/collector and the dusts, fumes, mists, vapors or gases collected by an exhaust or ventilating system shall discharge to the outside atmosphere, provided that the exhaust system shall discharge to the outer air in such a manner that it will not cause a harmful exposure in any accessible workplace. Collecting systems which return air to work areas may be used if contaminants which accumulate in the work area air do not result in harmful exposure to employees.

The air exhausted from blast-cleaning equipment, grinding, buffing, polishing equipment and all other equipment requiring exhausting of dust or particulate shall be discharged through dust-collecting equipment. Dust and refuse discharged from an exhaust system shall be disposed of in such a manner that it will not result in harmful exposure to employees.

4.14. Training

All Haskell Davis JV employees and those of its sub-contractors who are involved in excavation operations and exposed to excavation operation hazards shall be trained on the hazards of excavations and the procedures in this section. All such training shall be documented.

Employees who are involved in excavation operations and exposed to excavation operation hazards shall be trained in excavator notification and excavation practices required Cal OSHA Title 8 -1541 and Government Code Sections 4216 through 4216.9.
FALL PROTECTION

1.0 Purpose

To provide minimum standards for work at height.

As a principle: No person, as a result of work at height, shall be exposed to the risk of being hit by a falling object.

No person shall be exposed to the risk of a fall that is likely to cause injury.

2.0 Scope

The requirements of this procedure are mandatory to all Haskell Davis JV employees working on site, including Sub-contractors.

3.0 Definitions

- **Anchorage**: A secure point of attachment for lifelines, lanyards or deceleration devices, which is capable of withstanding at least 5,000 pounds or four times the intended load.

- **Full Body Harness**: A configuration of connected straps to distribute a fall arresting force over at least, the thighs, shoulders and the pelvis with provisions for attaching a lanyard, a lifeline or a deceleration device.

- **Connector**: A device, which is used to couple (connect) parts of the personal fall arrest system and positioning device systems together. It may be an independent component of the system, such as a carabineer, or it may be an integral component of part of the system (such as a buckle or D ring sewn into the body harness, or a snap hook spliced or sewn to a lanyard or self-retracting lifeline/lanyard).

- **Controlled Access Zone**: A designated area in which certain work may take place without the use of guardrail systems, Personal Fall Arrest systems, or Safety Net systems.

- **Deceleration Device**: Any mechanism, such as Rope grab, shock absorbing lanyard, automatic self-retracting lifeline/lanyard, etc., which serves to dissipate a substantial amount of energy imposed on an employee during fall arrest.

- **Guardrail System**: A barrier erected to prevent employees from falling to lower levels.

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

- **Leading Edge**: The edge of a floor, roof or framework for a floor or other walking/working surface (such as the deck) which changes location as additional floor, roof, decking or form work sections are placed, formed, or constructed. A leading edge is considered to be an unprotected side and edge during periods when it is not actively and continuously under construction.

- **Lifeline**: A flexible line for connection to an anchorage at one end to hang vertically (vertical lifeline), or for connection to anchorage at both ends to stretch horizontally (horizontal lifeline).
And which serves as a means for connecting other components of a personal fall arrest system to the anchorage.

- **Wall Opening**: A gap or void, which is 30 inches or more high and 18 inches or more in width, in a wall or partition, through which employees can fall to a lower level.

- **Personal Fall Arrest System**: A system used to arrest an employee in a fall from a walking/working surface including an anchorage point, connectors, body harness and may include a lanyard, deceleration device, lifeline or suitable combinations of these.

- **Rope Grab**: A deceleration device which travels on a lifeline and automatically, by friction, engages the lifeline and locks so as to arrest the fall of an employee. A rope grab usually employs the principle of inertial locking, cam/level locking or both.

- **Safety Monitoring System**: A safety system, used in conjunction with a warning line system only, in which a competent person, having no additional duties, monitors the proximity of up to 8 workers to the fall hazard, when working between the warning line and unprotected sides or edges, including the leading edge of a low pitched roof or walking/working surface.

- **Self-Retracting Lifeline**: A deceleration device, which contains a drum-wound line which may be slowly extracted from, or retracted onto, the drum under slight tension during normal employee movement, and which after onset of a fall, automatically locks the drum and arrests the fall.

- **Shock Absorbing Lanyard**: A flexible line of webbing, cable or rope used to secure a harness to a lifeline or anchorage point that has an integral shock absorber.

- **Walking/working surface**: Any area whose dimensions are 45 inches or greater in all directions, through which workers pass or conduct work.

- **Warning line system**: A barrier erected on a walking/working surface or on a low pitch roof (4/12 pitch or less, to warn employees that they are approaching an unprotected fall hazard.

- **Work at Height**: Work at height includes work being performed in a situation where there is potential for a person or an object, including equipment, material, tools and debris, to fall or be emitted sideways or upwards or otherwise hit persons during work from a scaffold, permanent work platform, through a ceiling or floor and the like. Examples are hosing material from elevated structures, opening drain valves that discharge at height, tools falling off a working platform, rock and soil falling into a trench and falling material deflected off the side of a building.

Work at height can either be external, performed outside of any confining structure, or internal where work is performed above or inside a confining structure (eg tank, boiler internal etc), that has access holes or openings below or above allowing any falling object to enter or exit the work area.

## 4.0 Training

A training program shall be provided for each employee who might be exposed to fall hazards. Training shall enable each employee to recognize the hazards of falling & shall train each employee in the procedures to follow to minimize these hazards.

Re-training shall be provided when the following are noted:
1. Deficiencies in training.
2. Work place changes.
3. Fall protection systems or equipment changes that render previous training obsolete.

Training shall be documented and maintained showing the following:

1. Who was trained, when, dates of training
2. Signature of person providing training & date employer determined training was deemed adequate.

5.0 Responsibilities

Supervisors are responsible for the following:

- Ensuring that the potential of an object or person to fall is managed as per this procedure.
- Ensuring there are written procedures and equipment available for the safe retrieval of a person who has fallen. If necessary, establish that local Rescue Services are available and able to respond effectively.
- Ensuring that the user of a fall arrest system does not work alone.
- Ensuring industrial safety nets are managed appropriately.
- Ensuring their employees or Sub-contractors are familiar with this procedure,
- Adherence to its guidelines,
- Providing necessary fall protection equipment, and P.P.E. The site shall obtain/maintain and store all necessary hardware to comply with this procedure. This equipment shall meet OSHA/ANSI requirements.
- Ensuring all persons using personal fall protection systems and P.P.E. are trained in the safe and correct use of that equipment
- Ensuring that inspections of all components of personal fall protection system are conducted annually.
- Initiating a rescue plan after a worker has fallen.
- Authority as Qualified Person to make any additional recommendations and administer this procedure and shall be responsible for supporting fall protection training through scheduling and implementation.
- Designating a Site Safety Representative for the project if necessary, with approval of the candidate by Haskell Davis JV Corporate management, and whose responsibilities shall be identical to those listed in this section with exception to designating a Site Safety Manager.

User of Personal Fall Protection Systems are responsible for the following:

- Inspecting harnesses and lanyard assemblies prior to every use.
- Ensuring that the fall-arrest / travel restrain system is used properly taking into account fall clearance etc.
6.0 Procedures

6.1. Fall Protection Work Plan

Whenever there is the possibility of employees exposed to a hazard of falling 6 feet or more in height, a site specific written fall protection work plan must be completed by a Qualified Person (usually a Supervisor or the SSHO). The supervisor shall be required perform a risk assessment and to analyze the work assignment using the fall protection work plan. Once the work plan has been developed, a copy shall remain at the work site for review. The work plan shall be reviewed by all employees assigned to that task- prior to beginning work and shall be followed completely.

6.2. When Fall Protection is Required

Approved personal fall arrest, personal fall restraint or positioning systems shall be worn by those employees whose work exposes them to falling in excess of 6 feet from the perimeter of a structure, unprotected sides and edges, leading edges, through shaft ways and openings, sloped roof surfaces steeper than 7:12, or other sloped surfaces steeper than 40 degrees not otherwise adequately protected.

6.3. Risk Management Before Work Starts

Prior to starting any work at height, the person in control of the workgroup shall document a risk assessment in a formal JSA to identify hazards that may result in a fall of an object or person and to identify control measures to minimize the risk.

If there is a risk of an object falling onto persons working below, then the flowchart in Attachment 1 shall be used to determine the appropriate controls.

If there is a risk of a person falling and the control measures involve a fall arrest harness system, then a rescue plan shall be completed.

Scaffold erection and demolition techniques shall comply with ANSI/OSHA Scaffolding – General

If workers have to access tank top roofs or building roofs the risk assessment must consider the physical integrity of the roofs

6.4. Rescue Plan

Rescue Methods/Options of Fallen Personnel

In the unlikely event that a fall arrest occurs on-site, personnel with the use of an articulating man lift or ladders where feasible, will rescue all employees. Alternate rescue would be through the local emergency services.

Communication

In the event of a fall, the following people will be notified as soon as possible.

1) Rescue personnel,
2) Manager/Supervisor,
3) Safety manager/coordinator,

4) Fire Department and emergency medical services if necessary.

At the beginning of any work activity where fall protection is an issue, rescue plans must be identified and discussed with all employees in case of a fall. The Project Manager, Superintendent or the SSHO will develop the rescue plan(s). Rescue plans may be in the JHA format and must list the specific fall hazards addressed.

All employees involved in a fall arrest or fall will be sent immediately for a medical evaluation to determine the extent of injuries, if any.

Safety Requirements for Assisted-Rescue and Self-Rescue Systems, Subsystems and Components

- The capacity of a one person rescue system shall range from 130 to 310 pounds (59 to 140kg). The capacity of a two person rescue system shall range from 130 to 620 pounds (59 to 280kg). The maximum and minimum rated working loads for each system component shall encompass the capacity range of the assembled system.

- **Operation.** It shall be possible to engage the RSRL (Self-Retracting Lanyard Component with integral Rescue Capability) into its rescue mode of operation at any time, subject to the manufacturer’s instructions. It shall not be possible to inadvertently change to or from rescue mode. The RSRL shall be capable of raising or lowering the load to affect rescue. The minimum mechanical advantage offered by the RSRL in rescue mode shall be 3:1, neglecting frictional losses. When in rescue mode, the RSRL device shall automatically stop and hold the load if the rescuer intentionally or unintentionally relinquishes control. The RSRL devise shall have a means to stabilize the device during use in rescue mode.

- Powered Operation Devices that are operational by use of a power source other than manual shall have means to limit applied lifting force and speed. A manual back-up means of operation shall be provided.

- Rope tackle blocks shall have a secondary means to prevent uncontrolled lowering of the load. Rope tackle blocks shall have a minimum theoretical mechanical advantage of 3:1.

- Descent Energy and Capacity. The capacity of decent devices addressed by this standard shall be 310 pounds, see capacity, one person.

6.5. Control Measures for Risk of an Object Falling

If there is a risk of an object falling on to persons working below then one of the following falling object risk management methods shall be implemented:

- **Time method** – planning or otherwise managing work so that tasks creating an overhead work situation do not occur at the same time for different work groups.

- **Distance Method** – planning or otherwise managing work so that tasks creating an overhead work situation do not occur in what is reasonably foreseeable and demarcated as the cordoned area.
• **Physical Barrier** at the elevated work area or the lower work area – could include, but are not limited to, steel mesh, structural ply, conveyor belt, insertion rubber, steel plate, scaffold planks etc. Grid mesh is not a physical barrier when the size of an object, tool, equipment etc. has the potential to fall through the grid mesh.

• Priority should be given to eliminating the risk by not having the workgroups work above and below each other.

• Consideration should be given to the use of tool lanyards to prevent them from falling.

• Barricading of access areas above a work area at a lower level shall be carried out. Each employee on a walking/working surface with an unprotected side or edge which is greater than 4 feet or more above a lower level shall be protected by the use of a guardrail system, safety net system, warning line system or personal fall arrest system.

### 6.6. Control Measures for Risk of a Person Falling

No person shall work in a position where there is potential for an un-arrested fall from a height of 6 feet measured from the top of the walking working surface to the nearest lower level or object that a falling worker could strike.

Control measures to prevent a person falling in order of priority are:

- A barricade such as standard guardrails,
- A fall protection cover placed over an opening,
- A travel restraint system

If fall prevention control measures are not practicable, then the following control measures to arrest a fall must be implemented—

- A fall arresting platform, or
- A personal fall-arrest system
- Provision shall be made for users to approach and connect onto a fall protection system without being exposed to a fall-risk situation. If there is the risk of a fall, they shall be protected by means of another fall-arrest system with provision for transferring to or from each system whilst always connected to one system or the other. The approach may comprise for example a fully protected walkway. The same requirements apply when persons are leaving the system.
- All fall arresting, descent control, and rescue equipment shall be approved and used in accordance with the manufacturer’s recommendations.

### 6.7. Walking Working Surface

Each employee on walking/working surfaces shall be protected from falling through holes or to lower levels greater than 4 feet by the use of a guardrail system, cover, travel restraint or personal fall arrest system. In addition, a guardrail system used at a hole shall:

- Be erected on all unprotected sides or edges of the hole or edges of the hole.
• Have no more than two sides provided with removable guardrail system sections to allow passage of materials. When the hole is not in use, it shall be closed with a cover.

Covers for holes in floors, roofs and other walking/working surfaces shall meet the following requirements:

• Covers located in roadways and vehicular aisles shall be capable of supporting, without failure, at least twice the maximum axle load of the largest vehicle expected to cross over the cover as determined by the first line supervisor.
• All covers shall be capable of supporting without failure at least twice the weight of the employees, equipment and materials that may be imposed on the cover at any one time as determined by the first line supervisor.
• All covers shall be secured when installed so as to prevent accidental displacement by the wind, equipment or employees
• All covers shall be marked with the word “HOLE” or “COVER” to provide warning of the hazard.

6.8. Controlled Access / Leading edge control zone
The control zone shall begin a minimum of 6 feet back from the leading edge to prevent exposure by employees who are not protected by fall restraint or fall arrest systems.

The control zone shall be separated from other areas of the low pitched roof or walking/working surface by the erection of a warning line system.

6.9. Warning line system
The warning line system shall comply with the following provisions:

• The warning line system shall be erected around all sides of the roof work area.
• The warning line system shall be erected not less than 6 feet from the roof edge.
• Points of access, material handling areas, storage areas, and hoisting areas shall be connected to the work area by an access path formed by a warning line system.

When the path to a point of access is not in use, a rope, wire, chain or other barricade, equivalent in strength and height to the warning line system shall be placed across the path to the point where the path intersects the warning line system erected around the work area, or that path shall be offset so that a person cannot walk directly into the work area.

Warning line systems shall consist of ropes, wires, chains and supporting stanchions as follows:

• Each line shall be flagged or otherwise clearly marked at not more than 6-foot intervals with high-visibility material (e.g. caution tape).
• Each line shall be rigged and supported in such a way that at its lowest point (including sag) is not less than 36 inches from the walking/working surface and its highest point is not more than 42 inches.
• After being erected, with the rope, wire or chain attached, stanchions shall be capable of resisting, without tipping over, a force of at least 16 pounds, applied horizontally against the stanchion.
• The rope, wire, or chain shall have a minimum tensile strength of 200 pounds and after being attached to the stanchions, shall be capable of supporting, without breaking, the loads applied to the stanchions.
• The line shall be attached at each stanchion in such a way that pulling on one section of the line between stanchions will not result in slack being taken up in adjacent sections before the stanchions tip over.

6.10. Safety Monitor system
A Safety Monitor system may be used in conjunction with a warning line system as a method of guarding against falls during work on low-pitched roofs and leading-edge work only. When selected, the safety monitor system shall be addressed in the fall protection work plan, including the name of the safety monitor.

The safety monitor system shall not be used when adverse weather conditions create additional hazards. A person acting in the capacity of safety(s) shall be trained in the function of both the safety monitor and warning line systems. And meet the following:

• Be a competent person
• Have control authority over the work as it relates to fall protection
• Be instantly distinguishable over members of the work crew by wearing highly visible, distinctive and uniform apparel, while in the control zone.
• Engage in no other duties while acting as safety monitor.
• Be positioned in relation to the other workers, so as to have a clear unobstructed view and be able to maintain normal voice communication.
• Not supervise more than 8 workers at one time.

6.11. Overhead protection
When an employee is exposed to falling objects, each employee shall wear a hard hat and one of the following measures shall be implemented:

• Erect toe boards, screens or a guardrail system to prevent objects from falling from higher levels.
• Erect a canopy structure and keep potential fall objects from far from the edge of the higher level so that those objects would not go over the edge if they were accidentally displaced.
• Barricade the area to which objects could fall, prohibit employees from entering the barricaded area, and keep objects that may fall far enough away from the edge of a higher level so that objects would not go over the edge if they were accidentally displaced.

6.12. Unusual applications
There may be unusual applications where other configurations not addressed in this procedure should be used, such as but not limited to boatswain’s chairs, chest harnesses or spider platforms. These alternatives shall be discussed with the employee’s supervisor and client Operations Safety, prior to implementation in the field.

6.13. Guardrail systems

Guardrail systems shall be so surfaced as to prevent injury to an employee from punctures or laceration. Guardrail systems and their use shall comply with the following requirements;

A standard guardrail shall consist of top rail, midrail or equivalent protection, and posts, and shall have a vertical height within the range of 42 inches to 45 inches from the upper surface of the top rail to the floor, platform, runway, or ramp level.

Top rails shall be capable of withstanding without failure, a force of at least 200 pounds applied either horizontally or vertically downward at the top rail, at any point along the top rail. If wire rope is used for top rails, it shall be flagged at not more than 6-foot intervals with high visibility material. Wire, manila, plastic or synthetic rope being used for top rails shall be inspected frequently as necessary to ensure it continues to meet strength requirements.

Mid rails shall be installed midway between the top rail and the walking/working surface. The mid rail shall be capable of withstanding without failure, a force of at least 150 pounds applied in any outward or downward direction, at any point along the mid rail. Wire, manila, plastic or synthetic rope being used for mid rails, shall be inspected frequently as necessary to ensure it continues to meet strength requirements.

Screens and mesh, when used shall extend from the rail to the walking/working surface and along the entire opening between top rail supports. The screen or mesh shall be capable of withstanding, without failure, a force of at least 150 pounds applied in any outward or downward direction.


Safety nets shall be provided when working more than 25 feet above the lower level, and the use of ladders, scaffolds, catch platforms, temporary floors, safety lines or personal fall arrest systems are impractical. Safety nets shall be installed as close as practical under the walking/working surface on which employees are working, but in no case more than 30 feet below such level. Contact the Corporate Safety Manager for additional safety net requirements.

6.15. Personal Fall Arrest Systems

Personal Fall Arrest Systems and their use shall comply with the following provisions:

Inspection – Personal fall arrest systems shall be inspected daily before each use, by the user for wear, damage and other deterioration, and defective components shall be removed from service. The user is responsible for the safety equipment in his/her possession and all manufacturer instructions are followed.
Haskell Davis JV Superintendent will ensure that maintenance inspections that meet with the manufactures requirements or the job specifications are maintained as required.

Haskell Davis JV tool room will maintain inspections on all fall protections systems that are maintained in the Bellingham facility and ensure that Personal Fall Protection systems that are distributed to job site locations have been inspected. All state and federal regulations will be adhered to.

System Requirements – Personal fall arrest systems, when stopping a fall shall:

- Limit maximum arresting force on employees to 1800 pounds when used with body harness
- Be rigged such that an employee cannot free-fall more than 6 feet or contact any lower level
- Bring an employee to a complete stop and limit deceleration distance an employee travels to 3.5 feet and have sufficient strength to withstand twice the potential impact energy of an employee free-fall distance permitted by the systems, whichever is less

Hoisting Areas – When a personal fall arrest system is used at hoist areas, it shall be rigged to allow the movement of the employee only as far as the edge of the walking/working surface.

Equipment Used During Falls – Personal Fall arrest systems and components subjected to impact loading shall be immediately removed from service and shall not be used again for employee protection.

All safety belts, harnesses and lanyards placed in service or purchased on or before February 1, 1997, shall be labeled as meeting the requirements contained in ANSI A10.14-1975, Requirements for Safety Belts, Harnesses, Lanyards, Lifelines and Drop Lines for Construction and Industrial Use.

All personal fall arrest, personal fall restraint and positioning device systems shall be labeled as meeting the requirements contained in ANSI Z359.1-1992 American National Standard Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components. NOTE: See appendix 1 to this section

- **Body Harness**

  Body harnesses shall be used only for employee protection and not to hoist material.

  Body harnesses shall be worn properly affording a snug, yet comfortable fit, and according to manufacturer’s instructions.

- **Connectors: Dee-rings, Snap Hooks and Carabineers**

  D-rings, snap hooks and carabineers shall be of the locking type and have a minimum tensile strength of 5,000 pounds and proof-tested to a minimum tensile load of 3,600 pounds. All connectors shall be drop forged, pressed and formed steel, or made of equivalent materials. They shall have a corrosion-resistant finish with all surfaces smooth to prevent damage to interfacing parts of the system.

- **Lanyards and Lifelines**
Lanyards and vertical lifelines shall have a minimum breaking strength of 5,000 pounds and be protected against being cut or abraded. Ropes and straps (webbing) used in lanyards shall be made from synthetic fibers.

Each person shall be attached to their own separate lanyard or lifeline.

Lanyards secured to a body harness (for fall protection) shall be secured in the center of the wearer’s back near shoulder level or above the wearer’s head.

Lanyards shall be secured in a manner so as to allow the least free fall distance possible, up to a maximum of 6 feet and not allow contact with objects below.

Horizontal lifelines shall be designed, installed and used under the direction of the Safety Department, as part of a complete fall arrest system, which maintains a safety factor of at least two to one.

Self-Retracting Lifelines/Lanyard that automatically limit free fall distance to 2 feet or less shall be capable of sustaining a minimum tensile load of 3,000 pounds. The use of an additional lanyard should be avoided when using self-retracting lifelines/lanyards the latching device on the self-retracting lifelines/lanyards should be connected directly to the body harness using the existing d-ring.

6.16. Anchorage

Personal fall arrest equipment shall be independently attached to an anchorage (tie off point) capable of supporting at least 5,000 pounds for each employee attached or shall be designed, installed and used as part of a complete personal fall arrest system which maintains a safety factor of at least two, as determined by the first line supervisor.

Building structures (columns, floor, steel grating and handrail, for example) may be used as tie off points, provided that they are capable of withstanding the loads indicated in this policy.

6.17. Positioning Device System

Positioning devices shall be rigged such that an employee cannot free fall more than 2 feet. Positioning device systems shall be inspected prior to each use for wear, damage, and other deterioration, and defective components shall be removed from service. The use of non-locking snap hooks shall be prohibited. Anchorage points for positioning device systems shall be capable of supporting two times the intended load or 3,000 pounds, whichever is greater.

6.18. Inspection and Maintenance

To maintain their service life and high performance, all belts and harnesses should be inspected frequently. Users are required to perform visual and tactile inspection before each use. Annual inspection shall be performed by a competent person. If any of the conditions listed below are found the equipment shall be replaced or repaired. Equipment that is damaged or has arrested a fall shall be removed from service immediately.

6.18.1. Harness Inspection
1. **Belts and Rings:** For harness inspections begin at one end, hold the body side of the belt toward you, grasping the belt with your hands six to eight inches apart. Bend the belt in an inverted "U." Watch for frayed edges, broken fibers, pulled stitches, cuts or chemical damage. Check D-rings and D-ring metal wear pads for distortion, cracks, breaks, and rough or sharp edges. The D-ring bar should be at a 90 degree angle with the long axis of the belt and should pivot freely.

Attachments of buckles and D-rings should be given special attention. Note any unusual wear, frayed or cut fibers, or distortion of the buckles. Rivets should be tight and unmovable with fingers. Body side rivet base and outside rivets should be flat against the material. Bent rivets will fail under stress.

Inspect frayed or broken strands. Broken webbing strands generally appear as tufts on the webbing surface. Any broken, cut or burnt stitches will be readily seen.

2. **Tongue Buckle:** Buckle tongues should be free of distortion in shape and motion. They should overlap the buckle frame and move freely back and forth in their socket. Rollers should turn freely on the frame. Check for distortion or sharp edges.

3. **Friction Buckle:** Inspect the buckle for distortion. The outer bar or center bars must be straight. Pay special attention to corners and attachment points of the center bar.

6.18.2. **Lanyard Inspection**

When inspecting lanyards, begin at one end and work to the opposite end. Slowly rotate the lanyard so that the entire circumference is checked. Spliced ends require particular attention. Hardware should be examined under procedures detailed below.

6.18.3. **Hardware**

**Snaps:** Inspect closely for hook and eye distortion, cracks, corrosion, or pitted surfaces. The keeper or latch should seat into the nose without binding and should not be distorted or obstructed. The keeper spring should exert sufficient force to firmly close the keeper. Keeper rocks must provide the keeper from opening when the keeper closes.

**Thimbles:** The thimble (protective plastic sleeve) must be firmly seated in the eye of the splice, and the splice should have no loose or cut strands. The edges of the thimble should be free of sharp edges, distortion, or cracks.

6.18.4. **Lanyards**

**Steel Lanyards:** While rotating a steel lanyard, watch for cuts, frayed areas, or unusual wear patterns on the wire. The use of steel lanyards for fall protection without a shock-absorbing device is not recommended.

**Web Lanyard:** While bending webbing over a piece of pipe, observe each side of the webbed lanyard. This will reveal any cuts or breaks. Due to the limited elasticity of the web lanyard, fall protection without the use of a shock absorber is not recommended.

**Rope Lanyard:** Rotation of the rope lanyard while inspecting from end to end will bring to light any fuzzy, worn, broken or cut fibers. Weakened areas from extreme loads will appear as a noticeable
change in original diameter. The rope diameter should be uniform throughout, following a short break-
in period. When a rope lanyard is used for fall protection, a shock-absorbing system should be included.

6.18.5. Shock-Absorbing Packs

The outer portion of the shock-absorbing pack should be examined for burn holes and tears. Stitching on areas where the pack is sewn to the D-ring, belt or lanyard should be examined for loose strands, rips and deterioration.

6.18.6. Visual Indication of Damage to Webbing and Rope Lanyards

Heat

In excessive heat, nylon becomes brittle and has a shriveled brownish appearance. Fibers will break when flexed and should not be used above 180 degrees Fahrenheit.

Chemical

Change in color usually appears as a brownish smear or smudge. Transverse cracks appear when belt is bent over tight. This causes a loss of elasticity in the belt.

Ultraviolet Rays

Do not store webbing and rope lanyards in direct sunlight, because ultraviolet rays can reduce the strength of some material.

Molten Metal or Flame

Webbing and rope strands may be fused together by molten metal or flame. Watch for hard, shiny spots or a hard and brittle feel. Webbing will not support combustion, nylon will.

Paint and Solvents

Paint will penetrate and dry, restricting movements of fibers. Drying agents and solvents in some paints will appear as chemical damage.

6.18.7. Cleaning of Equipment

Basic care for fall protection safety equipment will prolong and endure the life of the equipment and contribute toward the performance of its vital safety function. The proper storage and maintenance after use is as important as cleaning the equipment of dirt, corrosives or contaminants. The storage area should be clean, dry and free of exposure to fumes or corrosive elements.

Nylon and Polyester

Wipe off all surface dirt with a sponge dampened in plain water. Squeeze the sponge dry. Dip the sponge in a mild solution of water and commercial soap or detergent. Work up a thick lather with a vigorous back and forth motion. Then wipe the belt dry with a clean cloth. Hang freely to dry but away from excessive heat.
Drying
Harness, belts and other equipment should be dried thoroughly without exposure to heat, steam or long periods of sunlight.

6.19. Program Evaluation
This fall protection program will be evaluated periodically to determine the effectiveness. The following criteria will be used to evaluate its performance:

- Accident reports
- Number of accidents.
- Management/staff compliance with program components.
- Periodic on-site audits.
- Staff feedback and interviews.

In the event an employee falls, or some other related, serious incident occurs, (e.g., a near miss) the circumstances of the fall or other incident shall be investigated to determine if the fall protection plan needs to be changed. Project Management shall implement those changes to prevent similar types of falls or incidents.

7.0 Regulations

- Federal 29CFR 1926.500
- California Title-8 1670

8.0 Attachments

- Fall Protection Work Plan Template
- Working at heights Decision Making Guide
### FALL PROTECTION WORK PLAN

**Project:**

**Dates Valid:**

**Completed By:**

**Phone:**

---

**Note:** All affected employees will review all the requirements of this fall protection work plan prior to starting any work requiring fall protection. This plan will be maintained at the jobsite during work activities. Affected employees must also have current training in accordance with Haskell Davis JV’s Health & Safety Manual, prior to performing work covered by this plan.

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**Work/Task Description:** *(include tools required)*

---

**Is there a hazard of falling more than 6 feet, while performing this task?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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**Can this work/task be relocated, to eliminate the employee fall hazard?**

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<th>Yes</th>
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1. **Location/Structure:**

   **Working Surface Details:** *Check all that apply.*

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   **Height:**

   ---

   **Work will be accessed by:** *Check all that apply.*

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2. **Method(s) of fall protection to be provided:** *Check all that apply.*

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3. **Specific Fall Protection Equipment:**

<table>
<thead>
<tr>
<th>Manufacturer:</th>
<th>Style/Model:</th>
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<table>
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<tr>
<th>Type:</th>
<th>Capacity:</th>
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   **Special Requirements:**
4. Describe the method used to determine the adequacy of attachment points: Check all that apply.

☐ Manufacturer’s data  ☐ Existing engineering/design documents
☐ Evaluation by qualified engineer  ☐ Good faith assessment
☐ Other (describe): ______

5. Describe the procedure for assembly, maintenance, inspection, and disassembly of the fall protection system to be used:

_____

6. Describe the correct procedure for handling, storage, and securing of tools and materials:

_____

7. Describe the method of providing overhead protection for workers who may be in, or pass through, the area below the work site: Check all that apply.

☐ Barricading  ☐ Toe boards on scaffolds and floor openings
☐ Hard hats required  ☐ Warning signs
☐ Other (describe): ______

8. Identify all affected employees:

Designated Monitor: ______

Affected Employees:

________________________

________________________

________________________

________________________

________________________

________________________
9. Special Conditions:

_______________________________

Approved By: _____

Date: _____
Post-Fall Emergency Rescue Plan

Emergency Notification & Contact Numbers:

- Immediately  ☐ Onsite Rescue Team  Phone: _____
- Within FIVE minutes*  ☐ Emergency Responders  Phone: 9-1-1
- Within 1 hour  ☐ Haskell Davis JV Safety Manager  Phone: _____

Communication Method: Check all that apply.

☐ Direct Voice  ☐ Mobile Phone or Radio
☐ Whistle/Horn  ☐ Hand Signals
☐ Other (describe): _____

Describe any obstructions or obstacles to reaching the worker:

_____

Describe the method for accessing injured workers: Check all that apply.

☐ Utilize Portable Rescue ladders  ☐ Utilize man-lift/Scissor-lift
☐ Utilize Fixed Ladders/Stairs  ☐ Utilize Drop Lines or Retraction Devices
☐ Utilize Existing Tagged Scaffolds  ☐ Utilize other personnel lift or platform
☐ Other (describe): _____

Specific Post-Fall Rescue Equipment:

Manufacturer: _____  Style/Model: _____
Type: _____  Capacity: _____
Special Requirements: _____

Identify Rescue Team Members: Include copies of training records.
Rescue Team Supervisor: ____
Retrieval Team:

Ground Receiving Team:

This Rescue Plan is designed to address the potential need for the rapid recovery of a suspended worker, following an unexpected fall event. Optimal Recovery options will ensure that the worker is relieved from suspension-trauma risk and placed in a secure position within five minutes.

Pre-Fall Planning
Employees will receive adequate training and knowledge in the potential fall hazards associated with this work, the proper use of the available rescue equipment, the purpose of this plan, and their duties/responsibilities during/after an unexpected fall event.

Moment of Fall & Fall Suspension
Affected employees will recognize the potential for significant physical trauma associated with a fall event, the need to reposition the suspended worker (or self), and how to summon assistance.

Post-Fall Rescue Effort
*Response Time is critical, as the suspended worker is at great risk of suffering from reduced blood flow, toxic shock, and even death – regardless of their visible injuries.

Rescue Plan Steps:
1. Contact Rescue Supervisor/Team
2. Deploy Rescue Retrieval Team and Equipment
3. Assess/Stabilize fall victim in place
4. Effect a complete recovery
5. Re-Assess/Stabilize fall victim
6. Evaluate the effectiveness of the Rescue Operation

This plan must remain at the work site and should be returned to the Safety office after the duration of the job.
Falling Objects Risk Management Methods:

- **Time**: Have each workgroup work in their work area at a different time to eliminate the risk.
- **Distance**: Move the workgroups apart sufficiently to be out of each other's fall zone as demarcated by the cordoned area.
- **Physical Barrier**: Encapsulate the work area to prevent objects falling from the work area.

*If there are any issues relating to Work at Height, contact the relevant Safety Representative.*
9.0 Appendix 1 - ANSI/ASSE Z359.1:

Safety Requirements for Personal Fall Arrest Systems, Subsystems & Components

This standard contains product design criteria and test procedures for fall arrest components, subsystems and systems.

Several key changes have been made to Z359.1.

Gate strength requirements have increased for snap hooks and carabiners

The 1999 standard requires a test for 220 lb. force against the gate face and 350 lb. force against the side of the gate. The gate mechanism may not disengage from the nose of the snap hook or carabiner.

The new standard increases the strength requirement to 3,600 lb. in all directions of potential loading to the gate. Test procedures will change to exert static loads on the gate face, gate side and from inside the gate outward, forcing the gate away from the nose of the device.

2) The standard includes a front attachment element for fall arrest. The old standard states that only the dorsal (back) D-ring may be used for attachment of a personal fall arrest system. The revised standard includes attachment of the fall arrest system to a front-mounted D-ring, located approximately in the area of the sternum. However, connection at the front D-ring is limited to systems that restrict free fall distance to 2 ft. or less and limit the maximum fall arrest loads on the front D-ring to 900 lb. of force or less. This will be particularly useful in products selected by climbers and rope access workers.

3) The standard includes additional testing and warnings for twin-leg shock-absorbing lanyards. Concerns over potential misuse of twin-leg shock absorbing lanyards prompted additional test requirements and warnings for these products, which were not mentioned in the 1999 version. The new standard includes a 5,000 lb. static test of the joint between the two lanyard legs.

The standard also requires that the product label include a warning to attach only the center snap hook to the back D-ring of the harness. More warnings will be included in user instructions, such as a warning not to attach the unused leg of the lanyard to any point on the harness except attachment points specifically approved by the harness manufacturer for that purpose.
1.0 Purpose

This policy was written to help manage fatigue and the resultant safety risk to personnel during prolonged work periods.

2.0 Scope

This policy applies to all Haskell Davis JV employees and Sub-contractors.

3.0 Procedures

1. Personnel shall not work more than 19 shifts in a row without taking time off.
2. Personnel must take a sum of at least two shifts (10 or 12 hrs. each) off during a 21 day period.
   a. Time off may be taken in whole shifts (10 or 12 hrs.) or half shift (5-6 hrs.) increments. It is preferable to take time off one shift per week.
   b. Time off can be considered cumulative. For example, a night shift worker on 12 hour shifts can take 6 hours off 4 nights in a row, 4 separate 6 hour periods off in 21 days, 2 separate 12 hr. shifts off in 21 days, or two twelve hour shifts off back to back in order to meet the criteria.
3. Time off shall ultimately be managed by the respective supervisor.
   a. A time-off schedule will be posted prior to the start of any unit shutdown window.
   b. Foremen and/or Superintendents will coordinate scheduling of time off to accommodate the work schedule or level of activity in the unit or work area.
   c. All supervisors are responsible for monitoring the fatigue levels of their teams and may require additional time off for individuals if they feel it is warranted.
4. Deviations from this policy require the approval of the Haskell Davis JV Corporate Safety Director.

There shall be work hour limitations and job rotation schedules to control fatigue, allow for sufficient sleep, and increase mental fitness in an effort to control employee turnover and absenteeism.

Where practical ergonomic equipment will be considered for use to improve workstation conditions such as but not limited to: lift assist devices, rubber mats for standing, proper lighting and temperature control.

An analysis of work tasks to control fatigue must be performed periodically.

Break rooms with chairs and tables will be provided for workers to sit periodically.
Employees in safety critical positions shall be monitored for fatigue/tiredness and lack of mental acuity. Employees in safety critical positions shall report to supervision if they feel fatigued or tired.

Employees must not chronically use over-the-counter or prescription drugs or other substances to increase mental alertness. Employees shall be discouraged from taking any substance known to increase fatigue, including fatigue that sets in after the effects of a drug or substance wears off.

4.0 Training

Initial and annual training shall be provided on how to recognize fatigue, how to control fatigue through appropriate work and personal habits, and reporting of fatigue to supervision.

5.0 Regulations None
FIRE PROTECTION

1.0 Purpose

Haskell Davis JV will take the necessary steps and provide the necessary equipment for the protection of personnel and property from fire damage. Fire protection will be instituted at all warehouse, office and job site locations.

2.0 Scope

This policy applies to all Haskell Davis JV facilities and work areas.

3.0 Definitions

- **Flammable**: means any material having a flashpoint lower than 100 degrees Fahrenheit
- **Combustible**: means any material having a flashpoint higher than 100 degrees Fahrenheit

4.0 Procedures

Employees need to understand their role in responding to an emergency incident involving an incipient fire.

Supervisors shall ensure that fire extinguishers are inspected monthly and maintained in “Ready Condition” at all times, and that employees are trained in the use of equipment as deemed necessary by the exposure.

4.1. Equipment - General

Sufficient access to all firefighting equipment shall be maintained at all times. The equipment must be conspicuously located and easy to reach.

All firefighting equipment must be periodically inspected and maintained in a ready to use condition.

4.2. Training

Personnel shall be trained in the use of equipment prior to initial assignment and annually thereafter. This training is to familiarize employees with the general principles of fire extinguisher use and the hazards involved in incipient stage firefighting.

4.3. Portable Fire Extinguishers

A fire extinguisher, rated not less than 2a, as indicated on the manufacturer’s label, must be provided for each 3000 square feet of protected work area or warehouse. Travel distance from any point of the protected area to the nearest fire extinguisher shall not exceed 100 feet.

The specific type of fire extinguisher must be determined according to the specific risk.
A fire extinguisher rated 10b or higher shall be provided within 50 feet of any storage area where greater than 5 gallons of flammable or combustible liquids are stored.

Portable fire extinguishers shall be subjected to monthly visual inspections by a qualified person to ensure that extinguishers are at full charge and that there is no evidence of damage to any of the exterior parts. Portable fire extinguishers shall be subjected to and an annual maintenance check. Each extinguisher must have a durable tag attached to show the date of the last visual inspection, along with the initials of the person making the inspection. The inspection tags shall also indicate annual maintenance activities. Annual maintenance records shall be kept for 1 year.

4.4. Fire prevention measures

Smoking is prohibited at or in the vicinity of operations which constitute a flammable or combustible fire hazard, and must be posted as follows: “No Smoking or Open Flame”.

Internal combustion engine powered equipment shall be located so that the exhausts are positioned away from flammable and combustible materials.

Temporary buildings, when located within another building or structure, must be constructed of either noncombustible materials or have a fire resistance rating of not less than one hour.

Flammable and Combustible storage areas must be kept free from an excess accumulation of combustible materials. Accumulated waste piles may not exceed 29 feet in height.

4.5. Flammable and Combustible Liquids

Only approved containers and portable tanks shall be used for storage and handling of flammable and combustible liquids. Approved metal safety cans shall be used for the handling and use of flammable liquids in quantities greater than one gallon.

Flammable and combustible liquids shall not be stored in areas used for exits, stairways, or normally used for the safe passage of people.

No more than 25 gallons of flammable or combustible liquids can be stored in a room unless it is stored within an approved storage cabinet.

Any storage of flammable liquid containers outside of buildings shall not exceed 1,100 gallons in any one local area. Groups of containers shall be separated by a minimum 5-foot clearance. These storage containers must be no closer than 20 feet to any building. Outside storage areas must be kept free of weeds, debris, and other combustible materials.

Dispensing and handling of all flammable and combustible liquids must be done according to standards outlined in the OSHA standards 1926.152 (e) (1-5) and WAC 296-155 (250 – 280).
1.0 Purpose

To ensure that employees have immediate access to effective primary medical attention if the need arises.

2.0 Scope

This policy affects all Haskell Davis JV employees. These procedures shall only apply to injuries requiring first aid and includes the use of CPR/AED.

3.0 Definitions

- **First Aid**: means treatment of an employee injury that occurs at the place of employment
- **AED**: means an Automatic External Defibrillator-used for Cardiac Emergencies
- **CPR**: means Cardio-Pulmonary Resuscitation-related to Cardiac Emergencies

4.0 Procedures

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 American Red Cross, or equivalent training that can be verified by documentary evidence.

Because of the different types of jobsites Haskell Davis JV works in, an emergency procedure shall be established in the site specific health and safety plan for each project to address any emergencies beyond basic first aid. These procedures shall be reviewed and made known to all employees at the jobsite as part of their orientation.

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.

*Emergency phone numbers or radio frequencies shall be posted in a conspicuous place at the jobsite.*

Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable flushing facilities shall be provided within the work area.

4.1 Qualifications

All Jobsite Foremen or persons in charge of crews will be first aid and CPR trained. If their duties require them to be away from the jobsite, other persons certified in first aid and CPR will be designated.
Other persons designated by the Safety Coordinator, Superintendent or Project Manager, will be trained to augment or surpass the standard requirements of first aid and CPR training, including the use of AED.

4.2. Training
The SSHO or Superintendent will ensure that all employees receive training during their Site Specific Orientation regarding such things as basic emergency procedures, jobsite evacuation plan and first aid kit locations.

A Valid first aid card will include both first aid and cardiopulmonary resuscitation (CPR) training, be provided by the American Heart Association, Red Cross, or other authorized entity, and be within its expiration date.

4.3. Showers & Eye Wash
The Haskell Davis JV Home Office has portable and fixed eye-wash stations located in several locations in the Structural and Pipe Fabrication shops. Field construction projects, or other facilities where possible exposure to caustic or corrosive materials, will provide designated emergency showers and eye wash stations. The Project Superintendent shall be responsible to ensure that these requirements are met.

4.4. First Aid Kits
First aid supplies shall be easily accessible when required. First aid kits shall consist of appropriate items which will be adequate for the environment in which they are used. For construction operations, items shall be stored in a weather proof container with individual sealed packages of each type of item.

The Home Office Shipping & Receiving manager will ensure that all portable/field use first aid kits are properly maintained and stocked before issuing to the field. First aid kits, maintained on the Haskell Davis JV Corporate premises, are checked and re-stocked regularly, by a third-party.

Kits issued to company vehicles will be maintained by the person to whom the vehicle is issued.

Kits that are maintained on a jobsite will be under the responsibility of the Superintendent or Site Safety Representative.

4.5. First Aid Kit locations
- All company trucks
- At each jobsite (in each jobsite trailer)
- Main office, Fabrication Shop and Pipe Shop

4.6. Automated External Defibrillator (AED)
A fully charged AED is maintained by the Home Office Safety Department and in the Field Safety Office of large industrial projects, when required. Instructions on use, a dedicated one-way valve breathing mask for resuscitation, and a basic BBP kit will be maintained with each AED.

4.7. Bloodborne Pathogen Exposure
Please refer to Haskell Davis JV Safety Policy BLOODBORNE PATHOGENS for information regarding the potential exposure to infectious bodily fluids.

### 4.8. Supplementary supplies

In addition to the basic kits provided at each job site main office trailer, the following supplementary supplies will be available. Quantities are based on maximum number of supported personnel (HASKELL DAVIS JV employees- plus Sub-contractors if HASKELL DAVIS JV is providing Safety and support).

<table>
<thead>
<tr>
<th>Supplementary First Aid Contents</th>
<th>Number of Personnel Supported:</th>
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<tbody>
<tr>
<td>ITEM NR:</td>
<td>ITEM:</td>
</tr>
<tr>
<td>1</td>
<td>Adhesive Gauze (&quot;Coban&quot;) 3&quot; X 5 Yd. roll</td>
</tr>
<tr>
<td>2</td>
<td>Alcohol, quart, isopropyl</td>
</tr>
</tbody>
</table>
| 3 | Band Aid, 1" X 3"
| 4 | Band Aid, 3/4" X 3" | 20 | 30 | 50 | 100 | 150 |
| 5 | Band Aid, Finger Tip | 5 | 15 | 20 | 30 | 50 |
| 6 | Band Aid, Knuckle | 5 | 15 | 20 | 30 | 50 |
| 7 | BioHazard marked sealable plastic bags | 3 | 6 | 12 | 20 | 30 |
| 8 | Blankets | 2 | 2 | 2 | 2 | 2 |
| 9 | Bufferin, Box of 150/2’s | 1 | 1 | 1 | 1 | 2 |
| 10 | Cotton Balls, box | 1 | 1 | 1 | 2 | 2 |
| 11 | Cotton Tip Swabs (Q-Tip), box 100 | 1 | 1 | 1 | 2 | 2 |
| 12 | Disposable aprons or lab coats | 2 | 2 | 5 | 5 | 5 |
| 13 | Disposable CPR masks | 1 | 2 | 3 | 5 | 8 |
| 14 | Emagrin Forte Cold Tablets, Box of 150/2’s | 1 | 1 | 1 | 1 | 2 |
| 15 | Eye Glass Cleaning Station | 1 | 1 | 1 | 2 | 2 |
| 16 | Eye Wash Dispenser | 1 | 1 | 1 | 2 | 2 |
| 17 | Eye Wash Refill (Qt) | 1 | 1 | 1 | 2 | 2 |
| 18 | Gauze bandage, 4" square | 5 | 10 | 15 | 20 | 30 |
| 19 | Hydrogen Peroxide, pint | 1 | 1 | 2 | 2 | 3 |
| 20 | Instant Cold Pack | 2 | 5 | 10 | 15 | 20 |
| 21 | Liquid Chlorine Bleach, 1 Gal Container. | 1 | 1 | 1 | 1 | 1 |
| 22 | Neosporin Antibiotic Ointment, 1 oz. tube | 1 | 1 | 2 | 2 | 3 |
| 23 | Rubber (or Vinyl) Gloves | 6 | 12 | 20 | 35 | 50 |
| 24 | Stretcher | 1 | 1 | 1 | 1 | 1 |
| 25 | Throat Lozenges, Box of 250/2’s | 1 | 1 | 1 | 1 | 2 |
| 26 | Tylenol Caplets, extra strength, Box of 125/2’s | 1 | 1 | 1 | 1 | 2 |
| 27 | Water-Jel Burn Dressing, 4" X 4" | 2 | 4 | 6 | 8 | 10 |
| 28 | Trauma Kit, Mini-pac | 1 | 1 | 1 | 1 | 1 |
| 29 | EMT Holster | 1 | 1 | 1 | 1 | 1 |
| 30 | Flashlight, AA Penlight size | 1 | 1 | 1 | 1 | 1 |
1.0 Overview

The Globally Harmonized System of Classification and Labeling of Chemicals or GHS is an internationally agreed-upon system, created by the United Nations. It is designed to replace the various classification and labeling standards used in different countries by using consistent criteria for classification and labeling on a global level. Its development began at the United Nations Rio Conference in 1992, when the International Labor Organization (ILO), the Organization for Economic Co-operation and Development (OECD), various governments and other stakeholders met at a United Nations conference. It supersedes the relevant European Union (which has now implemented the United Nations' GHS into EU law as the CLP Regulation) and United States standards.

Before the GHS was created and implemented by the United Nations, there were many different regulations on hazard classification in use in different countries. While those systems may have been similar in content and approach, they resulted in multiple standards and classifications and labels for the same hazard in different countries. Given the extent of international trade in chemicals, and the potential impact on neighboring countries when controls are not implemented, it was determined that a worldwide approach was necessary.

The GHS was designed to replace all the diverse classification systems and present one universal standard which all countries should follow (however, the GHS is not compulsory under UN law). The system provides the infrastructure for participating countries to implement a hazard classification and communication system, which many less economically developed countries would not have had the money to create themselves. In the longer term, the GHS is expected to improve knowledge of the chronic health hazards of chemicals and encourage a move towards the elimination of hazardous chemicals, especially carcinogens, mutagens and reproductive toxins, or their replacement with less hazardous ones.

The final "Globally Harmonized System (GHS) for classification and labeling" standard was created at the 1992 Rio Conference on Environment and Development with the statement that “A globally harmonized hazard classification and compatible labeling system, including material safety data sheets and easily understandable symbols, should be available if feasible, by the year 2000”.

2.0 Hazard Communication

After the substance or mixture has been classified according to the GHS criteria, the hazards need to be communicated. As with many existing systems, the communication methods incorporated in GHS include labels and SDS’s. The GHS attempts to standardize hazard communication so that the intended audience can better understand the hazards of the chemicals in use. The GHS has established guiding
3.0 GHS Label Elements

The standardized label elements included in the GHS are:

Symbols (GHS hazard pictograms):

Convey health, physical and environmental hazard information, assigned to a GHS hazard class and category. Pictograms include the harmonized hazard symbols plus other graphic elements, such as borders, background patterns. Also, harmful chemicals and irritants are marked with an exclamation mark. Pictograms will have a black symbol on a white background with a red diamond frame. For transport, pictograms will have the background, symbol and colors currently used in the UN Recommendations on the Transport of Dangerous Goods. Where a transport pictogram appears, the GHS pictogram for the same hazard should not appear. Examples of all the pictograms and downloadable files can be accessed on the UN website for the GHS at http://www.unece.org/trans/danger/publi/ghs/pictograms.html

Signal Words:

"Danger" or "Warning" will be used to emphasize hazards and indicate the relative level of severity of the hazard, assigned to a GHS hazard class and category. Some lower level hazard categories do not use signal words. Only one signal word corresponding to the class of the most severe hazard should be used on a label.

Hazard Statements:

Standard phrases assigned to a hazard class and category that describe the nature of the hazard. An appropriate statement for each GHS hazard should be included on the label for products possessing more than one hazard.

The additional label elements included in the GHS are:

Precautionary Statements:

Measures to minimize or prevent adverse effects. There are four types of precautionary statements covering: prevention, response in cases of accidental spillage or exposure, storage, and disposal. The precautionary statements have been linked to each GHS hazard statement and type of hazard.

Product Identifier (ingredient disclosure):

Name or number used for a hazardous product on a label or in the SDS. The GHS label for a substance should include the chemical identity of the substance. For mixtures, the label should include the chemical identities of all ingredients that contribute to acute toxicity, skin corrosion or serious eye damage, germ cell mutagenicity, carcinogenicity, reproductive toxicity, skin or...
respiratory sensitization, or Target Organ Systemic Toxicity (TOST), when these hazards appear on the label.

Supplier identification:

The name, address and telephone number should be provided on the label.

Supplemental information: Non-harmonized information on the container of a hazardous product that is not required or specified under the GHS. Supplemental information may be used to provide further detail that does not contradict or cast doubt on the validity of the standardized hazard information.

GHS label format

The GHS includes directions for application of the hazard communication elements on the label. In particular, it specifies for each hazard, and for each class within the hazard, what signal word, pictogram, and hazard statement should be used. The GHS hazard pictograms, signal words and hazard statements should be located together on the label. The actual label format or layout is not specified in the GHS. National authorities may choose to specify where information should appear on the label or allow supplier discretion. There has been discussion about the size of GHS pictograms and that a GHS pictogram might be confused with a transport pictogram or "diamond". Transport pictograms are different in appearance than the GHS pictograms. Annex 7 of the Purple Book explains how the GHS pictograms are expected to be proportional to the size of the label text. So that generally the GHS pictograms would be smaller than the transport pictograms.

4.0 GHS material safety data sheet or safety data sheet

The safety data sheet (The GHS has dropped the word “material” from material safety data sheet. It will now be called the safety data sheet or SDS) is specifically aimed at use in the workplace. It should provide comprehensive information about the chemical product that allows employers and workers to obtain concise, relevant and accurate information that can be put in perspective with regard to the hazards, uses and risk management of the chemical product in the workplace. The SDS should contain 16 sections. While there were some differences in existing industry recommendations, and requirements of countries, there was widespread agreement on a 16 section SDS that includes the following headings in the order specified:

1. Identification
2. Hazard(s) identification
3. Composition/ information on ingredients
4. First-aid measures
5. Fire-fighting measures
6. Accidental release measures
7. Handling and storage
8. Exposure control/ personal protection
9. Physical and chemical properties
10. Stability and reactivity
11. Toxicological information
12. Ecological information
13. Disposal considerations
14. Transport information
15. Regulatory information
16. Other information.

The primary difference between the GHS requirements in terms of headings and sections and the international industry recommendations is that sections 2 and 3 have been reversed in order. The GHS SDS headings, sequence and content are similar to the ISO, EU and ANSI MSDS/SDS requirements. The SDS should provide a clear description of the data used to identify the hazards. There is a table comparing the content and format of a current MSDS/SDS versus the GHS SDS provided in Appendix A of the OSHA GHS guidance document available at this website http://www.osha.gov/dsg/hazcom/ghs.html#3.0

5.0 Training

Current training procedures for Hazard Communication in the United States are more detailed than the GHS training recommendations. Therefore, educating employees on the updated chemical and product classifications and related pictograms, signal words, hazard statements and precautionary measures will represent the greatest training challenge. Training will be a key component of the overall GHS approach and should incorporate information as it is introduced into the workplace. Employees and emergency responders will need to be trained on all new program elements, from hazard statements to pictograms. Bear in mind, if products are imported from countries that implement GHS prior to the United States and Canada, employee training may need to begin earlier than expected.

6.0 Implementation

The adoption of the GHS is expected to facilitate international trade by increasing consistency between the laws in different countries that currently have different hazard communication requirements. There is no set international implementation schedule for the GHS. The goal of the United Nations was broad international adoption by 2008. Different countries will require different time frames to update current regulations or implement new ones.

OSHA Published the final rule on March 26, 2012 for implementation of GHS. The final rule requires product manufacturers to adopt the standard by June 1, 2015 and product distributors to adopt the standard by December 1, 2015. Workers must be trained by December 1, 2013.[10][11]
HAND & POWER TOOL USE

1.0 Purpose

This policy will provide guidance on the safe use of hand and power tools for Haskell Davis JV employees.

2.0 Scope

This policy applies to all employees who use or are potentially exposed to hazards related to hand and power tools.

3.0 Definitions

- **Hand Tool**: means a tool that is used with manual effort
- **Power Tool**: means a tool that is used with some form of mechanical advantage or effort

4.0 Procedures

Haskell Davis JV will not issue or permit the use of any tools, which are defective and therefore unsafe. Tools, which are supplied by the company or the employee, must be inspected and maintained in proper condition.

4.1. Responsibilities

Supervisors shall assure proper tools are used and are in good repair.

Employees shall use the proper tool for the job and shall be responsible for the safe use and condition of such tools.

The supervisor reserves the right to tag and remove any defective tool from service, regardless of ownership.

4.2. General Tool Requirements

Tools will not be issued to employees unless they have been properly trained on the specific tool to be used.

All guards provided for power operated tools must be operable and remain in place while in use. Guards must be supplied for isolating belts, gears, shafts, flywheels, spindles, drums, chains and any other rotating or moving parts.

Any tool identified as unsafe shall be red tagged or have the controls locked out to render them inoperable or they shall be physically removed from the project site.

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Printed copies of this policy are uncontrolled and may not reflect changes made after the above revision date.
Personal protective equipment such as eye, face and hand protection must be used whenever the hazard of flying or splashing objects are created by hand or power tools.

Machines designed for a fixed location must be securely anchored to prevent walking or moving.

Tools shall be properly used and maintained in a safe condition at all times. Damaged, defective or otherwise deficient tools shall be tagged and removed from service until repaired.

Personnel who are competent in such operations shall perform repairs and sharpening of tools.

Proper tools shall be used for the job at hand. Size or capacity of a tool should be matched up to the requirements of the job. Substitute or makeshift tools shall no be used unless approved by the supervisor.

Cheater bars shall not be used to gain additional leverage unless the manufacturer designs the tool for such use.

Operating handles of jacks should be removed from the jack if possible, when the lift is completed and the handle is no longer needed.

Tools shall not be thrown to another employee or from higher elevations to the ground. Tools with sharp or pointed edges shall not be carried in pockets but in pouches or buckets when not in use.

Properly insulated tools shall be used.

Lanyards or other suitable devices shall be used to prevent hand tools from dropping into open pipes, shafts, etc., unless adequate covering is installed.

Non-sparking tools or those approved for explosive locations shall be used where the sources of ignition may cause fire or explosion.

Where craftsmen furnish their own tools, such tools shall conform to the requirements specified herein.

No tool shall be placed at an elevated surface such as the top of a stepladder, scaffold or platform, where it may fall onto an employee. When tools are used on or next to grating, a suitable cover/barrier shall be installed to prevent tools from passing through the grating.

Tools shall not be strewn about or left on the floor or at the base of a ladder, where they may create a tripping hazard.

Tools shall not be carried in had while climbing/descending a ladder. They are to be placed in an appropriate container and hoisted/lowered using a rope.

Proper storage facilities shall be used for the safe storage of tools, abrasive wheels and cutting blades.

4.3. Switches and Controls
Hand held powered drills, grinders (wheel diameter 2 inches or greater), disc sanders (discs 2 inches or greater), reciprocating saws, saber, scroll and jig saws with blade shanks greater than \( \frac{3}{8} \) in shall be equipped with constant pressure switch. They may have a lock on control, provided that a single motion of the finger can accomplish the shut-off.

Powered tools such as routers, grinders (wheel 2 inches in diameter and less), disc sander (discs 2 inches in diameter or less) and routers, nibblers may be equipped with a positive on-off control.

Pneumatic nailer or staplers must have a safety device on the muzzle to prevent it from ejecting fasteners when not in contact with the work surface. All hoses exceeding \( \frac{3}{8} \)" I.D. must have a safety device at the source of supply to reduce the pressure in the event of hose failure.

4.4. When using Circular Saws you must:
1. Use a constant pressure switch to turn on or operate any circular saw using a blade that has a diameter greater than two inches.
2. Remove cracked saws and saw blades from service.
3. Make sure power driven circular saws that have a blade diameter larger than two inches have guards above and below the base plate (shoe) as listed in the table below, Portable circular saw guarding requirements.

<table>
<thead>
<tr>
<th>Portable Circular Saw Guarding Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Guard</td>
</tr>
<tr>
<td>Covers the blade to the depth of the teeth, except for the minimum arc necessary to allow the base to tilt for bevel cuts.</td>
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<td></td>
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</table>

4.5. When using portable Belt Sanding machines you must:

Guard:
1. Nip points where the sanding belt runs onto a pulley
2. The unused run of the sanding belt.
4.6. Guards

Tools designated to accommodate a guard shall have the guard in place in operating condition.

Belts, gears, shaft, pulleys, sprockets, spindles, drums, and other types of moving drives shall be isolated.

Guards shall not be altered or modified without written approval from the manufacturer.

Portable circular saws (blade 2 inches or greater) shall have a guard above and below the base plate shoe.

The installation, guarding, use and care of grinding wheels shall comply with the standards set forth in the current ANSI B7.1 standard “Safety Code for the Use, Care and Protection of Abrasive Wheels”.

Band saws shall be fully enclosed, except for their point of operation.

Guards are not required for abrasive wheels 2 inches in diameter or less when used inside of materials, for which the material itself acts as a guard (i.e., grinding the inside of a pipe).

4.7. Abrasive Wheels and Cutting Blades

Abrasive wheels, scratch brushes and cutting blades shall be properly rated for use on a particular power tool. The specified RPM rating of the wheel/blade shall meet or exceed that of the power tool.

Cracked, bent worn or otherwise damaged wheels/blades shall be removed from service until repaired.

All wheels must be inspected before mounting and prior to each use.

Cutting blade shall be maintained in a sharpened state to minimize hazards created by dull blades.

All bench mounted abrasive wheels must be equipped with a protective hood, which allows only an exposure of ¼ of the wheel or a 90-degree angle. The safety guard must be strong enough to withstand a bursting wheel.

A work rest must be provided and the distance between the work rest and the abrasive wheel shall not exceed 1/8 of inch.

All portable abrasive wheels must be provided with safety guards, which are mounted in alignment with the wheel and strong enough to withstand the wheel braking.

Safety glasses and a full-face shield shall be worn for all grinding operations.

4.7.1. Use proper flanges.

You must:

- Mount all abrasive wheels between flanges that have a diameter at least one-third the diameter of the wheel.
Exemption:

This requirement does not apply to the following types of wheels:

- Mounted wheels
- Cup, cone or plug wheels with threaded inserts or projecting studs
- Abrasive disc wheels (inserted nut, inserted washer and projecting stud type)
- Plate mounted wheels
- Cylinder, cup, or segmental wheels mounted in chucks
- Types 27, 28 and 29 wheels
- Internal wheels less than two inches in diameter
- Modified Type 6 and 11 wheels (terrazzo)
- Types 1 and 27A cutting-off wheels.

You must:

- **Make sure flanges are:**
  - Dimensionally accurate
  - Properly balanced
  - Flat
  - Free of rough surfaces or sharp edges.
- **Make sure, if a wheel is mounted between two flanges, that both flanges:**
  - Are the same diameter
  - Have equal bearing surfaces.

Exemption:

The following wheels do not require same diameter, equal bearing surface flanges:

- Types 27, 28, and 29 wheels with adaptors
- Modified Types 6 and 11 wheels with tapered K dimension
- Internal wheels less than two inches in diameter.

You must:

- **Make sure the driving flange is:**
  - Part of the spindle
  - Securely fastened to the spindle.

4.7.2. Use blotters when required.

You must:
• Use a blotter between each flange and the abrasive wheel surface to uniformly distribute flange pressure.
• Make sure the blotter covers the entire flange contact area.
• Use a new blotter each time a wheel is mounted unless the wheel has a blotter already attached to it by the manufacturer.
• Make sure scuffed or damaged blotters are not used.

Exemption:

You do not need to use a blotter with:

• Mounted wheels
• Abrasive disc and Type 2 wheels which are mounted by inserted nuts, inserted washers, or projecting studs
• Plate mounted wheels
• Wheels mounted in chucks (such as cylinders and segmental wheels)
• Types 27, 28 and 29 wheels
• Type 1 and Type 27A cutting-off wheels
• Internal wheels less than two inches in diameter
• Diamond and cubic boron nitride wheels with metal or carbon fiber cores.

4.7.3. Mount wheels properly

You must:

• Make sure wheels fit freely on the spindle, wheel sleeves, or adaptors, and remain free under all grinding conditions.
• Make sure wheel, blotter and flange surfaces that contact each other are flat and free of foreign particles.
• Make sure any reducing bushing used in the wheel hole:
  o Fits freely on the spindle and maintains proper clearance
  o Does not exceed the width of the wheel or contact the flanges.
• Make sure that multiple wheels mounted between a single set of flanges are either:
  o Cemented together

OR

  o Separated by spacers that have a diameter and bearing surface that is the same as the mounting flanges.

Abrasive wheels and cutting blades attached to power tools should be allowed to stop their rotation prior to setting the tool down. Power tools equipped with abrasive wheels or cutting blades should not be dropped or thrown onto hard surfaces.
4.8. Hand Tools

Impact tools such as drift pins, punches and chisels shall be free from mushroomed, cracked or chipped heads or shanks.

Suitable holding devices or tongs should be used to hold impact tools while being struck.

Cutting edges shall be maintained in a sharp condition.

Appropriate safety equipment shall be obtained and properly used while working with hand tools.

Wrenches, sockets, etc., should be pulled rather than pushed to increase leverage, nor shall tools be struck by hammers or other tools unless designed for such use by the manufacturer.

Wooden handles shall fit snugly and shall be free of cracks and splinters. Files shall be equipped with handles.

Hand tools shall be used properly.

Screw drivers and files shall not be used as pry bars

Wrenches, pliers, etc., shall not be used as hammers.

Chisels, punches, files, etc., shall not be used as wedges.

Adjustable pipe, end and socket wrenches shall not be used with sprung jaws or damaged gears.

Wrenches shall fit snugly on nuts/bolts.

Non-sparking hand tools shall be used in locations where sources of ignition may cause a fire or explosion.

4.9. Portable Electric Tools

Portable electric power tools shall be equipped with an assured ground, or may be of the double insulated type. Double insulated tools shall be labeled as “Double Insulated” or contain a double square □ meaning the same.

Portable electric tools shall be visibly marked as approved by an underwriting agency such as Underwriters Laboratories, Inc., or Factory Mutual Engineering Corp.

Power tools shall be disconnected from their power source while changing attachments or while performing maintenance or repairs.

Electrical tools shall not be used where the hazard of fire or explosion exists.
Repairs shall be made by qualified personnel. Repairs in power cords shall be replacement of the entire power cord.

Personnel shall be familiar with the safe operation of portable electrical tools and shall use required personal protective equipment.

Never yank the cord to disconnect it from the receptacle or to hoist or lower tools.

4.10. When using Pneumatic Power tools you must:

Follow the manufacturer’s instructions for safe use of the tool,

Make sure the tool cannot accidentally eject an attachment,

Ensure Impact tools are operated with all retainer or safety clips installed,

Ensure personnel are familiar with the safe operation, care and maintenance of pneumatic tools and utilize proper safety equipment including eye and hearing protection,

Ensure hose and hose connections are be rated for the intended purpose,

Ensure hose exceeding 0.56 inch inside diameter is equipped with safety-type couplings and properly secured to prevent displacement,

Ensure hoses and hose connections are inspected daily. Those having excessive wear, damage, etc., shall be removed from service. Approved banding shall be used in connecting hose to fittings/couplings. The use of wire, hose clamps and or tape is prohibited,

Ensure compressed air is not directed at any portion of the body or allowed to contact a person’s body and shall not be used to dust off clothing or work activities,

Ensure hoses are not used for hoisting/lowering tools, and shall not be routed across ladders, steps, scaffolds or walkways, so as to not pose a tripping hazard. Hoses shall be routed overhead whenever possible to protect them from damage and to prevent a tripping hazards.

4.11. Use Pneumatic tools safely

Exemption:

This section does not apply to:

Tools specifically for medical or dental use
Tools specifically for use in the food processing industry
Tools mounted in stationary installations
Air hoists
Construction and mining tools such as paving breakers, diggers, tampers, and rock drills.

You must:
1. Relieve the pressure in the air line before disconnecting a compressed air tool from the line or disconnecting a hose joint unless there is automatic valve closing protection at the joint being separated.
2. Disconnect the tool from the compressed air supply before repairs are done.
3. Make sure that eye protection is worn at all times by:
   • The person operating the tool
   • Other persons in the area where tools are being used.

4.12. **Hydraulic Power Tools**

The maximum anticipated working pressures in the hydraulic system shall not exceed the safe working pressure rating of any component in the system, including hoses, fittings, couplings and gauges.

Only approved hydraulic fluid shall be used.

Hoses, fittings, couplings, etc., shall be inspected prior to each use and shall be removed from service when deficiencies are observed. Do not check for leaks using your hands because fluid under pressure may puncture the skin.

Repairs shall be made by qualified personnel and properly tested to ensure safe operation.

Personnel using hydraulic equipment shall be properly trained in the use, care and maintenance of hydraulic equipment, including its limitations.

Personnel using or near operating hydraulic equipment shall utilize proper protective equipment.

4.13. **Gasoline Powered Tools**

Gasoline powered tools shall be turned off and allowed to cool to ambient temperature before refilling. Spills shall be properly cleaned and the waste properly disposed of.

Gasoline powered tools shall not be used in a confined /enclosed space where such use may cause oxygen deficiency or increased levels of carbon monoxide. Adequate ventilation shall exist.

Employees shall be trained in the safe use, care and maintenance of gasoline powered tools, and shall use proper safety equipment.

Gasoline shall be stored in an approved and properly labeled “Safety Can” equipped with a self-closing spout and a flame arrester.

Smoking is not permitted while refueling powered tools.

Gasoline powered tools shall not be altered or modified in any way which may affect personal safety and/or the design or intended use of the manufacturer.

Powder – Actuated tools shall be designed, maintained and used in accordance with ANSI A10.3 “Safety Requirements for Powder – Actuated Fastening System”, as well as then requirements set forth herein.

Personnel using powder-actuated tools shall be trained in their use, care and maintenance by the manufacturer or his representative, and shall have an operator’s card in their possession. The operating manual for the powder-actuated tool shall be readily available to the user, along with tables specifying the load ranges for materials.

Proper safety equipment shall be utilized while operating powder-actuated equipment.

Suitable barriers shall be erected and properly posted, identifying the use of powder-actuated tools. Postings shall be posted within 50 feet of the operation.

Powder-actuated tools, such as Hilti guns, shall be inspected and tested before use to ensure that safety devices operate properly. A procedure, recommended by the manufacturer, shall be utilized for this inspection. Any tool not operating properly or developing a defect during use, shall be immediately removed from service and tagged for repair.

Powder-actuated tools shall not be loaded until just before firing. Loaded tools shall never be left unattended for any reason.

Powder-actuated tools whether loaded or unloaded, shall not be pointed at anyone else. Hands shall be kept away from the barrel end.

Only fasteners and explosive charges designed by the manufacturer shall be used in that particular tool. Explosive charges shall be properly stored as required by the manufacturer.

Powder-actuated tools shall not be used within a flammable or explosive atmosphere.

Fasteners shall not be driven into very hard or brittle material, such as cast iron, glazed tile, surface-hardened steel, glass block, live rock, faced brick, or hollow tile. Driving fasteners into materials, which are easily penetrated, should be avoided unless substantial backing is installed.

Fasteners shall not be driven into spalled surfaces caused by other fasteners, nor shall they be driven into pre-drilled holes.
HAZARD COMMUNICATION - SDS

1.0 Purpose

The purpose of this standard is to establish uniform requirements to insure that the hazards of all chemicals used within the workplace are evaluated and that the hazard information is transmitted to affected employees. This standard “is intended to address comprehensively the issue of evaluating and communicating chemical hazards to employees in the construction sector, and to pre-empt any state law pertaining to this subject”.

2.0 Scope

This policy applies to all divisions, departments, and locations within Haskell Davis JV, including fabrication shops, offices, and field construction projects.

3.0 Definitions

- GHS – Globally Harmonized System of Classification and Labeling of Chemicals
- SDS: means a comprehensive document containing essential health and safety information about a particular product, produced by a manufacturer

4.0 Procedures

Working with hazardous chemicals may increase the risk of illness, aggravate health problems, or contribute to fire or other safety hazards. Each employee has the “Right-To-Know”. The ultimate objective of this standard is to reduce the number of illnesses and injuries related to hazardous chemicals in the construction segment of the industry.

4.1. Training

Employees shall be provided with documented 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. Information and training may relate to general classes of hazardous substances to the extent appropriate and related to reasonably foreseeable exposures of the job.

There shall be pre-task meetings to inform employees of the hazards of non-routine tasks (i.e., the cleaning of reactor vessels, etc.) & the hazards associated with chemicals contained in unlabeled pipes in their work areas.

4.2. Procedure

Preparation and distribution of labels and Safety Data Sheets is the responsibility of the manufacturer or distributors of the product, but it is up to project management to obtain SDS for each hazardous

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chemical in the workplace (the SDS sheets will be collected at the home office for distribution on an ongoing basis), and to assure that containers of hazardous substances are properly labeled. The hazardous chemical list and training is entirely the responsibility of project management.

On projects with multiple contractors there shall be coordination meetings to determine if others are using hazardous materials that may affect Haskell Davis JV employees or where our activities may affect others. SDS for other contractors’ hazardous materials shall be obtained at such coordination meetings and distributed to affected workers. 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. The written program is maintained at the Haskell Davis JV Corporate office.

The major elements of the Hazard Communication Program are:

- Hazardous chemical list
- Safety Data Sheets (SDS’s)
- Warning labels
- Training

4.3. Hazardous Chemical List

A hazardous chemical list shall be developed covering all of the known hazardous chemicals used or stored at the workplace. The hazardous chemical list must be available at each work site for the employees and also available to other employers at each work site.

4.4. Safety Data Sheets (SDS)

SDS shall be maintained and readily accessible at each project site. SDSs are also maintained at the corporate office. They shall be available in case of an emergency. SDS must be made available, upon request, to employees, their designated representatives.

Every project site must have Safety Data Sheets for all hazardous or toxic substances. Each SDS must be in English and must address sixteen (16) information categories pertaining to the product. If the occasion arises that an employee does not speak English, information shall be given them in their own language.

Information in the SDS should be presented using the following 16 headings in the order given below:

1. Identification
2. Hazard(s) identification
3. Composition/information on ingredients
4. First-aid measures
5. Fire-fighting measures
6. Accidental release measures
7. Handling and Storage
8. Exposure controls/personal protection
9. Physical and chemical properties
10. Stability and reactivity
11. Toxicological information
12. Ecological information
13. Disposal considerations
14. Transport information
15. Regulatory information
16. Other information

A review of SDSs for carcinogenic or extremely hazardous chemicals is necessary to inform employees how they will be protected from carcinogens at the workplace.

- See Title 29 Code of Federal Regulations section 1910.1200 Appendix A
- See Title 29 Code of Federal Regulations section 1910.1200 Appendix B

Project Management is responsible to a periodic review of chemicals on site and replacing old SDSs with updated sheets when they are received.

4.1. Labels

ALL USERS OF ANY PRODUCT AT THE JOB SITE MUST READ AND BE FAMILIAR WITH ALL CONTAINER LABELS.

As of June 1, 2015, all labels will be required to have pictograms, a signal word, hazard and precautionary statements, the product identifier and supplier identification. The regulations require container labels to provide basic information about the product’s hazards:

Necessarily, labels are not comprehensive, but provide a quick source of reference. If a container does not have a label, consult the hazardous chemical list or SDS for appropriate information. Ensure that all secondary containers are labeled.

The manufacturer or distributor must label all hazardous and toxic substances before entering the workplace. Employers however have the responsibility of seeing that all containers at the workplace are labeled, including in-house containers. If a substance is transferred into a portable or in-house container, which will be used by one or more employee, or on more than one shift, the container must be labeled at the time of transfer.

Containers of hazardous chemicals shall be labeled to provide the following information:

(A) Product identifier;
(B) Signal word;
(C) Hazard statement(s);
(D) Pictogram(s);
(E) Precautionary statement(s)

Many labels also provide details about a chemical in words, pictures, numbers or symbols. In order for these labels to be effective, the employees must know what each word, picture,
number or symbol mean. Each label should be self-explanatory. If a label is not self-explanatory, the chemical list or relevant SDS should be consulted.

The project management shall ensure that labels or other forms of warning are legible, in English, and prominently displayed on containers, or readily available in the work area throughout each work shift.

4.2. NFPA LABEL

Below are some examples of Hazard Material Identification Guide labels. These labels are meant to identify the hazard associated with various chemicals.

4.3. Training

The training requirement of the standard is the most important tool for getting the required information to employees. The purpose of the training is to reduce the occurrence of injuries and illnesses resulting from the inappropriate use of chemicals and products.

The site supervisor for each project is required to see that hazards and precautions relating to products used on that specific job site are covered in a tool box meeting. This meeting should cover the information provided on labels and the hazardous chemical list. Review of commonly used products on every project is not required, but the foreman should confirm that the entire crew is familiar with hazards and precautions for such products.

Training of new hires is part of the Haskell Davis JV’s New Hire/rehire Orientation. Transferred employees who have already been through the orientation will be expected to be trained on any specific hazard that has already been covered in a previous toolbox meeting.

The specific points to be covered in the training are:

- An overview of the regulations, including the purpose of and information available on the hazardous chemical list, SDS and labels for products.
- The need for each employee to be familiar with the nature of the hazards in the work place. Employees should be advised to take quick inventory of the products that are present at each site and to confirm their understanding of hazards and precautions relating to these products.
- The requirement that the hazardous chemical list be present at all works sites. The general contractor, construction manager, owner, mechanical contractor, etc. (at a designated place)
can hold this information. If a place is not designated for this information, it must be kept in our tool box or office trailer.

- Basic information about the types of hazardous substances found on our construction sites. In addition to the information provided in the Hazardous Chemical List, the home office will supply supplemental training materials for common products.
- Employees should be encouraged to ask questions during the introduction and tool box meeting when they are uncertain about what is being covered.

4.4. Hazardous Non-Routine Tasks

Periodically, employees are required to perform hazardous, non-routine tasks. Prior to starting work on such projects, each affected employee will be given information by their supervisor about hazardous chemicals to which they may be exposed during such activity. This information will include:

- Specific chemical hazards.
- Protective/safety measures the employee can take.
- Measures taken to lessen the hazards including ventilation, respirators, presence of another employee, and emergency procedures.

4.5. Informing Contractors

It is the responsibility of the on-site Supervisor to provide contractors with employees with the following information:

- Toxic and hazardous substances to which they may be exposed while on the job site.
- Precautions the employees may take to lessen the possibility of exposure by usage of appropriate protective measures.

The on-site Supervisor will be responsible for contacting each contractor before work is started, to gather and disseminate any information concerning chemical hazards each contractor is bringing to the workplace.

4.6. Handling of Empty Containers and Used Batteries

BATTERIES: Small consumer size batteries, AA, AAA, C, and D are classified a hazardous waste by the Department of Ecology. Haskell Davis JV encourages recycling and proper disposal of hazardous waste. As such any used batteries should be returned to the tool room for proper disposal. This includes all typical household “dry cell: batteries either rechargeable or single-use as well as lithium, Ni-cad, nickel metal hydride (NiMH) from power tools and cellular phones.

EMPTY CONTAINERS: A container under environmental regulations can be an aerosol can, a 5-gallon bucket, a 55-gallon drum or a 200 gallon tote bin. After regulated or hazardous contents are spent, their containers will be regulated differently by various agencies such as OSHA, L&I or DOT. Regulated containers must be empty – as defined by the regulatory agencies – before disposal.
Empty containers will be stored in an area protected from the weather and where employees cannot accidentally add waste material. Empty containers should either be stored upside down where rainwater cannot accumulate and create an unknown hazard. Containers that are stored upright should be covered, bungs tightly in place, all labels removed and container marked “empty”. It is also a good idea to add the name of the product last stored in the container.

Aerosol cans used at the Haskell Davis JV main shop facility will be released of stored pressure through a carbon filter system, remaining contents drained and captured. Site facilities will follow the customer required guidelines for disposal procedures.
HEARING CONSERVATION

1.0 Purpose

The purpose of this program is to protect employees from noise induced hearing loss as set forth in the requirements of CFR 1926.52 Occupational Noise Exposure.

2.0 Scope

A hearing conservation program is required whenever employee noise exposures equal or exceed an 8-hour time weighted average (TWA) sound level of 85 dBA.

3.0 Definitions

- **Action Level**: The PEL of noise for an employee working an 8 hour shift is 90 decibels. At this point, Engineering Controls, Administrative Controls or PPE must be used.
- **Administrative Controls**: A procedure that limits daily exposure to noise by control of an employee's work schedule in a high noise environment.
- **Area Monitoring**: The testing of a work area for noise by monitoring the noise in general locations without considering movement of the employee in and out of the different areas.
- **Audiogram**: Chart, graph or table resulting from an audiometric test. This test shows an individual's hearing threshold levels.
- **Baseline Audiogram**: An audiogram used for comparison to future audiograms. This may also be called a reference, preplacement or entrance audiogram.
- **dBA**: Decibels, A-weighted - A sound level reading in decibels made on an A-weighted network of a sound level meter (SLM) set to slow response.
- **Dose**: The cumulative amount of noise that a person is exposed to over a certain period of time. Exposure to 95 dBA for 4 hours would be equivalent to a dose of 100% while exposure to 90 dBA for 8 hours would also be equivalent to 100%.
- **Engineering Controls**: Any mechanical device or physical barrier that reduces the sound level at the source or along the path.
- **Hearing Conservation Program (HCP)**: The program of employee protection against noise.
- **Harmful noise**: Any sound produced during employment capable of producing occupational loss of hearing as hereinafter defined. Sound of an intensity of less than 90 decibels, A scale, shall be deemed incapable of producing occupational loss of hearing as defined in this section.
- **Noise Dosimeter**: An electronic instrument that measures various noise levels along with the exposure times and integrates them into one cumulative measurement that indicates the percentage of the safe dose for that time period.
- **Occupational Hearing Loss**: Noise-induced hearing loss with a change in Standard Threshold Shift (STS) relative to the baseline audiogram of an average of 10 dB or more in either ear at
2000, 3000 and 4000 hertz, and the employee's total hearing level is 25 decibels (dB) or more above audiometric zero (also averaged at 2000, 3000, and 4000 hertz) in the same ear(s).

- **Permissible Exposure Limit (PEL):** The exposure limit enforced by OSHA.
- **Personal Monitoring:** The testing of a work area for noise by monitoring the individual employee's movement into and out of different work areas.
- **Sound Level Meter:** An electronic instrument for the measurement of sound levels.
- **Standard Threshold Shift (STS):** An average hearing threshold shift of 10 dB or more in either ear at 2000, 3000, and 4000 hertz. This may be temporary or permanent.
- **Time Weighted Average (TWA):** The sound level which, if constantly exposed to over an 8 hour workday, would result in the same noise dose as measured.

### 4.0 Procedures

It is the policy of the Haskell Davis JV to provide a safe working environment that avoids employee exposure to excessive noise levels. Haskell Davis JV will take measures to reduce workplace noise to acceptable levels. Where such measures fail to reduce sound levels adequately, employees will be provided hearing protection and enrolled in the Hearing Conservation Program at no cost to the employee.

Haskell Davis JV may provide employee assistance or accommodation; either through the acquisition of quieter equipment or through reassignment to an equivalent job, to any employee who is found to have a noise induced hearing loss as a result of his or her job duties to such a degree that it affects job performance.

Haskell Davis JV adopts the five elements of an OSHA hearing conservation program which are:

- Monitoring, employee notification, and observation of monitoring
- Audiometric (noise) testing programs and test requirements
- Provision of Hearing protectors and hearing protector attenuation
- Training program and access to information and training materials
- Recordkeeping

### 4.1. Responsibilities

#### 4.1.1. Management

Haskell Davis JV managers are responsible for budgeting annual audiometric testing costs and ensuring that the required training is made available to employees. Managers are responsible for enrolling employees as required in this HCP. Managers are responsible for ensuring that noise monitoring for suspect areas identified by supervisors is conducted and corrective actions taken. Managers will notify employees within 21 days of receiving the report on their hearing tests or if the results of monitoring indicates the employee's routine 8 hour TWA exceeds 50% of the PEL.
Managers will ensure that engineering or administrative control alternatives are considered, evaluated, and implemented before employees are included in the HCP.

Managers will ensure that employee audiometric test records are maintained in the appropriate personnel files.

Managers may use random checks of employee training, audiometric testing, and hearing protection use to ensure the HCP is being properly implemented.

4.1.2. Supervision
Supervisors are responsible for requesting and coordinating periodic noise monitoring for their work area or project. Supervisors will schedule employees for hearing tests and training if the employees are included in the HCP. Employees who are placed in a job where excessive noise levels (90 dBA or above) may occur will be scheduled for audiometric tests within 180 days of their placement. This will include both new hires and employees transferred into high noise jobs.

Supervisors are responsible for enforcing the use of hearing protection through disciplinary action as prescribed in Haskell Davis JV Safety Policy. Supervisors will ensure that an adequate supply and variety of hearing protection is made available and that employees are reminded to wear protection when required.

4.1.3. Employee
Employees must inform their supervisor if a change occurs in the workplace that results in exposure to higher noise levels. Employees will use noise control measures or will wear and maintain hearing protection as required. Employees will attend training on noise exposure and the requirements of the HCP. Employees included in the HCP will have medical evaluations and follow-up audiograms scheduled by their supervisor as a condition of employment. Employees are to report any known or discovered medical problems that can interfere with their hearing to their supervisor.

Employees that observe a colleague not wearing hearing protection around machinery/equipment so labeled should advise the employee to do so. If compliance is not achieved after doing so, the supervisor shall be alerted and they will provide the employee with hearing protection and enforce its use.

4.2. Background
Sound level intensity is measured in units called decibels (dB). The sound level of a normal conversation is approximately 65 dB, and the pain threshold level or level at which pain begins is about 120 to 125 dB. The OSHA permissible exposure limit for noise is 90 dB averaged over an 8-hr work shift. Employee exposure is measured with either a sound level meter or a personal dosimeter. Sound level meters are real time monitors that display the current noise level. Employees may also wear dosimeters, during their work shift, which average the sound level throughout the day and calculate a noise dose. The OSHA allowable noise dose is 100%, which corresponds to 90 dB, averaged over an 8-hour day.

The human ear has three parts: the outer ear, the middle ear and the inner ear. The outer ear, which includes the auricle and the ear canal, collects sound waves and channels them to the eardrum.

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The eardrum is a thin membrane, which stretches across the ear canal, collects sound waves and channels them to the eardrum. The eardrum is a thin membrane, which stretches across the ear canal and separates the outer ear from the middle ear. The middle ear is an air-filled chamber that contains three small bones, which transmit sound vibrations from the eardrum to the inner ear. The inner ear contains a fluid-filled structure called the cochlea. The cochlea is lined with tiny hair cells, which turn vibration into electrical nerve signals that are perceived by the brain as sound.

There are two types of hearing loss: conductive and sensorineural. Conductive hearing loss is due to impairment of sound transmission before it reaches the inner ear and is usually not a result of prolonged and excessive hearing noise exposure. Sensorineural hearing loss is a result of damaged hair cells in the cochlea and is often due to repeated and excessive exposure to noise. Aging can also cause significant sensorineural damage; however, noise-induced hearing loss occurs more quickly and is more extreme.

The hair cells in the cochlea correspond to the audible frequency range, which is 20 Hz to 20,000 Hz for a normal young ear. Exposure to loud noises for an extended period of time causes the hair cells to become worn down and thus, less sensitive to sound waves. The hearing loss is permanent, and the hair cells sensitive to the higher frequency range around 4,000 Hz are usually the first to be damaged. Prolonged and excessive hearing exposure will damage more and more hair cells causing permanent hearing loss over a wider frequency range. Hearing aids are not very effective for noise-induced hearing loss because they function by amplifying sound.

4.3. Monitoring

When employee noise exposure may equal or exceed an 8-hour TWA of 85 dBA, individual or representative monitoring will be conducted to determine actual employee exposure. Dosimeters will be used to measure personal employee exposure and sound level meters will be used to conduct area sampling. Sound level meters will be used for determining the daily exposure of employees only when noise levels and exposure are continuous.

After the initial noise exposure assessment, monitoring will be repeated annually or whenever a change in production, process, equipment or controls increases the sound level.

Monitors will be calibrated before and after sampling. Employees included in the hearing conservation program will be given the opportunity to observe the monitoring. Employees who have confirmed exposure at or above 85 dBA will be notified of the monitoring results, in accordance with this policy.

4.4. Noise Control

Whenever employee noise exposures equal or exceed an 8-hour TWA of 90 dBA, feasible administrative or engineering controls must be used. Altering the work process/schedule is an example of a simple and effective administrative control. Sound-proofing panels are an example of effective engineering control. If engineering or administrative controls are not feasible or not able to reduce exposure level below 90 dBA, then appropriate hearing protection shall be used.
4.5. Hearing Protection

Hearing protection shall be made available to all employees exposed to an 8 hour TWA of 85 dBA or greater at no cost to the employee. These hearing protectors shall be worn by employees who are exposed to an 8-hour TWA of 85 dBA, or are exposed to noise above 115 dBA, or to any impulse or impact noise at or above 140 dBA using an impulse sound level meter. Employees shall be given the opportunity to select their hearing protectors from a variety of suitable hearing protectors.

Supervisors will ensure that employees wear the hearing protection when it is required by noise levels or while working in signed areas at a host facility.

Hearing Protector styles range from moldable foam plugs, to over-the-ear cap attenuators, to noise-cancelling headsets. Hearing protectors help reduce noise exposure to a level which is designed to prevent hearing loss. It is important to remember that multiple attenuation factors cannot be added together when two hearing protectors are worn. For example, if an employee using a pair of ear plugs with an attenuation factor of 30 dB, adding a pair of ear muffs with a noise reduction rating of 20 dB does not resulting a total attenuation factor of 50 dB. Only 5 to 10 additional decibels of sound attenuation can be obtained from the additional earmuffs.

The project Superintendent or SSHO shall evaluate the hearing protection to be used for the specific noise environments in which it will be used.

4.6. Audiograms

Within 6 months of an employee's first exposure at or above an 8-hr. time-weighted avg. 85 decibels, a valid baseline audiogram shall be established against which future audiograms can be compared. If a mobile audiometric van is used, the baseline shall be established within 1 yr of first exposure at or above an 8-hr. time-weighted avg. 85 decibels.

Audiometric testing will be made available to all employees whose exposures equal or exceed an 8-hr. time-weighted avg. 85 decibels. All audiometric testing is conducted by qualified 3rd-party providers, to ensure accuracy of data collection and reporting.
Baseline and annual audiograms are provided (at no cost) to employees who are or may be exposed at or above the PEL and are used to evaluate the impact of occupational noise as well as the overall effectiveness of this program.

Prior to being tested to establish a baseline, employees must have at least 14 hours without exposure to workplace noise. Testing to establish a baseline audiogram shall be preceded by hearing protection may be used to meet the requirement. Employees shall also be given notice that they are to avoid high levels of noise.

At least annually after obtaining the baseline audiogram employees exposed at or above an 8-hour time-weighted average of 85 decibels shall be tested to obtain a new audiogram. Annual audiograms shall be compared to determine if the audiogram is valid and if a standard threshold shift has occurred. If a comparison of the annual audiogram to the baseline audiogram indicates a standard threshold shift, the employee shall be informed of this in writing, within 21 days of the determination. Additionally, If a threshold shift has occurred, hearing protection shall be re-evaluated and refitted. If necessary a medical evaluation may be required.

4.7. Training

Hearing Conservation training will be provided to all affected employees on an annual basis and include the following basic elements:

- The effects of noise on hearing.
- The purpose, care, selection, fitting, and maintenance of hearing protectors.
- The results of any noise tests conducted in the work area.
- The purpose and methods of audiometric testing.

Refresher training will be given annually for all employees or included in the HCP. This training may be provided through a qualified internal, state, or third-party provider. Training shall be updated consistent to changes in PPE and work processes and include the proper techniques of wearing hearing protection.

4.8. Recordkeeping

All records related to occupational exposure to noise will be kept as follows.

When a Standard Threshold Shift (STS) occurs that meets the criteria of occupational hearing loss, it must be recorded in section 5 as hearing loss on the OSHA log 300. The date listed for the hearing loss illness will be the date that the STS was first diagnosed.

Records on work area noise testing exposure will be accurately maintained for 5 years.

All employee audiometric test records will be maintained for the duration of employment plus 5 years. After that time records will be removed and stored/destroyed consistent with existing OSHA requirements and the state record retention policy in place at the time.
Audiometric test records will include: a) Name and job classification b) Date of the audiogram c) Examiner's name d) Date of audiometer calibration e) Employee's most recent noise exposure assessment.

Records will be provided on request to employees, former employees, and OSHA inspectors/auditors.
HEAT RELATED ILLNESS

1.0 Purpose

To provide a safe and healthful working environment and protect Haskell Davis JV employees who perform work in an outdoor environment. Haskell Davis JV will evaluate and reduce hazards if employees are exposed to temperature extremes radiant heat, humidity, or limited air movement while working in an outdoor environment.

2.0 Scope

This policy applies to all employees working in outdoor environments, and selected indoor environments, where there is risk of suffering from a heat-related illness.

3.0 Definitions

- **Acclimatization**: means the body’s temporary adaptation to work in the heat that occurs gradually as a person is exposed to it.
- **Drinking Water**: means water satisfying the Department of Health’s requirements as potable water suitable for drinking by the public. Water packaged as a consumer product is an acceptable source of drinking water.
- **Environmental risk factors for heat illness**: means working conditions that create the possibility that heat illness could occur, including air temperature, relative humidity, radiant heat from the sun and other sources, conductive heat sources such as the ground, air movement, workload severity and duration, protective clothing and personal protective equipment worn by employees.
- **Heat Related Illness (HRI)**: 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.
- **Outdoor Environment**: means an environment where work activities are conducted outside of a building shell (generally referring to a ceiling and at least three sides). Environments such as vehicle cabs, sheds, and tents, or other non-permanent structures may be considered an outdoor environment when the environment factors are not controlled.
- **Personal risk factors for heat illness**: means factors such as an individual’s age, degree of acclimatization, health, water consumption, alcohol consumption, caffeine consumption, and use of prescription medications that affect the body’s water retention or other physiological responses to heat.
- **Shade**: means blockage of direct sunlight. Canopies, umbrellas and other temporary structures or devices may be used to provide shade. Some shade producing areas are not adequate to cool the body; for instance, a car sitting in the sun does not provide acceptable shade to a person inside it, unless the car is running with air conditioning.
4.0 Procedures

It is the policy of Haskell Davis JV that all affected employees are required to comply with the Heat Related Illness (HRI) policy and are encouraged to actively participate in identifying ways to reduce the risk of experiencing heat related illness in the workplace. This heat prevention procedure shall be made available to employees.

4.1. Hazard Evaluation

Haskell Davis JV will evaluate our construction sites and outdoor workplaces, to identify and evaluate HRI hazards. The following is a list of where we might expect hazards to occur:

- Seasonal high heat and humidity (~May-September)
- Reflected heat from pavement, concrete or asphalt
- Radiated heat from equipment
- Heavy work clothing and PPE
- Specific job duties involving increased physical exertion

Heat Index Chart

Haskell Davis JV supervisors will be aware of the daily humidity and temperature

<table>
<thead>
<tr>
<th>Temperature (°F)</th>
<th>80</th>
<th>82</th>
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4.2. Prevention, Controls and Correction of Hazards

When HRI hazards are present Haskell Davis JV may utilize one or more of the following options to aid in minimizing heat exposure:

- Engineer temperature controls (install fans or barriers)
- Utilize mechanical aids where possible to reduce the work rate
- Regulate the length of exposure, additional breaks may be provided during peak temperature times and/or adjust work hours to avoid the hottest time of the day
- Prevent Dehydration - Water will be provided and made readily accessible in sufficient quantity to provide one quart per employee per hour
• Employees will be encouraged to frequently drink small quantities of water since one quart or more over the course of an hour may be necessary when the work environment is hot and employees may be sweating more than usual during the performance of work.
• New employees or employees off the job for two weeks or more will limit time of moderate to heavy work to 50% on the first day and increase work by 10% each day until acclimatized.
• Cooling vest, bandanas, neck covers may be provided to employees.
• Provisions will be made for shaded areas for breaks.
• Train workers on awareness and symptoms to look for and methods used to cool the employee off, how to identify workers who are more susceptible.

4.3. First Aid awareness and actions in the event of a heat related illness:
The following chart helps employees recognize the main types of heat related illnesses, signs, symptoms, and the appropriate treatment to reduce the effects of the heat related illness. This chart will be posted in the employee job shack.

4.3.1. Signs & Symptoms

<table>
<thead>
<tr>
<th>Condition</th>
<th>Symptoms</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunburn</td>
<td>• red, hot skin</td>
<td>• move to shade, loosen clothing</td>
</tr>
<tr>
<td></td>
<td>• may blister</td>
<td>• apply cool compresses or water</td>
</tr>
<tr>
<td>Heat Rash</td>
<td>• red, itchy skin</td>
<td>• apply cool water or compresses</td>
</tr>
<tr>
<td></td>
<td>• bumpy skin</td>
<td>• keep affected area dry</td>
</tr>
<tr>
<td></td>
<td>• skin infection</td>
<td>• control itching and infection with prescribed medication</td>
</tr>
<tr>
<td>Heat cramps</td>
<td>• muscle spasms in legs or abdomen</td>
<td>• move person to a cooler location</td>
</tr>
<tr>
<td></td>
<td>• grasping the affected area</td>
<td>• stretch muscles for cramps</td>
</tr>
<tr>
<td></td>
<td>• abnormal body position</td>
<td>• give cool water or electrolyte-containing fluid to drink</td>
</tr>
<tr>
<td>Heat exhaustion</td>
<td>• headaches</td>
<td>• move person to a cooler place (do not leave alone)</td>
</tr>
<tr>
<td></td>
<td>• clumsiness</td>
<td>• loosen and remove heavy clothing that restricts evaporative cooling</td>
</tr>
<tr>
<td></td>
<td>• dizziness/lightheadedness/fainting</td>
<td>• if conscious, provide small amounts of cool water to drink</td>
</tr>
<tr>
<td></td>
<td>• weakness/exhaustion/fatigue</td>
<td>• fan person, spray with cool water, or apply a wet cloth to skin to</td>
</tr>
<tr>
<td></td>
<td>• heavy sweating/clammy/moist skin</td>
<td>increase evaporative cooling</td>
</tr>
<tr>
<td></td>
<td>• irritability/confusion</td>
<td>• call 911 if not feeling better within a few minutes</td>
</tr>
<tr>
<td></td>
<td>• nausea/vomiting</td>
<td>• call 911</td>
</tr>
<tr>
<td></td>
<td>• paleness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• high pulse rate</td>
<td></td>
</tr>
<tr>
<td>Heat stroke</td>
<td>• any of the above but more severe</td>
<td></td>
</tr>
</tbody>
</table>

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• sweating may or may not be present
• red or flushed, hot dry skin
• bizarre behavior
• mental confusion or losing consciousness
• panting/rapid breathing
• rapid, weak pulse
• seizures or fits
• can be fatal

• move person to a cooler place (do not leave alone)
• cool worker rapidly
• loosen and remove heavy clothing that restricts evaporative cooling
• fan person, spray with cool water, or apply a wet cloth to skin to increase evaporative cooling

In the event that medical treatment is needed beyond first aid and 911 must be called, either the foreman or safety supervision will call 911 from cellular or land line whichever is applicable.

Directions to the worksite will be provided by employer representative.

4.4. Emergency Response Assessment

For situations where an employee may be suffering from either Heat Exhaustion or Heat Stroke, the foreman, superintendent, safety supervisor should ask the following questions to evaluate proper treatment needs:

1. “What is your name?” and/or “What is my name?” (if responder is known by victim)
2. “Where are we now?” and/or “Where do you live?”
3. “What day is this?”

Inability to answer these questions is a strong indicator that the person is suffering from Heat Stroke and that immediate medical attention is needed- CALL 9-1-1 and cool the person down immediately.

4.5. Training

All training will be provided prior to outdoor work assignments presenting heat related illness hazards, and at least annually thereafter. Training will be documented.

4.5.1. Employee training

Training in the following topics will be provided to all employees who may be exposed to a heat related illness hazard:

• The environmental factors that contribute to the risk of heat related illness
• Awareness of personal factors that may increase susceptibility to heat illness
• Haskell Davis JV procedures for identifying, evaluating, and controlling exposure
• The importance of removing personal protective equipment during all breaks
• The importance of frequent consumption of small quantities of water, one quart or more over the course of an hour may be necessary when the work environment is hot and employees may be sweating more than usual in the performance of their duties
• The importance of acclimatization
• The common signs, symptoms, and types of heat related illness
• The importance of immediately reporting to Haskell Davis JV, directly or through the employee’s supervisor, symptoms or signs of heat illness in themselves, or in co-workers
• Haskell Davis JV procedures for responding to symptoms of possible heat related illness, including how emergency medical services will be provided should they become necessary
• The purpose and requirements of this standard
• The worker’s right to receive the protections provided by this standard.

4.5.2. Supervisor training

Prior to assignment as a supervisor of employees working in the heat, training on the following topics will occur:

• The information provided for employee training above
• The procedures for implementing the applicable provisions in this policy
• The procedures the supervisor is to follow when an employee exhibits signs or symptoms consistent with possible heat illness, including emergency response procedures
• The procedures for moving employees to a place where they can be reached by an emergency medical service provider if necessary
• How to provide clear and precise directions to the emergency medical provider who needs to find the work site

4.6. State Rules

4.6.1. Washington

• Provide training to all employees
• Provide potable drinking water
• Have emergency response plan

<table>
<thead>
<tr>
<th>Outdoor Temperature Action Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-breathing clothes including vapor barrier clothing or PPE such as chemical resistant suits</td>
</tr>
<tr>
<td>Double-layer woven clothes including coveralls, jackets and sweatshirts</td>
</tr>
<tr>
<td>All other clothing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activity Workload Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resting</td>
</tr>
<tr>
<td>• Sitting quietly(break/lunch)</td>
</tr>
<tr>
<td>• Sitting with moderate arm movement (desk/computer)</td>
</tr>
<tr>
<td>Light</td>
</tr>
<tr>
<td>• Sitting/Standing with moderate arm movement (general)</td>
</tr>
<tr>
<td>• Bench or Machine type work (standing with mostly arm movement)</td>
</tr>
<tr>
<td>• Bench or Machine type work (including walking between stations)</td>
</tr>
<tr>
<td>• Using small hand/power tools</td>
</tr>
<tr>
<td>• Driving tractor/forklift/aerial lift</td>
</tr>
<tr>
<td>Moderate</td>
</tr>
<tr>
<td>• Vigorous arm movements (scrubbing/cleaning/tool use)</td>
</tr>
</tbody>
</table>
• Full body movement up to 4 MPH (Walking and carrying ~6Lb tools/materials)

Heavy
• Vigorous tool use (construction saws/hammers)
• Frequent ladder use (changing levels)
• Intermittent Shoveling (dry materials)
• Elevated of Confined Space Work (with tools)
• Frequent lifting/pushing/pulling (35-65 Lb)

Very Heavy
• Steady Shoveling (wet soil/sand)
• Steady Lifting/Carrying materials (>50 Lb)

4.6.2. California
• Provide Training to all workers and supervisors
• Provide fresh water for employees (1qt/hr)
• Provide continuous access to shade (5min/periodic breaks)
• Develop written plan

**Outdoor Temperature Action Levels**

<table>
<thead>
<tr>
<th>Temperature (°F)</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>85°F</td>
<td>Provide Shade, or alternate cooling measures, for up to 25% of workforce and allow/encourage periodic 5min breaks</td>
</tr>
<tr>
<td>95°F</td>
<td>High-heat procedures shall include, but are not limited to:</td>
</tr>
</tbody>
</table>

1. Effective communication by voice, observation or electronic means
2. Observation of employees for alertness and signs/symptoms of heat illness
3. Designating one or more employees on each worksite as authorized to call for emergency medical services
4. Reminding employees to drink water throughout the shift
5. Pre-shift meetings before beginning work to review the high heat procedures, encourage drinking water, and remind employees of their right to take a cool-down rest when necessary.
1.0 Purpose

To establish safe work practice and protective equipment requirements for welding, cutting and grinding.

2.0 Scope

This policy applies to all Haskell Davis JV employees who perform welding cutting or grinding activities, includes fabrication shops and field construction projects.

3.0 Definitions

- **Approved**: means listed or approved by a nationally recognized testing laboratory such as Underwriters Laboratory Inc. or Factory Mutual Insurance, etc.
- **Hot Work**: means any operation where heat, spark, fire or molten metal could be produced, such as welding, burning, and cutting, using oxy-acetylene or plasma arc process, or grinding. This also includes the use of any tools that are not intrinsically safe inside a Class I Division I area. Some facilities shall require hot work permits. These requirements shall be strictly adhered to.
- **Fire watch**: means an individual assigned to monitor hot work activities for detection of possible fires. Fire watch personnel shall be trained and knowledgeable in the use of available fire extinguishers and how to summon help in the event of an emergency.

4.0 Procedures

Supervisors shall ensure hot work activities are performed in a safe manner with fire potentials controlled, as specified herein. This includes inspections and authorizations for all procedures.

Employees are responsible for the proper use of welding, cutting and grinding equipment for its safe use. Only qualified personnel shall be allowed to operate welding and cutting equipment.

4.1. Hotwork Permit

Before any hotwork is permitted the area shall be inspected for fire hazards and a written hotwork permit shall be used to authorize hotwork operations.

4.2. Hazards

There are a number of hazards associated with welding, cutting and grinding. By following the guidelines outlined in this directive the hazards listed below which can cause injuries, can be eliminated/or minimized.
Flash Burns – The most common injuries from welding are flash burns, caused by the ultraviolet light produced by the arc. A flash burn is like sunburn of the outer surface of the eye resulting in a gritty feeling in the eye.

Radiation burns – Unfiltered ultraviolet light from welding or cutting can cause severe short term burn and poses the same long term skin cancer risks as sunburn.

Heat, Sparks, Open Flames, Metal Spatter – Can cause burns to the welder as well as bystanders and can cause a fire by not covering or removing flammable materials or substances. Prepare for the job by removing all potential fire hazards before starting task.

Electric Shock – Can be caused by electric welders from welding on steel or other conductive materials or when the welding is wet or damp and when not properly grounded.

Fume poisoning – Fumes from such metals as zinc, lead and cadmium, and others can enter the nose or the mouth. Continuous exposure may lead to long-term health disorders. Appropriate point source ventilation or respiratory protection shall be used.

Improper Handling of Gas Cylinders - Acetylene must be stored upright. The use of oil, grease or similar substances on torches or regulators in oxygen service may burn, or if ignited, explode.

Any defective equipment shall be tagged Danger Do Not Operate. Repairs or maintenance shall only be done by trained and qualified employees.

4.3. General Requirements

Mixtures of fuel gases and air or oxygen may be explosive and shall be guarded against. No device or attachment facilitating or permitting mixtures of air or oxygen with flammable gases prior to consumption, except at the burner or in a standard torch, shall be allowed unless approved for the purpose.

Under no condition shall acetylene be generated, piped (except in approved cylinder manifolds) or utilized at a pressure in excess of 15 p.s.i. gage pressure or 30 p.s.i. absolute pressure. (The 30 p.s.i. absolute pressure limit is intended to prevent unsafe use of acetylene in pressurized chambers such as caissons, underground excavations or tunnel construction.) This requirement does not apply to storage of acetylene dissolved in a suitable solvent in cylinders manufactured and maintained according to U.S. Department of Transportation requirements, or to acetylene for chemical use. The use of liquid acetylene shall be prohibited.

Only approved apparatus such as torches, regulators or pressure-reducing valves, acetylene generators, and manifolds shall be used for welding, burning, cutting and grinding operations. Use of replacement tips will not nullify the “approved apparatus” status of a torch, if such replacement tips are made to the same specifications as the original tip of the torch at the time of approval by the nationally recognized testing laboratory, or if the use of such tips in conjunction with convertor/adaptors results in the same specifications as the original tip at the time of approval by the nationally recognized testing laboratory.
Individuals performing welding/cutting tasks shall be trained in the safe operations of their equipment and the process. Those in charge of the oxygen or fuel-gas supply equipment, including generators, and oxygen or fuel-gas distribution piping systems shall be trained and judged competent for this work before being left in charge. Rules and instructions covering the operation and maintenance of oxygen or fuel-gas supply equipment including generators, and oxygen or fuel-gas distribution piping systems are readily available. Arc welding or cutting equipment having a functional defect shall not be used.

No employee shall enter a confined space to perform welding, cutting or grinding without following the requirements of section 2.4 Confined Space Entry and any of the requirements of the permit should the space be a permit required confined space. Welding machines shall be left on the outside of a confined space and heavy portable equipment shall be blocked to prevent accidental movement.

Employees using hotwork equipment should report any defect or safety hazards and discontinue use of equipment they feel is unsafe until it has been evaluated and its safety has been assured. Repairs shall be made only by qualified personnel.

Cords and hoses shall not create a tripping hazard for personnel.

Suitable flash protection shall be used to provide eye protection for other personnel working in the area.

Where inert gas is used as a purging gas, or during the shielded arc process, appropriate measures shall be instituted so as not to create an oxygen deficient atmosphere within the area, or low areas.

Where possible and/or necessary, local exhaust ventilation and point source ventilation shall be used shall be used to minimize respiratory hazards. When necessary appropriate respirators shall be worn.

First aid equipment shall be readily available at all times.

When arc welding is performed in wet or high humidity conditions, employees shall use additional protection, such as rubber pads or boots, against electric shock.

Adequate (temporary) fire extinguishing equipment shall be readily available during all hot work activities.

When arc welders or cutters leave or stop work or when machines are moved, the power supply switch shall be kept in the off position.

4.4. Fire Protection

Fire watches trained in the use of fire extinguishing equipment and who are also familiar with the procedures for sounding an alarm in the event of a fire shall be posted when required. This shall be when a client permit requires one or more and in locations where a small fire might develop such as combustible materials within 35 feet of heat source, or materials in excess of 35 feet but that might easily ignite. Floor and wall openings within a 35 foot radius which expose combustible materials in adjacent areas including concealed spaces in walls or floors and areas adjacent to the opposite side of ceilings, walls or metal partitions. If all the hazards are not mitigated that allow safe welding and cutting

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operations then hot work shall not be done until it is safe. Fire watches shall have a 20# fire extinguisher or charged water hose up to 1 ½ in diameter, equipped with a nozzle readily available.

Unless client policy states otherwise, Fire Watches shall remain at least one half hour after the hot work operation was completed.

If the hot work cannot be relocated and if all the fire hazards cannot be removed, shields, such as fire blankets, etc. shall be used to confine the heat, sparks and slag and to protect the immovable fire hazards. Where coverings, such as fire blanket are used to contain hot work debris at floor, wall or other openings, this material shall not create a fall hazard for personnel. If fire hazards cannot be removed or shields cannot be used to confine heat, sparks, slag and protect the immovable fire hazards, the welding/cutting shall not be performed.

4.5. Protective Clothing

Protective clothing worn during hot work activities shall be of fire resistance properties. Highly combustible materials such as nylon, polyester, etc. shall not be worn while performing, or in close proximity to hot work activities.

Pants and long sleeves should be free of cuffs, so as not to trap hot materials. Long sleeve shirts shall be worn. Suitable protective clothing, such as leather sleeves or jacket, shall be worn while performing overhead hot work activities.

Suitable hand protection shall be worn as determined by the nature of the welding, burning, cutting or grinding operation.

4.6. Eye, Face and Ear Protection

Only approved eye, face and era protection shall be worn while performing, or in close proximity to, hot work activities. Approved welding helmets (ANSI Z89.1-1986) equipped with proper filter lens shall be worn. The welding helmet and lens shall be free of defects, excess spatter or cracks.

Safety glasses or goggles shall be worn under the welding helmet, protecting the welder from flying metallic particles, sparks, flames or debris.

Other nearby personnel shall be protected from the UV rays by wearing approved safety glasses or noncombustible or flame proof screens or shields.

Only approved eye protection shall be worn. Refer to OSHA Standard 29 CFR 1926.102 (b) Table E-2 Filter Lens Shade Numbers for Protection against Radiant Energy. This table should be used as a guide for the selection of filter lens used in welding and cutting operations.

4.7. Respiratory Protection

Any hot work involving lead base metals, zinc, cadmium, mercury, beryllium or exotic metals or paints not listed here shall have proper ventilation, respiratory protection or a combination of both.

4.8. Compressed Gas Cylinders

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4.8.1. Inspection of compressed gas cylinders.
Gas identification should be stenciled or stamped on the cylinder or affixed with a label. No compressed gas cylinder should be accepted for use that does not legibly identify its content by name.

Compressed gas cylinders shall be inspected periodically to ensure they are in a safe condition to the extent that this can be determined by visual inspection. Visual and other inspections shall be conducted in accordance with Compressed Gas Association Pamphlets C-6-1968 and C-8-1962.

4.8.2. Compressed gases.
The handling, storage, and utilization of all compressed gases in cylinders, portable tanks, rail tankcars, or motor vehicle cargo tanks shall be in accordance with Compressed Gas Association Pamphlet P-1-1965.

4.8.3. Safety relief devices for compressed gas containers.
Compressed gas cylinders, portable tanks, and cargo tanks shall have pressure relief devices installed and maintained in accordance with Compressed Gas Association Pamphlets S-1.1-1963 and 1965 addenda and S-1.2-1963.

4.8.4. Cylinders.
Cylinders shall be handled carefully. Rough handling, knocks, and falls are liable to damage the cylinder, valve or safety devices and result in leakage.


Cylinders shall not be positioned in proximity to electrical equipment so as to become part of the electrical circuit.

All cylinders shall be secured in an upright position at all times during use and storage.

Cylinders shall not be secured to a metal fabricating table, piping, structures, etc. which are being welded upon using the electric arc process, unless suitable insulation is installed. Electrodes shall not be permitted to come in contact with a cylinder.

Cylinders shall be hoisted only when in approved cart. Cylinders shall not be placed where they may be exposed to welding debris such as sparks, fire, molten metal or other falling debris.

No cylinder containing oxygen or acetylene or other fuel or gas shall be permitted within a confined/enclosed space.

When not in use or at the completion of the activity or shift, all cylinders shall be broken down and capped, unless otherwise permitted.
Cylinders designed to utilize a special key or wrenches to open/close valves shall have proper key/wrench in place at all times while in use.

Oxygen cylinders shall be stored a minimum of 20 feet from any flammable gases or petroleum products.

Before connecting a regulator to a cylinder valve, the valve shall be opened slightly and closed immediately. (This action is generally termed "cracking" and is intended to clear the valve of dust or dirt that might otherwise enter the regulator.) The valve shall be opened while standing to one side of the outlet; never in front of it. A fuel-gas cylinder valve shall never be opened up, cracked near other welding work or near sparks, flame, or other possible sources of ignition.

4.9. Cable, Grounding and Electrode Holders

Only leads free from repair or splice for 10 feet from the electrode holder shall be used unless insulated connectors or splices with insulating quality equal to that of the cable are provided.

When a cable other than the lead wears and exposes bare conductors, the portion exposed shall not be used until it is protected by insulation equivalent in performance capacity to the original.

All cables shall be capable of handling the current produced through the welding activity.

All leads shall be properly installed. All welding machines shall be properly grounded.

All cables and leads shall be routed away from the path of travel so as not to create a tripping hazard, nor expose the cable(s) to potential damage. When possible it is best to route cables overhead at a height of 7 feet and properly secured using non-conductive materials.

Where exposed to either foot traffic or vehicular traffic, all cables shall be adequately protected from damage by covering them with suitable material, which is adequately secured against displacement.

Electrode holders, which become hot, shall be allowed to air cool. Dipping of electrode holders in water or other cooling agents is prohibited.

4.10. Defective Equipment

Any arc welding or cutting equipment having a functional defect shall not be used.

Any gas welding or cutting equipment having a functional defect shall not be used.

Any defective equipment shall be red tagged with the words DO NOT OPERATE written on it. The defective tools shall be turned over to a Haskell Davis JV Supervisor or taken to the site tool room.

No repairs shall be made to defective equipment except by authorized service technicians properly trained to make such repairs.
HOUSEKEEPING

1.0 Purpose

To establish the requirement and responsibilities for routine housekeeping to ensure that work areas are maintained in a clean manner and present an acceptable appearance.

2.0 Scope

This policy applies to all personnel and facilities.

3.0 Procedures

All personnel will work towards maintaining their respective workplaces in a clean and orderly manner. Supervisors shall:

- Estimate waste that will be generated before any work is performed so that the need for containers and waste removal can be determined.
- Plan for the necessary time to insure good housekeeping standards are maintained.
- Conduct or arrange for inspections in their area of responsibility.
- Insure that each work area under their supervision is maintained at an acceptable level of appearance and cleanliness.
- Initiate corrective action for deficient items noted during inspections.
- Ensure employees are instructed on the proper disposal method for wastes, including waste classified as hazardous.
- Encourage segregation of waste materials to create opportunities for reuse or recycling.

Housekeeping encompasses all activities related to the cleanliness of Haskell Davis JV facilities, projects, materials, and equipment and the elimination of nonessential materials and hazardous conditions. The following general housekeeping practices must be applied to all areas where employees perform maintenance, construction, or other activities:

- Garbage, scrap, debris and other trash materials are to be properly disposed of in designated containers and shall be removed on frequent and regular intervals.
- Containers used for garbage and other oily, flammable or hazardous wastes shall be equipped with solid covers to control the potential for run-off.
- Material and equipment will be stored only in appropriate storage locations.
- Floors should be maintained clean and as dry as reasonably practicable. Liquid spills are to be cleaned up immediately.
- Equipment is to be kept clean and in good working condition.
• Tools, supplies, parts, and equipment will not be used in a manner that would be hazardous or adversely affect the work quality. Control should be used to insure that the work area is maintained in an acceptable manner.

• Welding splatter and slag should be contained with the use of high temperature protective screens or shields. Welding splatter or slag should be cleaned up before leaving the work site for an extended period of time. The entire welding work site will be cleaned at the end of the work shift.

• Compressed air shall not exceed 30 psi when used for cleaning purposes. Eye protection is required during these cleaning operations. The use of compressed air for cleaning an employee’s body or clothing is prohibited.

• Shelved items must be placed in an orderly manner and arranged so that the items cannot easily fall while nearby items are being retrieved.

• Items will not be placed in front of shelves so that employees must climb or reach over the items stored in front of the shelves to retrieve items.

• Storage of excessive combustibles such as cardboard boxes or pallets is discouraged.

• Items stored shall remain 18" below the plane of the sprinkler heads, or 24" below the ceiling in areas without automatic sprinkler systems.

• Every floor, working place, and passageway shall be kept free from protruding nails, splinters, loose boards, and unnecessary holes and openings.

3.1. Inspections

Work areas will be inspected for deficiencies in cleanliness and good physical appearance. Inspections should be performed at a frequency that will ensure the desired level of cleanliness and appearance are maintained throughout the day.

Supervisors should monitor these areas to insure that housekeeping is acceptable.

In shared storage areas, shops, or offices, supervisors of the various employees should work closely together to insure that housekeeping is maintained in an acceptable manner.

During inspections, any safety related deficiencies that constitute hazardous conditions should be given priority attention. Hazardous conditions that constitute imminent danger shall be immediately reported to the supervisor and/or Safety department, for guidance and direction.

3.2. Inspection guidelines:

• Housekeeping is being maintained as an integral part of every work operation.

• Ensure that sufficient receptacles are available for waste and debris.

• Cleaning and removal of waste, debris, and dust is being performed regularly.

• Stairways, aisles, corridors, and passageways are free from loose material and debris and are not used for storage.

• Tools, cords, and other materials are not strewn about where they may cause tripping or other safety hazards.
• Lunch rooms, wash rooms, toilets, drinking fountains, and other employee comfort facilities are being constantly maintained in a sanitary condition.
• Deficiencies in facility appearance (such as a need for painting and other appearance related maintenance items) should be noted during the inspections.
• Deficiencies in the area of corrective maintenance such as leaking valves or fittings, excessive motor vibrations, etc., should be noted during the inspections.
INJURY MANAGEMENT PROCEDURE

1.0 Purpose

To outline the procedure to be followed in implementing Haskell Davis JVs Injury Management Policy.

To outline the roles and responsibilities of Haskell Davis JV and its workers with regard to the management of work-related injuries and return to work processes.

2.0 Scope

This procedure applies to all workers employed by Haskell Davis JV.

3.0 Definitions

Light Duty, Limited Duty or Modified Duty Assignments:
In most cases, some temporary modification of duties can be made for an employee that would allow them to return to work in a limited capacity, subject to his/her medical restrictions. Such temporary modifications are called "light duty, limited duty, or modified duty" assignments.

In certain circumstances this may mean the worker is placed in an alternative Work Site/Training Center/Institute where the suitable duties are available.

Current work capacity:
In relation to a worker, means a present inability arising from a work-related injury such that the worker is not able to return to their pre-injury employment but is able to return to work in suitable employment.

Medical Approval:
Medical approval refers to a doctor’s agreement that the work duties offered are within the workers current work capacity and should not cause harm to the injured/ill worker.

Approval from an independent medical examiner appointed by Haskell Davis JVs Insurer may also be used where appropriate.

Medical Restrictions
Directions provided by a doctor to advise Haskell Davis JV and the injured/ill worker regarding physical and/or psychological limits to be put in place to assist with recovery from a work-related injury/illness.

Medical Restrictions may include but are not limited to the number of hours to be worked, lifting capacity or preventing work in certain areas of Haskell Davis JV.
Occupational Rehabilitation Program:
   A documented process to assist injured/ill workers to return to work from a work-related illness or injury.

Offer of Suitable Employment (OSE):
   A written offer detailing the duties offered and hours of work for an injured worker who is able to return to work.

Personal Illness or Injury:
   An injury, illness or disease that is not related to employment.

Pre-Injury Duties:
   Duties undertaken by a worker, as per their position description. Duties undertaken prior to a work-related injury occurring.

Productive Duties:
   Productive Duties are any suitable duties performed by an injured worker that provide meaningful employment and contribute to the project.

Rehabilitation Provider:
   An external organization approved by our Insurer that provides independent support to injured workers and their employer by facilitating the injury management and return to work process.

Workers:
   Any employee of Haskell Davis JV. Any person who holds a current contract of employment with Haskell Davis JV.

Suitable Employment:
   Suitable employment is work that is suited to the Workers medical condition, capacity for work, skills and experience.

   It is work the injured worker can do without the risk of further injury. The aim is to support the injured worker so they can remain at or return to work while they recover from their injury and return to their normal work when possible.

Supervisor:
   Any Director, Manager or Supervisor who has the responsibility for the management of staff.

Workers Compensation Claim:
   If a worker has a work-related injury or illness, they may be able to receive compensation from Haskell Davis JVs Workers Compensation Provider. To do this they must report a work related Injury to the project SSHO or Haskell Davis JVs Safety Director.

Work Related Injury:
Work-related injuries, illnesses and fatalities are those in which an event or exposure in the
work environment either caused or contributed to the condition. In addition, if an event or
exposure in the work environment significantly aggravated a pre-existing injury or illness, this
is also considered work-related

4.0 Actions

This Section Outlines the Steps Taken in the Injury Management Process

1. Injury reported by worker. Refer to Reporting Procedure for further detail.
2. Worker receives onsite first aid or off site first aid/medical treatment. Worker is transported to
medical facility by Haskell Davis JV vehicle or ambulance.
3. Supervisor contacts Haskell Davis JV Safety Director to advise of the injury as soon as they
become aware an injury has occurred.
4. The Haskell Davis JV Safety Director or designee contacts the injured Worker to provide contact
details and outline Haskell Davis JV’s processes. A workers compensation claim is initiated if
appropriate. Written contact will be initiated if the Haskell Davis JV Safety Director or designee
is unsuccessful in establishing contact by telephone or telephoning is deemed inappropriate.
5. Injury Report and Workers Compensation Claim Form are completed promptly by worker if
appropriate. Assistance may be provided if the worker is unable to complete the forms
personally.
6. Haskell Davis JV Safety Director or designee forwards the completed claim form and associated
medical certificates within ten (10) days of receipt, to the insurer for recording or determination
of liability.
7. Haskell Davis JV Safety Director or designee begins a consultation process with the injured
Worker, their Supervisor, treating health practitioners and Rehabilitation Provider (if
appointed).

Haskell Davis JV will commence planning a workers return to work, to the extent that it is
reasonable to do so, as soon as the first Physicians Activity Prescription Form is received.

In initiating discussions regarding returning to work, the Haskell Davis JV Safety Director will
make all reasonable efforts to consult with the parties involved.

When initiating return to work discussions with the injured Worker, the Haskell Davis JV Safety
Director will take into consideration the nature of the Workers injury or illness and begin
consultation at an appropriate time. Advice on whether or not it is appropriate to commence
return to work discussions may be sought from the treating doctor prior to commencement.

During the consultation process, the Worker and Haskell Davis JV Safety Director or designee
will discuss potential medical restrictions and available return to work options that can be
offered within those restrictions.

The injured Worker may be assisted by a representative during any consultation.
The injured Worker can request the participation of an approved Rehabilitation Provider at any time during the consultation process.

8. The Haskell Davis JV Safety Director or designee will develop a Return to Work Plan based on the information gathered as part of the consultation process and provide this to the worker, treating health practitioners, and supervisor for review and approval. The Return to Work Plan will detail identified suitable employment, medical restrictions and return to work goals. The Return to Work Plan must be signed by all parties to the agreement.

A Return to Work Plan cannot commence without medical approval and the appropriate Activity Prescription Form being provided.

Any issues arising from the Return to Work process may be dealt with under Haskell Davis JV's Return to Work Issue Resolution Procedure.

9. Haskell Safety Director or designee will monitor and update the Return to work plan in accordance with the Activity Prescription Form provided by the injured Workers Attending Physician.

The Haskell Davis JV Safety or designee will maintain contact with injured worker, Supervisor, treating health practitioner(s) and Rehabilitation Provider and continue the consultation process as the Return to Work Plan progresses.

10. The injured Worker completes Return to Work process and returns to pre-injury duties. This is confirmed by providing a final Activity Prescription Form from the treating doctor who indicates the Worker is fit to return to normal duties.

If an injured worker is unable to ever return to their pre-injury duties, Haskell Davis JV will consider offering alternative employment at Haskell Davis JV, within the worker’s ongoing medical restrictions. Any alternative employment offered will be in accordance with Haskell Davis JVs operational requirements.

5.0 Responsibilities

This Section Outlines the Responsibilities of All the Parties required to be involved in the Occupational Rehabilitation Program

Haskell Davis JV Safety Director or designee, Supervisors, Injured Worker

The Haskell Davis JV Safety or designee is required to:

- Manage, monitor and review the Injury Management Policy and Procedure;
- Ensure that the confidentiality of information is maintained and appropriate disclosure authorities are obtained before releasing any information to third parties.
• Develop sustainable working relationships with the relevant insurer case manager, supervisors, injured workers, treating health practitioners, rehabilitation and other service providers;
• Ensure workers are aware of their rights and responsibilities in the event of a work related injury or illness;
• Consult, to the extent that is reasonable, with the injured Worker, supervisors, treating doctors and rehabilitation providers in planning return to work options;
• Provide injured Workers with clear, accurate and current details of their return to work arrangements;
• Ensure workers who are participating in return to work plans have suitable and productive duties that make a contribution to Haskell Davis JVs operations and are within their identified medical capacity;
• Manage, monitor and review return to work plans and suitable duties in consultation with the injured worker, their supervisor, treating health practitioner(s) and rehabilitation providers;
• Participate in the Return to Work Issue Resolution Process should it be required;
• Ensure compliance with legislative requirements in relation to employee compensation and return to work processes;
• Ensure workers receive compensation entitlements for a work related injury or illness;
• Promptly process all paperwork relating to a worker’s compensation injury; and
• Interact with workers who have a personal illness or injury and their supervisors, where appropriate, to facilitate their return to the workplace.

Supervisors

Supervisors are required to:

• Ensure an injured worker receives appropriate first aid or medical treatment;
• Promptly advise the Haskell Davis JV Safety or designee via telephone or email as soon as they become aware of any work-related injuries that require medical treatment and/or time off work;
• Comply with the requirements of the Haskell Davis JV Incident Reporting Procedure.
• Promptly forward any paperwork received (including a copy of the Injury Report) relating to a workplace injury to the Haskell Davis JV Safety or designee;
• Facilitate and/or implement changes as needed to provide a workplace that is safe and free of any risks to health and safety;
• Facilitate the necessary advice and/or training to the workers with regard to preventing work-related injuries;
• Stay in contact with the injured worker while they are away from the workplace;
• Participate in return to work planning discussions with an injured worker and the Haskell Davis JV Safety or designee;
• Participate in Return to Work Issue Resolution Processes should they be required;
• Ensure that staff under their supervision follow Policies and Procedures; and
• Provide appropriate supervision to all workers.

Injured Workers

**Injured Workers are required to:**

• Report any workplace injuries/illnesses to their supervisor immediately or if immediate reporting is not possible as soon as reasonably practicable;

• Advise their supervisor within one hour (1) of the commencement of their usual working day if they are unable to attend work due to a workplace injury/illness. If notification within the specified time period is not possible, notification should be made as soon as practicable;

• Promptly complete all necessary paperwork relating to their workplace injury/illness;

• Make reasonable efforts to return to work in suitable or pre-injury duties;

• Make reasonable efforts to actively participate in return to work planning and any ongoing return to work discussions;

• Discuss with their treating health practitioner any duties they will be able to complete while injured/ill;

• Abide by the doctor’s medical restrictions both at work and at home;

• Actively participate and co-operate in assessment of your capacity to work, rehabilitation progress or future employment prospects;

• If unable to attend an assessment appointment, the worker must contact the Insurer to request an alternative date. If a worker unreasonably refuses to attend a medical examination arranged by the insurer, the insurer has the right to suspend access to compensation payments.

• Make any medical appointments concerning their injury outside of work hours where possible. Where it is not possible to do so, provide their supervisors with reasonable notice of their absence from work prior to the absence occurring;

• Regularly communicate with their Supervisor and/or the Haskell Davis JV Safety or designee in relation to the status of their injury and their return to work program;

• Make reasonable efforts to participate in a Return to Work Issue Resolution Process should it be required; and

• Immediately advise their Supervisor or the Haskell Davis JV Safety or designee if they have an aggravation or re-occurrence of their injury.
1.0 Purpose

The purpose of this program is to minimize employee exposure to lead. Exposure to lead at construction job sites can occur during abatement, removal and/or contact with lead containing products such as paints, mastics, coatings, mortars, cements, roof cornices, tank linings, electrical conduit, solders, manufacturing and occupational lead dust.

2.0 Scope

This policy applies to all Haskell Davis JV employees who may be exposed to Lead in the course of employment.

3.0 Definitions

- **Action Level**: an airborne concentration of lead greater than 30 micrograms per cubic meter (30 \( \mu g/m^3 \)) calculated as an 8 hour time weighted average (TWA)
- **Lead**: The word “lead” when used in this program means elemental lead, all inorganic lead compounds and a class of lead compounds called soaps. Lead is a heavy metal at room temperature and pressure and is a basic chemical element. It can combine with various other substances to form lead compounds.
- **Lead based Paint**: Although there is no federal guideline or definition for lead based paint, it is generally accepted to be dry paint that contains 0.06% (600ppm) or greater lead by weight.
- **\( \mu g/m^3 \)**: “Micrograms per cubic meter” of air. This is the common unit for reporting airborne concentrations of lead.
- **\( \mu g/dl \)**: “Micrograms per deciliter”, of whole blood.
- **NIOSH/MSHA**: National Institute of Occupational Safety and Health Administration / Mine Safety and Health Administration are federal agencies which conduct research on safety and health issues and test respirators.
- **HEPA filter**: High Efficiency Particulate Air filter. Filters that remove 99.97% of all particulate 0.3 microns or greater in diameter.
- **Competent Person**: One who is capable of identifying existing and predictable lead hazards in the surroundings or working conditions and who has the authorization to take prompt corrective measures to eliminate them.
- **PEL or Permissible exposure limit**: 50\( \mu g/m^3 \), as an 8-hour Time Weighted Average (TWA). This is the maximum 8-hour average concentration of lead that an employee may be exposed to during each workday.
4.0 Procedures

It is the plan of Haskell Davis JV to maintain employee lead exposure below the minimum exposure limit through engineering and work practice controls, emission control of lead into the environment, through the air, water or soil and proper disposal of lead contaminated waste.

This procedure applies to situations where abatement, removal, maintenance and repair tasks involve the disturbance of known or suspected lead-based paint. Lead may be present when using abrasive blasting, welding, burning, cutting, sanding, manual scraping, chemical stripping or heat gun applications in many client facilities where all lead containing materials have not yet been abated. This program establishes methods for complying in substance with OSHA 29 CFR 1910.1025 Lead Standard for General Industry OSHA 29 CFR 1926/26 Lead Exposure in Construction and any other state regulated agencies such as WAC 296-155-17603.

No employee will be exposed to airborne lead above the PEL without proper protection and the following methods shall be used as feasible and effective for maintaining airborne lead exposures below the PEL:

Engineering controls, such as general area ventilation for contaminants, local exhaust ventilation for spot removal, vacuum blasting or vacuum equipped power tools. When ventilation for contaminants is used, manometers, and/or velometers will be used to evaluate the mechanical performance of the ventilation system.

A respirator shall be used during the time period necessary to install or implement engineering or work practice controls, where engineering and work practice controls are insufficient, and in emergencies.

Administrative and work practices controls, such as but not limited to:

- Appropriate work practices to ensure the lead containing materials are not disturbed.
- Worker rotation.
- Limiting exposure time(s) in an 8-hour period.
- Lead surface cleaning by an outside contractor.
- Warning signs.
- Hygiene facilities and practice.
- Protective work clothing and equipment.
- Housekeeping.

During the period that respirators are worn, the protection fit factor of the specific respirator may be used to determine employees’ exposures to airborne lead and to achieve compliance with the PEL. The protection factors are listed in the Respiratory Protection Section of this IIPP Table 1.

If employees working immediately adjacent to a lead abatement activity are exposed to lead due to the inadequate containment of such job, the employees shall be removed from the area until the enclosure breach is repaired or an exposure assessment deems it is safe to return.
4.1. Employee Information and Training

All employees who work on projects where lead exposures are known to or expected to be above the Action Level shall be provided information and training on the hazards of lead and measures for controlling these hazards and protecting health.

Employees will receive initial comprehensive lead training before performing work that may involve airborne lead exposure. This training will be repeated annually as a refresher course if the lead work continues. Training shall be documented including dates of training, employee name, and trainer name.

The content of the lead training shall include:

- The specific nature of activities or operations that may result in airborne lead exposure above the action level.
- Federal and state regulations that apply to lead exposure. Appendices A & B of the regulation.
- The nature of the operations which could result in exposure to lead above the action level.
- The health effects and risks of lead exposure.
- Engineering controls, including contaminants and ventilation systems.
- Work practices for controlling lead exposure, including housekeeping, protective clothing, and proper hygiene facilities and practices.
- Methods for monitoring airborne lead concentrations and exposure.
- The medical surveillance program including biological monitoring, medical examinations, consultations and medical removal protection. Employees will be notified within five working days after the receipt of biological monitoring results.
- Precautions for female employees who are pregnant.
- Instructions to employee that chelating agents should not be used to remove lead from their bodies.

All employees who may be exposed to lead above the Action Level or who may be required to wear a respirator will be provided initial and periodic medical examinations.

All employees who are temporarily removed from lead exposure due to elevated lead exposure due to elevated blood levels or at the recommendation of a physician, may be reassigned other duties at the site that do not involve exposure to lead above the Action Level.

4.2. Competent Person

All work activities where employee exposures may exceed the Action Level will include a Competent Person in both the planning and performing stages of projects involving lead exposure.

The competent person will be a supervisor with training and experience in conducting jobs involving lead exposure. The competent person will have the capability of identifying hazards and the authority to take immediate action to eliminate them.
The competent person shall be at the work site at all times while lead exposure activities are in progress. He or she may have other job duties, but will be able to monitor work continuously for hazards or deficiencies.

The competent person will control access of persons into work areas.

### 4.3. Warning Signs

Warning signs will be posted in the work area around activities where lead exposures may exceed the Permissible Exposure Limit. Ropes, tape, walls or containments shall demarcate the work area.

Signs will be posted at every accessible side of the work area. These signs will be easily visible from a distance so that employees can read the sign and take the necessary protective measures before entering the work area. Signs will read as follows:

<table>
<thead>
<tr>
<th>WARNING: LEAD WORK AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>POISON</td>
</tr>
<tr>
<td>NO SMOKING OR EATING</td>
</tr>
</tbody>
</table>

All persons entering work areas will wear protective clothing and respirators.

Eating, drinking, smoking and chewing is prohibited in work areas and any area where lead exposure may exceed the Permissible Exposure Limit (PEL).

### 4.4. Containment

Where required by state, federal, or local regulations, the project sponsor, or the project owner, a containment area shall be constructed and used as specified.

The purpose of containment is to restrict or prevent the spread of lead-containing dust or debris to surrounding areas or the environment. While the proper use of containment can help protect the public and the environment, they generally cause a significant increase in airborne lead concentrations in the area. Containment may increase the potential for higher employee lead exposures. Therefore the use of well designed exhaust ventilation and the use of more protective respirators may be necessary to properly protect workers.

Containment may include any of the following:

- Rigid or flexible barriers or sheets surrounding the work area.
- Complete unventilated enclosure built around the work area.
- Complete enclosures maintained under negative pressure by exhaust ventilation with exhaust air filtration.

Containment may also require the construction and use of platforms or scaffolding. These may be stationary or moveable, ground supported or suspended.

### 4.5. Personal Hygiene Facilities and Practices
Clean change areas will be provided for all projects where employee lead exposures exceed the Permissible Exposure Limit. These clean change areas will be equipped with storage facilities for street clothing and a separate area for the removal and storage of lead-contaminated clothing and equipment. This change area will be designed and used so that contamination of street clothing will be maintained below the Action Level.

Shower facilities will be provided for all projects (where feasible) when employee lead exposures exceed the Permissible Exposure Limit. Showers will comply with all state and federal regulations. All employees, whose airborne lead exposures may exceed the Permissible Exposure Limit, will shower, or at a minimum wash their hands and face at the end of each work shift. Employees required to shower will not leave the workplace wearing any clothing worn while performing lead exposure activities.

Clean lunch areas will be provided for all projects where employee airborne lead exposures may exceed the Permissible Exposure Limit. Employees will remove or clean their protective clothing and wash their hands and face before eating, drinking or smoking. Airborne lead exposures in the lunch area will be maintained below the action level.

An adequate number of clean lavatory and hand washing facilities will be provided. These will comply with all state or Federal Sanitation regulations. Where required by Federal or State regulations, the project sponsor or project owner, decontamination units will be constructed as specified. These generally are maintained under negative pressure and contain clean change rooms showers and dirty equipment rooms.

4.6. Protective Clothing and Equipment

All employees shall wear protective clothing and equipment whose airborne lead exposures may exceed the Permissible Exposure Limit. Protective clothing will be provided at no cost to the employee.

Protective clothing will include washable or disposable full body coveralls. Other protective equipment will include face shields, hats, gloves, shoes or disposable shoe covers, eye protection, and hearing protection as appropriate.

Disposable clothing will be used for no more than one workday. They will be disposed of as lead-contaminated waste.

Reusable coveralls will be collected at the end of each workday in closed containers. Authorized laundries according to all applicable State and Federal regulations pertaining to lead contaminated laundry and water discharge will clean contaminated clothing.

Reusable protective clothing (coveralls) will be laundered at least weekly, and clean coveralls provided daily to employees whose exposure levels without regard to a respirator are over 200μg/m³ of lead as an 8-hour TWA.

Protective clothing and equipment will be removed in the contaminated section of the change area and will not be worn into any clean areas not contaminated with lead.
4.7. Health Effects of Lead
Common symptoms of acute lead poisoning are loss of appetite, nausea, vomiting, stomach cramps, constipation, difficulty in sleeping, fatigue, moodiness, headache, joint or muscle aches, and anemia. Long term (chronic) overexposure to lead may result in severe damage to the blood-forming, nervous, urinary, and reproductive systems.

4.8. Painted Pipe (Leaded)
Routine work practice on painted pipe and structural steel if hot work needs to occur. Remove a 3” band of paint on all sides where hot work may occur. By doing this, the work area is considered non-leaded.

4.9. Removal of Leaded Paints
Removal of leaded paints using power tools, like grinding wheels or needle guns, for periods of twenty minutes or less during a shift does not create exposures above the permissible exposure limit. Respiratory protection must be worn.

Small scale work involving removal of paint does not fall into the lead program. Any large scale jobs, involving more than 40-60 minutes of removal should be handled by trained lead workers.

4.10. Respiratory Protection and Use
Respiratory protection will be used in combination with engineering controls and work practices, to maintain employee airborne lead exposures below the Permissible Exposure Limit.

Respirators will be worn by all employees, who may be exposed to airborne lead at or above the Permissible Exposure Limit.

Employee qualification for respirator use includes:

- Medical: Each employee will successfully complete an annual respiratory medical evaluation. A physician will determine if an employee is medically capable of wearing a respirator.
- Training: Each employee will receive annual training on the selection, use, maintenance and limitations of the specific respirators that will be used for controlling airborne exposures to lead. This training will be provided as part of initial and annual lead training.
- Fit testing: Each employee will be qualitatively fit-tested every 6-months on the specific half-mask, negative pressure respirator that will be used. Fit test procedures will be in accordance with all State and Federal regulations. Each employee who will be required to wear full face negative pressure respirators will be quantitatively fit tested every 6 months on the specific device being used.
- Facial Hair: Each employee wearing face piece respirators will be clean-shaven, with no facial hair that interferes with the sealing surface of the face piece or the operation of inhalation or exhalation valves.
- Corrective lenses: Eyeglasses with temple bars that extend through the sealing surface of a full-face respirator will not be worn.
4.11. Respirator Selection

All respirators selected for use will be approved by NIOSH/MSHA for use against lead-containing dusts, mists, and fume.

Selection of proper respirator will be based upon the known or expected concentration of airborne lead, the need for eye or face protection, the presence of any other hazardous gases, vapors, dusts, mists, or fumes, and the need for worker mobility, visibility and communication. In every case, the respirator selected for use will maintain employees’ actual inhalation exposures below the PEL.

4.12. Respirator Issue

The competent person will issue respirators to employees who meet the qualification for respirator use outlined in this respiratory protection program.

Only properly selected respirators that provide an adequate degree of protection will be issued for use. Employees will not use any respirator that is not issued by Haskell Davis JV.

4.13. General Respirator Requirements:

Each employee will inspect his or her respirator before each use. The straps, facepiece, valve assemblies, covers, cartridges, hoods, helmets, hoses, fittings and or regulators will be examined for defects or malfunctions. Any defective or malfunctioning respirator will not be used until properly repaired or replaced.

Each employee will perform a 10 second negative pressure test before each use of negative pressure respirators. Respirators that do not successfully pass this negative pressure field test will not be used.

Respirators will be according to manufacturer’s instructions and only in their NIOSH/MSHA approved configuration. Only those parts that are supplied by the manufacturer as part of the respirator’s NIOSH/MSHA approved configuration will be used.

Air purifying respirators will not be used in oxygen deficient atmospheres containing less than 19.5% oxygen.

Only Supplied Breathing Air operated in the pressure demand mode will be used for entry into Immediately Dangerous to Life or Health (IDLH) or unknown atmospheres. IDLH atmospheres can be those with less than 19.5% oxygen and/or those that contain concentrations of hazardous materials above the personal exposure limit (PEL).

Employees may not be assigned to projects that require supplied breathing unless they have received training in its use, with current records on file.

4.14. Respirator Inspection

All respirators will be inspected routinely before and after each use by the wearer. Respirator inspection will include a check of the tightness of connections and the condition of the facepiece, headbands,
valves, connection tubes, canisters, hoses and helmets. Rubber and elastomeric parts will be inspected for reliability and signs of deterioration.

4.15. Respirator Cleaning
Respirators will be cleaned and disinfected each day to ensure that proper protection is provided for the wearer. Respirators will be cleaned and disinfected according to instructions provided by the manufacturer.

The supervisor is responsible for ensuring that each individual properly stores respirator issued to them each day.

4.16. Respirator Storage
The competent person will be responsible for the daily and overnight storage of the respirators issued to Haskell Davis JV employees. Respirators will be stored in a secure, clean, dry area. Hose connections will be protected to prevent internal contamination.

4.17. Respirator Repair
Only qualified trained persons, according to instructions provided by the manufacturer will perform repairs. Only manufacturer approved replacement parts will be used according to their instructions for installation. After repairs have been made, respirators will be cleaned and inspected before use.

4.18. Monitoring for Lead
A hazard assessment may be conducted if the “competent person” is aware of or observes anything that would lead him to believe it is necessary. This may be done by area sampling or by monitoring individual employees with personal air sampling pumps to determine the lead exposure. Where a determination conducted shows a possibility of employee exposure at or above the action level additional monitoring will continue and shall be repeated at least every 6 months to ensure that exposure is below the PEL. The employee shall continue to be monitored at the required frequency until at least two consecutive measurements, taken at least 7 days apart, are below the action level. Should an employee be found to have been over exposed the medical procedures and blood sampling and continued monitoring required will be conducted.

Affected employees shall be notified of the results of any monitoring performed within 15 working days, 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 representative employee exposure, without regard to respirators, exceeds the permissible exposure limit, the written notice shall include 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.

It should be noted that it is Haskell Davis JV’s policy to contract out any work that would require lead abatement to a qualified subcontractor.

4.19. Site Compliance Program
Prior to the start of any job that may exceed the full shift PEL a written compliance plan must be developed to describe the work. It will include:

- A description of the task involved with lead exposure.
- List the equipment used.
- Identify the material involved.
- Identify control measures to reduce exposure.
- Summary of previous monitoring data that establishes personal protective gear needed or arrangements to conduct monitoring with Health Group.
- Crew size and responsibility.
- Maintenance practices.
- Provide for frequent inspection of the job by a competent person.

The compliance program must be reviewed with crew prior to start of work.

When ventilation is used to achieve compliance with the standard it will be evaluated through testing or air monitoring by the Superintendent or SSHO.

The written program must be revised & updated annually.

4.20. Medical Surveillance Program

Workers who are, or will be exposed at or above the action level for Lead for thirty or more days per year shall be included in a medical surveillance program. Medical surveillance will also be made available for workers who experience signs and symptoms of Lead exposure or who are exposed in emergency situations. Medical examinations & procedures shall be performed by or under the supervision of a PLHCP.

Medical surveillance will be conducted within 30 days of initial assignment and annually thereafter. Exam will include:

- Physical examination of skin and respiratory tract
- Completion of Respiratory Protection Questionnaire
- Completion of Lead Questionnaire
- Additional tests deemed appropriate by the examining physician

Employees occupationally exposed on any day to lead at or above the action level shall have made available at no cost to the employee, biological monitoring in the form of blood sampling and analysis for lead and zinc protoporphyrin levels to each employee.

Blood sampling & monitoring shall be conducted every 6 months until two consecutive blood samples & analysis are acceptable. Any employee with elevated blood levels should be temporarily removed. The sampling & monitoring shall be performed at least monthly during the removal period. Employees shall be notified in writing within five days when lead levels are not acceptable. The standard requires that employees temporarily removed for lead exposure be afforded medical removal protection benefits.

4.21. Evaluation of Program Effectiveness

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*Printed copies of this policy are uncontrolled and may not reflect changes made after the above revision date*
The Corporate Safety Manager shall periodically meet with field supervisors as necessary to evaluate the effectiveness of this program. Changes will be made, as necessary, to ensure the continued effectiveness of this program.
1.0 Purpose

This procedure is to define the minimum requirements for isolation, lockout, and tagging of project equipment and systems to protect employees from exposure to hazardous energy sources, both stored and active.

2.0 Scope

This procedure will apply to all Haskell Davis JV and sub-contractor personnel on a Haskell Davis JV project or sub contracted portion of any project, who are not working under the approved lock out tag out procedure of a client facility.

This procedure describes:
- Personal danger tags
- Locks and scissors
- Isolating equipment
- Basic shutdown and isolation steps
- Required documentation

3.0 Definitions

Affected employee: An employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.

Authorized employee: A person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes an authorized employee when that employee’s duties include performing servicing or maintenance covered under this section.

Block: One solid piece of substantial material placed under a suspended load or machine part, which completely immobilizes all potential vertical movement

Chock: One solid piece of substantial material placed between horizontal pieces or on both the downward and upward slope of inclined equipment to immobilize potential lateral movement

Disconnect: Device: A pipe valve, electrical switch, or other mechanical device which will cut off the source of power or supply at the entry point to the machine or equipment

Potential Energy source: Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.
Hazardous Energy Supervisor: Individual with the Authority and the Responsibility to place locks on any and all equipment that poses a potential Hazardous Energy release harmful to Project Personnel or to the safety of the Equipment.

Hot tap: A procedure used in the repair, maintenance and services activities which involves welding on a piece of equipment (pipelines, vessels or tanks) under pressure, in order to install connections or appurtenances. It is commonly used to replace or add sections of pipeline without the interruption of service for air, gas, water, steam, and petrochemical distribution systems.

Lockbox: A device used in a Group Lockout to contain keys to all locks used to isolate a system that is to be worked on by affected employees. Affected employees place their personal locks on the Lockbox to isolate the lockout system keys for the duration of the work that is being performed. The Hazardous Energy Supervisor shall ensure that their lock is the last lock to be removed from a Group Lockout Lockbox.

Lockout: The placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout Device: Active devices used to control energy and prevent the accidental energizing of a machine or equipment. Devices include blank flanges and bolted slip blinds.

Tagout: The placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Tagout Device: Passive devices used as a warning system to prevent the inadvertent or accidental energizing of a machine or equipment.

4.0 Procedures

Unless otherwise noted in the contract, the appropriate representative of the customer and/or facility in which the work area is located, will be requested, prior to the start of work, to de-energize and render inoperative all mechanical equipment, electrical circuits and vessels containing chemicals or pressurized fluids in the immediate vicinity of the work area, and have locks and tags attached to all points where such equipment, circuits or pressurized vessels can be energized.

4.1 Exceptions:

This policy does not apply to the following:

Work on cord and plug connected electric equipment for which exposure to the hazards of unexpected energization or startup of the equipment is controlled by the unplugging of the equipment from the energy source and by the plug being under the exclusive control of the employee performing the servicing or maintenance.
Hot tap operations involving transmission and distribution systems for substances such as gas, steam, water or petroleum products when they are performed on pressurized pipelines, provided that it is demonstrated that: continuity of service is essential; shutdown of the system is impractical; and documented procedures are followed, and special equipment is used which will provide proven effective protection for employees.

Lockout/Tagout

If an energy isolating device is capable of being locked out, affected employees shall utilize lockout, unless it can be demonstrated that the utilization of a tagout system will provide full employee protection.

If an energy isolating device is not capable of being locked out, affected employees shall utilize a tagout system.

4.2. Lockout or tagout device application.

Lockout or tagout devices shall be affixed to each energy isolating device by authorized employees.

Lockout devices, where used, shall be affixed in a manner to that will hold the energy isolating devices in a "safe" or "off" position.

Tagout devices, where used, shall be affixed in such a manner as will clearly indicate that the operation or movement of energy isolating devices from the "safe" or "off" position is prohibited.

Where tagout devices are used with energy isolating devices designed with the capability of being locked, the tag attachment shall be fastened at the same point at which the lock would have been attached.

Where a tag cannot be affixed directly to the energy isolating device, the tag shall be located as close as safely possible to the device, in a position that will be immediately obvious to anyone attempting to operate the device.

4.3. Full Employee Protection

When a tagout device is used on an energy isolating device which is capable of being locked out, the tagout device shall be attached at the same location that the lockout device would have been attached, it must be demonstrated that the tagout program will provide a level of safety equivalent to that obtained by using a lockout program.

Additional means to be considered as part of the demonstration of full employee protection shall include the implementation of additional safety measures such as the removal of an isolating circuit element, blocking of a controlling switch, opening of an extra disconnecting device, or the removal of a valve handle to reduce the likelihood of inadvertent energization.

Following the application of lockout or tagout devices for energy isolation, all potential stored or residual energy shall be relieved, disconnected, restrained & otherwise rendered safe. If there is a
possibility of the re-accumulation of stored energy, verification of isolation shall be continued until the servicing or maintenance is completed, or until the possibility of such energy accumulation no longer exists.

No device, valve, switch, control, or piece of equipment shall be operated with a danger tag and/or lockout attached to it regardless of circumstances!

4.4. Energy Control Procedure

Tags

Personal Danger Tag

Personal danger tags are attached to locks on isolation points to identify and protect the individual who places it. Only standardized danger tags shall be used.

Tag- Front Side

- Will have the word "DANGER" Do Not Operate
- This lock/tag may only be removed by:

Tag - Back Side

- Will have the words "DANGER- This energy source has been LOCKED OUT
- Only the individual who signed the reverse side may remove this lock/tag.
- Remarks _________________________________________

Filling out the tag properly

The tag installer will fill out all appropriate information on the tag. The minimum information will include: Installer's name, date, on the front of the tag.

Employers name and means for contacting the employee under remarks.

The tag will be secured by means of a non-releasable, self-locking nylon cable tie with an unlocking strength of no less than 50 lbs. The tag will be affixed to the lock, scissors hasp or lock box. Whichever means of lockout is used.

Tags, locks, hasps, tie wraps, locking devices and lock boxes can be acquired from the Hazardous Energy Control Supervisor in the Supervisors Office Trailer. (Other devices also available are breaker locks, chain, cable, valve covers, etc.)

4.5. Request for Lockout Tagout

Affected Employees, Crew Coordinators, or Contractor Lockout Tagout Coordinators shall request a Lockout Tagout if they or their employees may be subjected to any hazardous energy source.
The Affected Employee, Crew Coordinator/Lockout Tagout Coordinator shall fill out a "Request for Lockout Tagout" to be submitted to the Hazardous Energy Control Supervisor.

The "Request for Lockout Tagout" shall list the system or equipment that may have a potential for hazardous energy.

The "Request for Lockout Tagout" shall describe in detail the work to be performed on the system or equipment.

The "Request for Lockout Tagout" shall then be given to the Hazardous Energy Supervisor for review and evaluation in accordance with this procedure.

4.6. Responsibility

Hazardous Energy Supervisor responsibilities are:

- Review and evaluate all "Requests for Lockout Tagout" for the need for a Lockout Tagout.
- If the review of the "Request for Lockout Tagout requires a Lockout Tagout, the Hazardous Energy Supervisor shall review the Lockout Tagout with the affected employees, and ensure that the affected employees understand the boundaries of the Lockout Tagout. The Hazardous Energy Supervisor shall hang the first Lockout device on each Lockout Tagout location for a particular piece of equipment or system and shall ensure that the Personnel Protective locks are installed by the Affected Personnel in accordance with this procedure.
- If the review of the "Request for Lockout Tagout" does not require and Lockout Tagout the Hazardous Energy Supervisor shall review the "Request for Lockout Tagout" with the Requester to ensure that the requestor agrees that a Lockout Tagout is not required.
- All Requests for Lockout Tagout shall be retained until completion of the project.
- Ensure that there are sufficient isolation devices and tags to accomplish the necessary LO/TO functions on the project.
- Update and maintain the isolation logs in conjunction with Sub-contractors, coordinating supervisors, and crew coordinators.
- Ensure that all equipment and systems intended for work have been properly shut down, de-energized/depressurized, isolated and locked/tagged prior to work start.
- Monitor and audit the LO/TO process periodically.
- Ensure that all work has been completed, all unnecessary materials and tools removed from the area and all workers have removed their locks and tags and are clear of the equipment prior to removing locks and tags.
- Ensure that the LOTO log and survey are cleared and up to date and all locks and tags have been accounted for.
- Keep the logbook current immediately after any change in the status of any control device governed by this procedure.
- The Hazardous Energy Supervisor must apply his/her isolation device to each isolation location. (First on and last oft) The Hazardous Energy Supervisor's lock is the first isolation device on and the last isolation device off.
- The Hazardous Energy Supervisor shall have the Authority and the Responsibility to place locks on any and all equipment that poses a potential Hazardous Energy release harmful to Project Personnel or to the safety of the Equipment.
Crew Coordinator Responsibilities

- The Crew Coordinator is responsible for ensuring the equipment has been disarmed, locked out (with a lock and hasp or other built-in locking mechanism, or a self-locking cable tie to render the equipment inoperable), and that tags are properly applied to all energy sources associated with the equipment being prepared for repair or service. This is accomplished through a walk down of the system with the Hazardous Energy Supervisor. Some equipment and systems may have multiple energy sources that require additional locks and tags (operating voltage, control voltage and heat trace circuits) for example.
- Testing the machine/equipment to determine the isolation procedure has effectively been isolated shall be done.
- Relieving, disconnecting, or restraining any residual energy left in the machine after the lock-out/tag-out procedure is applied.
- Before releasing the machine from lock-out/tag-out, inspecting the machine and equipment to ensure that non-essential items have been removed from the equipment and that all employees have been safely removed or positioned prior to start-up.
  - The Crew Coordinator shall keep a Hazardous Energy Control Logbook.
  - All pertinent information shall be logged and a LOTO survey completed.

4.7. Affected Person

The affected person shall have the authority to ensure isolation by the methods listed below:

The affected employee will walk down the system with the Hazardous Energy Supervisor and verify all isolation devices are in place as described on the LOTO survey.

- The affected person has the authority to apply their personal LOTO device and tag to any or all isolation energy source locations on equipment the affected person is working on or inside of.
- The affected person shall attach their own lock unless the Lockout/Tag-out is considered a group lockout. If the Lockout Tagout is considered a group lockout the locks shall be installed in accordance with the Group Lockout procedure.
- The affected person shall review the equipment and Hazardous Energy Control Lockout Tagout Form.
- The affected person will test the machine/equipment to determine the isolation procedure has effectively isolated the machine prior to commencing work.

4.8. Group Lockout

- The Hazardous Energy Supervisor and the Crew Coordinator will apply their lock(s) and tag(s) at all isolation points where locks and tags are required.
- The Hazardous Energy Supervisor or Crew Coordinator will then place all key(s) in the lock box.
- The Hazardous Energy Supervisor will then place a multi-lock hasp on the lock box and apply the first lock.
- The Crew Coordinator and the affected personnel shall walk down the system and verify locks and tags and review the Hazardous Energy Control Lockout Tagout form each day prior to his/her crew working on the isolated equipment.
• The Crew Coordinator applies his lock to a Group Lock box multi-lock hasp. The Crew Coordinator will ensure that all personnel working on the equipment or system under the Lockout Tagout have applied their own Locks to the Lock box.

4.9. Equipment Isolation Device Removal

• The individual who placed the lock on the isolation point is the only person who may remove a Personal Danger Tag/lock except as noted below. Personal Danger Tags and locks must be removed when the work is completed. If there is no other shift and the work is not complete the existing contractor coordinator lock and tag shall be left in place.
• If the machinery/equipment is still in a hazardous condition at the end of a shift the Hazardous Energy Supervisor must leave his/her lock and tag in place.
• Affected persons must remove their personal locks and tags at the end of their shift prior to leaving the site.

Personal Danger Tags and personal locks shall not be removed by anyone other than the person who installed the lock or tag except as noted below.

Personal Danger tags and personal locks shall not be removed by anyone other than that person named in the lockout tagout or another person specifically authorized by the Site Manager (or delegate) on an "Authority to Remove Personal Danger Tag Form."

4.10. Locks and Multi-Lock Hasps

Locks designated for LOTO shall be used for no other purpose and shall have the name of the affected person affixed.

Where required, personnel needing to isolate a facility and/or equipment shall be issued a suitable good quality padlock.

Padlocks shall be individually keyed; there shall be no duplicate or master keys for isolation locks. Tags will be secured by nylon tie wraps or equivalent non-reusable ties with a breaking strength of not less the 50 lbs.

Scissors or hasps will be issued for tasks in which multiple personnel may be required to isolate equipment.

4.11. Shift Change / Interim Locks and Tags

Specific procedures must be followed to accommodate those situations where it is necessary to continue the current lockout status of equipment/systems into subsequent shifts. Typically, off-going employees will remove their locks/tags and these will immediately be replaced by the locks/tags of the incoming employees. If there will be a time period between off-going and incoming employees removing/applying their personal locks, or if work will not resume until the next day, an alternate system of providing a safe “equipment down” status may be utilized. Interim locks and tags may be used to maintain an “equipment down” status when it becomes necessary for individuals to remove their personal locks and tags prior to completion of a job. When this occurs, after the last employee has
removed their personal lock and tag from a group lockbox, the off-going Lockout Tagout Supervisor will apply an interim lock and tag fully describing the reason the equipment is locked out. This is to protect the equipment and explain the current status until the next shift begins work. No one is allowed to work under the protection of an interim lock and tag.

Any time that an Interim Lock has been applied the Lockout Supervisor must ensure that the time and date of application and removal of Interim is entered in the Lockout Tagout Written Log.

Prior to the resumption of work by anyone affected by the Lockout Tagout which had interim locks applied, a review of Lockout Tagout Isolation Points must be conducted and logged in the Lockout Tagout Written Log.

Interim locks may be keyed alike.

Employees must be trained in the purpose and limitations of interim locks.

4.12. Isolating Equipment

Equipment may be isolated only by using the following methods:

- Electrical - Circuit breakers, knife switches, removal of fuses.
- Mechanical - Double block and bleed, installation of a blind in a flanged joint, or removal of a spool piece, actuator locks, chocking, blocking, chaining, or wedging, etc.

Push button switches, trip wires, control room/operating station switches, pneumatic, hydraulic, solenoid operated valves are not acceptable forms of isolation.

It is the practice of Haskell Davis JV to require isolations be made with both locks and tags wherever possible.

Electrical isolations requiring High Voltage switching must be done by suitably qualified personnel operating under an authorized access permit issued by the supply authority. (High Voltage is voltage above 480Volts AC or 1500 Volts DC).

There are four specific steps, which create the basic principle that need to be applied in successfully isolating plant or equipment. These steps are:

- Isolate
- Lock
- Tag
- Test to confirm Zero potential energy

4.13. Basic Shutdown and Isolation Procedure

Shutdown and isolation require an orderly procedure for preparing the machine or equipment for the application of isolation devices, locks, and tags. The specifics may change because of differing situations, but the following procedure should be applied where possible.
Isolation - This involves the application of energy-isolating devices that have been identified as being capable of preventing any hazard to those who will be working on the equipment.

Application of Isolation Equipment - Isolation and lockout devices will be applied only by the Hazardous Energy Supervisor. The point of attachment must secure the energy control devices safely and securely in the OFF or SAFE position. Locks and tags will be positioned so that they are clearly visible.

Release of Stored Energy - Once isolation of the main energy source has occurred, and it has been physically locked and tagged out at the point of control, the hazard will be eliminated by disconnecting or restraining any and all of the potential, stored, or residual energy (including electrical, mechanical and pneumatic).

Note: All personnel on the project must be trained in this procedure.

5.0 TRAINING

- Employees shall receive Hazardous Energy Control training. All training shall be documented.
- Retraining shall be provided if there is a change in job assignments, in machines, a change in the energy control procedures, or a new hazard is introduced.
- All training or retraining must be documented, signed, and certified.
- All affected employees are to be instructed in the purpose and use of the Hazardous Energy Control Procedure.
- Employees shall receive training in the recognition of hazardous energy source, type and magnitude of energy available, and methods and means necessary for energy isolation and control. The training shall include tagging requirements, limitations, and employee roles and responsibilities.

6.0 Program review

When Haskell Davis JV is working at a site where such as in new construction where there is no facility specific LOTO program, and there is risk that must be mitigated by use of the Haskell Davis JV LOTO program, there shall be a periodic review of the energy control procedure at least annually to ensure that the procedure is being followed. The program review shall be conducted by the safety director or their designee, but it must be someone other than those actually using the Lockout Tagout in progress. A certified review of the inspection including date, equipment, employees & the inspector shall be documented.
7.0 Forms

- Energy Isolation Request
- Lock Removal Request
REQUEST FOR LOCK OUT TAG OUT

______________________________________________
Date

Hazardous Energy Control Supervisor                         Affected Employees

______________________________________________
LOTO Requestor

______________________________________________  ___________________________________________
Crew Coordinator

_____________________________________________________________________________________________________________
System/Equipment to be LOTO:

Work to be performed: __________________________________________________________________________________
_____________________________________________________________________________________________________________
_____________________________________________________________________________________________________________
_____________________________________________________________________________________________________________

Signatures

<table>
<thead>
<tr>
<th>LOTO Required</th>
<th>Date</th>
<th>LOTO Not Required</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazardous Energy Control Supervisor</td>
<td></td>
<td>Hazardous Energy Control Supervisor</td>
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<tr>
<td>Crew Coordinator</td>
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</table>
## HAZARDOUS ENERGY SURVEY

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>DATE</th>
<th>LOTO NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>CREW COORDINATOR</td>
<td>HAZARDOUS ENERGY CONTROL SUPERVISOR</td>
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</table>

### EQUIPMENT DESCRIPTION

### REASON FOR ISOLATION

<table>
<thead>
<tr>
<th>Hazardous Energy Source</th>
<th>Volts</th>
<th>Pressure</th>
<th>Temperature</th>
<th>Other</th>
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### METHOD OF ISOLATION (Circle items that apply)

- ELECTRICAL ISOLATION
- BLIND FLANGE
- SLIP BLIND
- DISCONNECTED LINE
- DOUBLE VALVE & VENT
- OPEN FLANGE
- INSTRUMENT DISCONNECT
- BLOCK
- CHOCK

### ISOLATION DEVICE & LOCATION

<table>
<thead>
<tr>
<th>LOCK NO.</th>
<th>DATE INSTALLED</th>
<th>DATE REMOVED</th>
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## LOCK REMOVAL AUTHORIZATION

I,

Print the name of the person requesting removal of the lock or tag

(a) Have made all efforts to contact

Print name of person named on lock and tag

(b) Have made a thorough search of the equipment isolated to verify that

Print name of person named on lock and tag is not present.

(c) Now request authority to remove their Personal Danger Tag and Lock

Date __________________________

Signed by requesting authority  
Date: __________________________

Confirmed by Site Safety and Health Officer  
Date: __________________________

Printed name of Project Manager or Delegate  
Date: __________________________

Authorization signature by Project Manager or Delegate
## LOCK OUT TAG OUT LOG SHEET

<table>
<thead>
<tr>
<th>PERSONNEL</th>
<th>LO/TO#</th>
<th>LOCK#</th>
<th>DATE INSTALLED</th>
<th>DATE REMOVED</th>
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1.0 Purpose

Many different tasks fall to powered industrial vehicles. Each new situation can provide an opportunity for error. At any time during the performance of a task, the operator, pedestrian(s), the equipment, the product, or structures could be harmed or damaged unless the operator and pedestrians are constantly diligent. This procedure establishes minimum guidelines for employees working with or in proximity to mobile equipment of any kind. It is intended to assist in the control of health hazards and to ensure compliance with regulatory standards.

2.0 Scope

This policy & procedure applies to all Haskell Davis JV employees and those of its Sub-contractors.

This policy & procedure controls the use of mobile equipment on all Haskell Davis JV projects. It establishes safe operational guidelines, associated risk management issues and enforcement of this policy.

3.0 Definitions

4.0 Procedures

4.1. Mobile Equipment Safety Guidelines:

4.1.1. Mobile Equipment shall be operated with the utmost courtesy, care and consideration for the safety and convenience of pedestrians. Pedestrians shall be afforded the right-of-way at all times.

4.1.2. In crowded pedestrian areas, operators must yield or park and proceed on foot.

4.1.3. Each requirement of this policy applicable to safety and considerations for care and courtesy shall be applied for persons in wheelchairs or any type of mobility assistance device.

4.1.4. Mobile Equipment is not to be operated by anyone without training for the specific equipment. Authorization to operate mobile equipment will be issued to employees qualifying under appropriate training and functional evaluation by a competent person.

4.1.5. Passenger occupancy must not exceed the passenger limit and load capacity designated by the manufacturer. Only mobile equipment designed and equipped to transport passengers may be used for this purpose.

4.1.6. Mobile Equipment operating on project site roadways must travel in the direction of and with the flow of traffic and obey all traffic regulations and signs.

4.2. Mobile Equipment Safety Instructions:

4.2.1. Make sure the equipment is in safe working condition before each use.

4.2.2. Report any mechanical or equipment defects to your supervisor.
4.2.3. Before starting the equipment, assure it is in neutral. The driver and approved passengers shall fasten seat belts and adjust them for a proper fit.

4.2.4. Check the area behind the equipment before backing up.

4.2.5. All body parts—feet, legs and arms—shall be within the confines of the equipment while it is in motion.

4.2.6. Always remain seated and hold on while equipment is in motion.

4.2.7. Do not exceed the posted speed limit.

4.2.8. Slow down before and during turns. All turns shall be executed at reduced speeds.

4.2.9. Drive the mobile equipment only as fast as terrain and safety considerations allow.

4.2.10. Avoid sudden stops or change of direction that may result in a loss of control.

4.2.11. Brake to control speed when traveling down an incline.

4.2.12. Operators may not wear headsets to include IPOD ear buds while operating mobile equipment. Headsets may cause distractions and may result in an accident.

4.2.13. When the mobile equipment does not include an enclosed cab the operator and approved passengers shall wear eye protection rated ANSI Z87 or Z87.1.

4.2.14. When the equipment is to be left unattended, turn the key to the off position. Remove the key and engage the parking brake.

4.2.15. The operator shall not use, or attempt to use any mobile equipment in any manner or for any purpose other than for which it is designated without written authorization from the manufacturer.

4.3. Applied Loads

4.3.1. Mobile equipment used to lift or move power lines, equipment other material shall be used within its maximum load rating and other design limitations for the conditions under which the work is being performed.

4.3.2. The operator shall not load the equipment beyond its established load limit and shall not move loads which because of the length, width, or height have not been secured for safe transportation.

4.4. Inspections

4.4.1. At the beginning of each shift, the operator shall perform a documented inspection of the assigned equipment, reporting immediately to their supervisor any malfunction of the clutch or of the braking system, steering, lighting, or control system and tag out the equipment if necessary.

4.4.2. The critical safety components of mechanical elevating and rotating equipment shall receive a thorough documented visual inspection before use on each shift.

4.4.3. Note: Critical safety components of mechanical elevating and rotating equipment are components whose failure would result in a free fall or free rotation of the boom or other appurtenance.
4.6. Limited Visibility
No equipment having an obstructed view to the rear may be operated on off-highway jobsites where any employee or client facility equipment or other objects are exposed to the hazards created by the moving vehicle, unless:

- 4.6.1. The vehicle has a reverse signal alarm audible above the surrounding noise level, or
- 4.6.2. The vehicle is backed up only when a designated employee (spotter) signals that it is safe to do so.

4.7. Operating Equipment Near Exposed Energized Power Lines or Equipment

- 4.7.1. Mechanical equipment shall be operated so that the minimum approach distances are maintained from exposed energized lines and equipment. However, the insulated portion of an aerial lift operated by a qualified employee in the lift is exempt from this requirement.
- 4.7.2. A designated employee (spotter) other than the equipment operator shall observe the approach distance to exposed power lines and equipment and give timely warnings before the minimum approach distance is reached. A spotter shall not be required if it can be demonstrated that the operator can accurately determine that the minimum approach distance is being maintained. For the sake of simplicity, the minimum approach distance shall be 3.5ft if working at 3000 feet or less above sea level. If working at greater than 3000 feet above sea level or a lesser approach distance is necessary, OSHA standard 1910.269 (p)(4)(i) must first be referenced and the guidelines therein shall be adhered to.
- 4.7.3. The energized lines or equipment exposed to contact shall be covered with insulating protective material that will withstand the type of contact that could be made during the operation.
- 4.7.4. Each employee shall be protected from hazards that could arise from mechanical equipment contact with energized lines or equipment. The measures used shall ensure that employees will not be exposed to hazardous differences in electric potential. Unless it can demonstrate that the methods in use protect each employee from the hazards that could arise if the mechanical equipment contacts the energized line or equipment, the measures used shall include all of the following techniques:
  - 4.7.4.1. Using the best available ground to minimize the time the lines or electric equipment remain energized,
  - 4.7.4.2. Bonding mechanical equipment together to minimize potential differences,
  - 4.7.4.3. Providing ground mats to extend areas of equipotential, and
  - 4.7.4.4. Employing insulating protective equipment or barricades to guard against any remaining hazardous electrical potential differences.
4.8. Fueling

4.8.1. The operator of a gasoline or diesel powered piece of equipment shall shut off the engine before filling the fuel tank and shall ensure that the nozzle of the filling hose is in contact with the filling neck of the tank.

4.8.2. No one shall be on the equipment during fueling operations except as specifically required by design.

4.8.3. There shall be no smoking or open flames in the immediate area during fueling operation.
ORIENTATION / TRAINING

1.0 Purpose

To establish a consistent and effective process for orienting and training new employees for their job assignments.

2.0 Scope

This policy applies to all Haskell Davis JV employees, regardless of assignment. Specific orientation and training materials are provided for each work location.

3.0 Definitions

- **Orientation**: Initial overview/awareness training
- **Training**: Task specific training / evaluation of performance

4.0 Procedures

It is the policy of Haskell Davis JV to ensure that every employee is provided with sufficient knowledge about our safety and health policies and procedures, prior to their assignment to work. This policy does not replace formal or required training, but provides a basic overview of the health and safety program, related policies, and essential information needed to assist employees in making good choices.

The following topics may be covered during initial employee orientation: *NOTE: not all topics apply to all work locations, separate orientations/training may be required for employees who transfer from one work location to another.

Records shall be kept to document safety and health training for each employee by name or other identifier, training date, types of training and training providers.

4.1. Orientation Topics

- Accident prevention & reporting
- Asbestos Awareness
- Confined Space Entry
- Electrical Safety
- Environmental Policy
- Excavation/Trenching
- Fall Protection
- Fire Protection
- First Aid / CPR / BBP
- Hand/Power Tool Use
- Hazard communication (SDS)
- Hearing Conservation
• Housekeeping
• Lockout Tagout
• Material Handling
• Mobile Equipment Operation
• Personal Protective Equipment
• Project Specific Safety
• Scaffolding Safety
• Substance Abuse Policy
• Welding/Cutting/Grinding

Additional topics or subjects may be added from time to time, to address changes in regulations or specific project requirements.
PERSONAL PROTECTIVE EQUIPMENT

1.0 Purpose

To provide the requirements for hazard assessment and eye, face, head, foot, hand and hearing protective equipment selection. To establish requirements for training and selection and maintenance of various types of personal protective equipment, used by employees. To provide training relating to the proper use, care and maintenance of various types of personal protective equipment.

2.0 Scope

This policy applies to all departments, divisions, and locations of Haskell Davis JV. The initial training shall be a part of the new hire/rehire orientation and additional training shall be done as conditions or requirements change.

3.0 Definitions

- **Contaminant**: means any material, which by its own action upon, within, or to a person is likely to cause physical harm.
- **Hazard Assessment**: means an assessment of the workplace to determine if hazards are present, or likely to be present, which require the use of Personal Protective Equipment (PPE)

4.0 Procedures

Supervisors shall ensure that safe work practices are followed and that personnel use appropriate PPE properly. In the event that wearing of PPE creates a greater hazard when performing the assigned work, the supervisor shall determine the safest way to proceed. Supervisors shall also perform random inspections as appropriate.

The Job-Site Supervisor, with assistance from the Safety Department shall be responsible for performing a documented hazard assessment of each type of construction project to assure the sources of hazards are identified to workers and their supervisors. They will ensure that the proper PPE is issued and that a maintenance record is maintained as required by state and federal mandated laws.

Each employee shall be provided the appropriate personal protective equipment and shall utilize such equipment as intended/designed by the manufacturer. Any defective equipment shall be reported immediately to the supervisor and shall be removed from service.

4.1. Training

Prior to being allowed to perform work requiring the use of PPE, employees must be trained to know when to wear PPE, what PPE should be worn, how to put on, take off, and adjust any PPE that is used. Employees must be trained to know the limitations of the PPE. The training shall include the correct use,
care, and maintenance of PPE. Employees will be required to demonstrate an understanding of the following items:

- When PPE is necessary.
- How to properly don, take off, adjust and wear required PPE.
- Limitations of PPE.
- Proper use, identification of defects/wear/damages, maintenance and disposal methods for PPE.

If there is a reason to believe that an employee who has been trained does not have the required understanding and skill or there are changes in the workplace, the employee must be retrained.

All PPE training shall be documented. Training should include the employee name, the dates of training, and the training content.

4.2. Minimum Attire

All employees and visitors are required to comply with the following minimum dress/attire requirements:

- Shirts shall have a minimum 4” sleeve length;
- Pants shall be made of full-length durable materials;
- Boots shall be made of leather and suitable for construction.
- Employees shall contain or remove all loose clothing, long hair, or jewelry that could become tangled or caught in tools, equipment, or machinery, or otherwise pose a danger to the employee or a co-worker.
- Office personnel and visitors to any Haskell Davis JV production or construction operation or facility shall comply with the above minimum requirements with the exception that work boots are not required if the visit does not involve persons getting into close proximity to the work activities. All visitors must wear closed toed shoes. Slippers or “Romeo” style shoes are not allowed.

4.3. Selection

Selection of personal protective equipment (PPE) shall be based on assessment of the hazards of the job sites and the hazards the employees are likely to encounter. PPE should be used in conjunction with engineering controls, guards and good work practices.

Safety glasses (ANSI Z87) with side shields, hard hats and sturdy work boots are the required minimum PPE for all projects.

PPE shall not be altered, modified or abused in any manner which affects the intended protection features as designed by the manufacturer are. PPE shall be of the type and size, affording optimum protection and comfort for the user.

PPE shall be worn properly and maintained in good repair, relating to its physical appearance and/or sanitary condition.
PPE that is damaged or shows signs of wear, jeopardizing the protection afforded by the equipment, shall be removed from service and repaired and/or replaced.

Employee owned PPE is not allowed. Any required PPE shall be provided at no cost to the employee by Haskell Davis JV.

4.4. Care of PPE

All Personal Protective equipment, must be provided, used, and maintained in a sanitary and reliable condition.

4.5. Eye and Face Protection

Eye and face protection equipment of approved design shall be worn when engaged in all operations on Haskell Davis JV projects including fabrication shops and while performing any task unless the eye protection causes a hazard. In such instances, alternate means of eye and face protection shall be selected. Eye protection is not required while performing the normal activities in project site or corporate offices, or while in a completely enclosed vehicle or piece of equipment. If the purpose of being in the vehicle or equipment is to perform maintenance tasks, approved eye protection must be worn. Face shields, goggles and similar equipment must be of approved design and construction according to ANSI Standard Z87.1 – 1989 and marked as approved.

Dark lenses are only permitted in outside areas during daylight. They are not permitted at night or in any poorly lit areas.

Employees who wear prescription glasses and are required to wear approved eye protection shall comply with the following:

- Prescription safety glasses shall be equipped with side shields and will be marked with Z87-1 (usually marked on the temple bar).
- Mono-goggles or safety glasses can be worn over prescription glasses, providing the device does not disturb the adjustment of the prescription lenses.

Eye/face protection shall be worn properly and in good condition. Damaged eye/face protection equipment shall be replaced.

Nonflammable welding hoods with lift-up or stationary lenses, providing appropriate shade of filtered protection against ultra violet light shall be worn while welding. Approved safety glasses shall be worn under welding hoods, providing additional protection against eye injury.

While grinding and cutting with abrasive saws, safety glasses in conjunction with a full face shield shall be worn.

Sufficient cleaning stations shall be available for cleaning safety glass lenses.

Where exposure to eye injury through contact with chemicals exists, chemical resistant goggles shall be worn. Adequate eyewash/shower stations shall be available for immediate use.
4.6. Head Protection

Head protection shall be worn on all construction projects as part of the minimum required PPE in which there is the possibility of injury from impact, falling or flying objects, or from electrical shock and burns.

Hard hats must be of approved design in accordance with ANSI Z89.1 and marked as approved.

Hard hats shall be kept in good repair and in good sanitary condition. Worn or damaged liners shall be replaced, as needed. All Haskell Davis JV craft personnel shall wear ORANGE Hard Hats

Cleaning/sanitizing shall be done using warm soapy water or solutions approved by the manufacturer. Solvents, which are not approved, may seriously deteriorate the structural integrity of the shell, thereby reducing afforded protection.

4.7. Hand Protection

The company shall supply and employees are required to wear appropriate hand protection when exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns; thermal burns; and harmful temperature extremes. Gloves should be selected according to the specific work performed.

Hand protection (gloves) should not be worn where their use may create a greater hazard (i.e., exposure to rotating equipment). Hand protection should be fitted properly and be kept in good condition.

All personnel engaged in welding and burning must wear approved leather gloves.

4.8. Foot Protection

Minimum foot protection in all construction areas is sturdy, hard-soled leather work boot, covering the ankle. Employees working on particular customers projects may be required to wear ANSI Z41.1 safety Shoes. Metatarsal guards may also be required.

All footwear worn on projects shall be in good condition.

4.9. Respiratory Protection


4.10. Hearing Protection

Whenever employees are exposed to noise levels that exceed the OSHA permissible noise exposure limits as outlined below, hearing protection devices shall be provided.

<table>
<thead>
<tr>
<th>Duration per Day, Hours</th>
<th>Sound Level, Decibels</th>
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Printed copies of this policy are uncontrolled and may not reflect changes made after the above revision date
A hearing protection program has been developed to eliminate hearing loss due to the occupational exposures to noise and ensure the safest possible working environment for our employees. This program applies to all employees of the company. Areas measured with sound levels that are continuous or intermittent steady state noise levels that are greater than or equal to 85 dBA (decibels), or where peak sound levels for impact or impulse noise is greater than 140 dBA, constitute high noise areas. Personnel entering posted noise areas must wear hearing protection at all times.

### Working over or adjacent to water

When an employee is employed under conditions which expose them to a risk of drowning, they shall wear a U.S. Coast Guard approved life saving device, unless it can be shown that conditions, such as shallow water, are such that flotation would not be achieved.

Prior to and after each use, the buoyant life saving device shall be inspected for defects which would alter their strength or buoyancy. Defective units shall not be used.

Ring buoys with at least ninety feet of line shall be provided and readily available for emergency rescue operations. Distance between ring buoys shall not exceed two hundred feet.

At least one lifesaving skiff shall be immediately available at locations where employees are working over or adjacent to water. Each skiff, or skiffs, shall:

(a) Be suitable for conditions where used.

(b) Be equipped with oar locks securely attached to gunwales, oars, one boat hook, and one cork ring buoy with fifty feet of suitable line attached.

Whenever boats or skiffs cannot be used, due to swift currents, life lines close to the water surface shall be provided and, wherever practicable, a line shall be stretched across the stream with tag lines.

Where workers are transported by boat or barge, only such number of persons shall be carried that can be safely accommodated on fixed seats. Capacity showing number of persons shall be plainly marked on vessel.

All workers shall be provided with a U.S. Coast Guard approved buoyant life saving device while transported in open boats and/or barges, and where deemed necessary by the department, workers shall wear same while in transport.
POWERED INDUSTRIAL TRUCKS (FORKLIFTS)

1.0 Purpose

To provide safety requirements relating to fire protection, design, maintenance and use of powered industrial lift trucks (forklifts).

2.0 Scope

This policy applies to all Powered Industrial Trucks (PIT/Forklifts) owned, leased, or operated by Haskell Davis JV employees.

3.0 Definitions

- **Powered Industrial Truck**: means a mobile, power-propelled truck used to carry, push, pull, lift, stack or tier materials.
- **Forklift**: means an industrial vehicle with a power-operated pronged platform that can be raised and lowered for insertion under a load to be lifted and moved. Also refers directly to any one of eleven different classifications of powered industrial trucks as defined by OSHA.

*For the purposes of this policy, Powered Industrial Trucks and Forklifts are synonymous by definition.*

4.0 Procedures

It is the policy of Haskell Davis JV to ensure that only qualified personnel operate forklifts and that all forklifts are operated and maintained in accordance with current regulations.

**4.1. Responsibilities**

Supervisors shall ensure that powered industrial trucks are operated by qualified personnel in a safe manner and are maintained in a safe operating condition. This includes the performance of required inspections.

Operators shall perform a daily inspection of any powered industrial truck in their use and the inspection should remain with the truck for the duration of that day. The inspection sheet should be turned into the jobsite office and kept on file.

The Jobsite Supervisor or their designee shall assure that all required maintenance is performed and qualified personnel perform repairs.

The Jobsite Supervisor may act as the competent person if they are qualified or may designate a competent person to certify a trained and experienced operator as set forth in the qualification part of this section.
4.2. Training & Qualifications

Avoid duplicative training. A designated competent person from the job site shall administer to trained and experienced forklift operators a written examination. Upon completion of the written examination with a passing score of 70%, the competent person then shall have the employee demonstrate the requirements of the forklift performance evaluation to demonstrate their ability to drive the forklift safely.

Employees are required to be trained and certified prior to operating each specific type of equipment. All trainers must have the knowledge and ability to teach and evaluate operators. Reevaluation of each operator’s performance is required at least once every three (3) years. Mandatory refresher training shall be provided when unsafe operations are observed, after an accident, if operation a different vehicle type, changes in conditions, etc.

Trainees may operate a powered industrial truck only:

Under the direct supervision of persons who have the knowledge, training, and experience to train operators and evaluate their competence; and

Where such operation does not endanger the trainee or other employees.

Training shall consist of a combination of formal instruction (e.g., lecture, discussion, interactive computer learning, video tape, written material), practical training (demonstrations performed by the trainer and practical exercises performed by the trainee), and evaluation of the operator's performance in the workplace.

All operator training and evaluation shall be conducted by persons who have the knowledge, training, and experience to train powered industrial truck operators and evaluate their competence.

Powered industrial truck operators shall receive initial training in the following topics, except in topics which are not applicable to safe operation of the truck on the affected project.

Forklift-related topics:

- Operating instructions, warnings, and precautions for the types of truck the operator will be authorized to operate;
- Differences between the truck and the automobile;
- Truck controls and instrumentation: where they are located, what they do, and how they work;
- Counter weight and counter balance;
- Load evaluation and center of gravity;
- Engine or motor operation;
- Steering and maneuvering;
- Visibility (including restrictions due to loading);
- Fork and attachment adaptation, operation, and use limitations;
- Vehicle capacity;
• Vehicle stability;
• Any vehicle inspection and maintenance that the operator will be required to perform;
• Refueling and/or charging and recharging of batteries;
• Operating limitations;
• Any other operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicle that the employee is being trained to operate.

Only employees that have a valid, current driver’s license may be permitted to drive any type of mobile equipment.

Any employee with a current Haskell Davis JV mobile equipment card transferred from another jobsite should have a site-specific orientation/evaluation to familiarize the employee with any hazards or unique characteristics of the jobsite and any differences in the type of equipment from those that they had been previously evaluated on.

**4.3. Procedure**

Powered industrial trucks, including attachments, shall be designed for their intended use.

Powered industrial trucks shall bear a label or similar identification, indicating type of truck, and load capacity. Such identification shall be conspicuously located and legible.

Powered industrial trucks shall not be altered or modified.

Powered industrial trucks found to be defective shall be reported to the Supervisor. Those affecting safe operation of the equipment warrant tagging and immediate removal of the forklift from service.

The operator shall be the only person permitted to ride on the forklift, unless the manufacturer provides additional seating.

Personnel shall not ride on the forks or the load.

Personnel shall not walk or stand under the elevated forks of the truck.

Powered industrial trucks shall not be left unattended while the engine is running. The carriage of fixed mast forklifts and the boom of variable reach forklifts shall be lowered to the lowest possible position, the engine turned off, and brakes set prior to the operator leaving the equipment.

**4.4. Load Management**

Only stable or safely arranged loads shall be handled. Caution shall be exercised when handling off-center loads, which cannot be centered.

Loads shall be kept as low to the ground as possible during transit.

The load backrest shall be used to prevent the load from falling backwards.
Only loads within the rated capacity of the truck shall be handled.

4.5. Safety Devices
Powered industrial trucks shall be equipped with roll-over-protective-structure (ROPS) with suitable shielding (overhead) to protect the operator from falling objects. Shielding may not necessarily protect the operator from a falling capacity load.

Powered industrial trucks shall be equipped with a backup alarm which automatically activates while operating in reverse.

Lights shall be maintained in an operable condition.

Powered industrial trucks shall have an operable horn.

Seat belts shall be worn at all times by the operator.

Trailers must be chocked and secured.

4.6. Travel Management
Traffic rules shall be followed at all times.

Powered industrial trucks shall be properly controlled at all times. Horseplay, careless or reckless operation of a powered industrial truck shall not be permitted.

Cross aisles, blind spots and corners shall be approached cautiously. The operator shall slow down and sound the horn.

Pedestrians shall be given the right of way. When following pedestrians, a safe distance shall be maintained.

Loads that obstruct the operator’s vision shall be transported backwards.

Grades shall be ascended/descended slowly. Steep grades (10% or more) shall be descended with the load upgrade.

Loads shall be kept as close to the ground as possible with forks tilted back.

Dock boards and bridge plates shall be properly secured prior to driving onto them. Floor coverings such as plate or other material shall be capable of supporting the entire combined weight of the forklift and the load. Such coverings shall be secured from displacement.

Powered industrial trucks should cross railroad tracks diagonally whenever possible.

Trucks (highway), trailers and railroad cars shall have their brakes set and wheels chocked while being loaded and unloaded.

4.7. Fire Protection/Prevention
Fuel storage areas for fuel shall be controlled in accordance with OSHA / DOSH requirements.

The engine shall be turned off and allowed to cool prior to refueling.

Smoking, open flames or other ignition sources shall be restricted from fueling areas.

Spillage shall be cleaned up and properly disposed of prior to restarting the equipment. This includes on the engine or other parts of the equipment.

4.8. Attached Personnel Platforms

When using forklifts as elevated work platforms, a platform or structure built specifically for hoisting persons may be used if the following requirements are complied with:

The structure must be securely attached to the forks and must have standard guardrails and toe boards installed on all sides and be marked with the rated capacity of the platform.

The hydraulic system must be so designed that the lift mechanism will not drop faster than 135 feet per minute (pressure holding valves) in the event of a failure in any part of the system. Forklifts used for elevated work platforms must be identified as being designed for that purpose.

A safety strap must be installed or the control lever must be locked to prevent the boom from tilting.

An operator must be in control of the forklift at all times while workers are in the platform.

A means shall be provided where personnel on the platform can shut off power to the truck.

Except when inching or maneuvering at a very low speed, the forklift must not be moved from point to point while workers are in the platform.

Personnel shall wear a full body harness while using the platform. Lanyards shall be secured to the handrail or other provided anchorage point. Anchorage to points outside the platform shall not be permitted.

The use of ladders, planking, or scaffold within the platform to gain additional height, shall not be permitted.

4.9. Maintenance and Inspection

An effective maintenance program shall be instituted to detect and initiate proper corrective action(s) assuring the safe operating condition of powered industrial forklifts.

Prior to use, the operator shall perform a general inspection to identify obvious deficiencies. Deficiencies shall be reported to the supervisor. Deficiencies which present a serious injury potential or may cause considerable damage to the equipment or materials through equipment failure shall warrant immediate corrective action. In such a case, the forklift shall be danger tagged noting the problem, and removed from service.
Only qualified personnel shall make repairs to powered industrial trucks. Repairs shall be made in accordance with the manufacturer’s recommendations.

Powered industrial trucks shall be maintained in a safe operating condition with a daily inspection performed prior to being placed in service.
PROJECT SAFETY

1.0 Purpose

To establish minimum requirements for health, safety, and environmental controls at field project locations

2.0 Scope

This policy applies to work performed at field locations that are under the temporary control of Haskell Davis JV, including Sub-contractors (where applicable)

This policy does not apply to the Haskell Davis JV Home Office or Fabrication Shops

3.0 Definitions

Accident: means an undesirable event, which results in bodily injury or property damage

Incident: means an undesirable event, which does not result in injury or property damage

4.0 Procedures

It is the policy of Haskell Davis JV to ensure that all field projects have effective procedures in place to address the specific safety and health needs relevant to that project, for the protection of employees, Sub-contractors, and other personnel.

4.1. Site Specific Plan

Prior to beginning work at a field project, the Project Manager will meet with the Corporate Safety Director to review job safety requirements. This review will include scope of work, schedule, special hazards, and subcontractor scope of work.

Subcontractor submittals to be reviewed include: Safety program, site-specific safety plan, safety performance questionnaire and workers compensation rate sheet (Washington only).

If job is more than 5 days duration or 5 employees or involves special hazards, the project manager and Corporate Safety Manager will jointly prepare a site-specific safety plan using the forms provided in Haskell Davis JV Safety Manual. For larger, longer duration or especially hazardous jobs, the Corporate Safety Manager will determine whether a more detailed or elaborate site-specific safety plan is necessary.

The completed site-specific work plan for Haskell Davis JV and its Sub-contractors will be reviewed and approved prior to beginning work. A copy of this plan is to be kept on the job site at all times.

The Haskell Davis JV Superintendent is responsible for following the requirements of the site-specific safety plan, including monitoring subcontractor compliance.
4.2. Job site Safety Meetings

Documented safety meetings be conducted by foremen for their crews on a weekly basis and reported using a Job site Safety Meeting report form. Subcontractor personnel may either hold their own weekly toolbox safety meetings, or attend those held by Haskell Davis JV supervision. If separate meetings are held, subcontractor will provide Haskell Davis JV Superintendent with documentation.

4.3. Job site Inspection

4.3.1. Routine Hazard Inspections

Safety Inspections – A joint documented jobsite HSE audit consisting of at least one manager and one craft member elected by the work force as their representative shall be conducted weekly. Corrective action shall be implemented within a reasonable time period, when unsafe conditions are noted. The results of the inspection and corrective action taken will be documented and shall be reviewed with the crews at the weekly safety meeting.

Supervisors are expected to maintain continuous surveillance of their work areas to identify and correct unsafe work practices and conditions, and implement necessary safeguards for special hazards such as overhead work, crane picks, excavations, ignition sources, and radiation hazards (e.g. radiography).

General controls such as plant layout, facilities and equipment will be considered from a hazard reduction and safety standpoint. Housekeeping will be regularly inspected and corrective action taken as needed. Walking surfaces, traffic flow and illumination should be sufficient to allow safe personnel movement and emergency egress.

Tools and equipment will be inspected and maintained in safe operating condition and repaired as needed. Major equipment will be scheduled for routine preventive maintenance. Machine guarding and lockout/tag out procedures shall comply with State and Federal requirements.

Material Handling will be monitored and mechanical methods introduced where needed.

Portable fire extinguishers will be available in all work areas. Welding and other hot work activities shall be conducted in areas free of flammable or combustible material or special precautions shall be taken. Fire watch shall be used where appropriate and shall be trained and knowledgeable of their duties. Adequate ventilation including fume removal will be provided.

Emergency procedures shall be established and reviewed on a regular basis. Emergency phone numbers shall be posted near shop and office telephones. First aid supplies will be adequate and available.

4.3.2. JSA- Job Safety Analysis

Field supervisors shall go through a daily safety preview of their work, using the Haskell Davis JV JSA form. The supervisor/foreman will consider how to complete the work in the safest manner practical. The supervisor must review the completed form with all employees who will perform the work, before work actually begins and following any changes to the hazards/controls during the shift.
Each daily JSA will include the following:

- Date & Time
- Job Location
- Nature of work
- Identified Hazards
- Hazard Controls
- Employee Sign-off

After a review of the JSA, employees are encouraged to offer any input they may have to ensure a safer working environment. They are required to sign the back of the JSA indicating they have discussed the job and all associated hazards, PPE, permits, etc., required to perform the tasks in a safe and productive manner. The finalized JSA will be kept on file, throughout the project and archived for one year.

4.4. Fire Control Measures

Each job site work center/area and unit of mobile equipment in use by Haskell Davis JV will be equipped with at least one 10 lb. B-C dry chemical fire extinguisher, for immediate use on small fires. Where indicated, larger equipment may be placed in strategic locations on the site.

4.5. Emergency Procedures

Personnel safety is given top priority, over property or environmental preservation

Unless otherwise required by customer contract, response by Haskell Davis JV personnel to an emergency will be limited to sounding the jobsite alarm, or notification of designated, trained emergency response personnel, and prompt evacuation. Any further actions to minimize property or environmental damage will be evaluated by the Superintendent or Project Manager, and will be based on the circumstances, equipment and personnel available.

Fire/Explosion: Personnel on the scene must rapidly evaluate whether to attempt to fight fire with available equipment and personnel or to sound alarm and evacuate immediately.

Toxic Gas Release: Immediately sound alarm. Depending on the nature of the hazard, use appropriate respiratory protection, if available. If Haskell Davis JV personnel are in a position to take immediate action to prevent further release without endangering themselves, they should do so. Otherwise evacuate up wind to a safe area until the all clear is given.

Environmental Spill: Drum racks used for storing and dispensing hazardous liquids in quantities greater than 25 gallons, including fuels will be located in an area providing adequate spill containment. At a minimum, the area will be contained within a visqueen berm, adequate for containment of the contents of the largest single container.

Significant Spills: (greater than 5 gallons or the EPA reportable quantity, whichever is the lesser) The senior Haskell Davis JV field supervisor on the scene will notify the Haskell Davis JV Corporate Safety Manager with the following information:
• The exact location and nature of spill
• Environmental area surrounding spill
• If in or near water: Name of river, lake, stream or body of water
• Approximate amount of material spilled
• Access to area
• The Haskell Davis JV safety & loss control manager will brief Haskell Davis JV senior management and report incident to appropriate governmental agencies.

4.6. Reporting Requirements

Superintendents or safety representatives shall maintain the following records on site:

• Monthly Accident Summary Report
• Accident investigation reports (FAX copy to Haskell Davis JV Safety (360) 734-5538 within 24 hrs.)
• Report of Job Site Safety Meeting
• Record of Weekly Job Site Safety Audit
• Subcontractor held safety meetings, including attendance rosters.

Superintendent or safety representative will provide an immediate report to the Haskell Davis JV Safety Manager and Project Manager, for any serious accidents or incidents, requiring either outside response or mandated reporting to governmental agencies, which could potentially result in unfavorable media attention.

4.7. Employee Safety Concerns Reporting Procedures

It is Haskell Davis JVs intent to have all employees involved in safety. It is requested and Haskell Davis JV supports and encourages employees to report all incidents or situations which they believe or perceive could cause injury or illness.

Concerns may be reported in any of the following ways:

• Speak to job superintendent
• Weekly safety toolbox meeting
• Completing a Near-Miss Report
• Site Safety Manager
• Safety Director – Ray Pierce – (360) 676-7215

All concerns will be documented, and the superintendent is responsible to report back to the employee any resolution of the concern.

4.8. Stop Work Authority

It is the policy of Haskell Davis JV to maintain a safe and secure work environment against any risk or exposure to personal harm, property damage or adverse effects to the environment.
As such, it is the duty and the right of everyone employed and engaged by Haskell Davis JV to exercise a STOP WORK policy whenever any employee, members of the public, or the local environment are at risk. Management supports the decision of its employees in the diligent execution of this policy:

- STOP WORK shall be applied if any situation arises due to an unsafe action or behavior or omission or non-action of any party involved in the operation, and if such situation were permitted to continue, may potentially lead to the occurrence of an untoward incident;
- Any person regardless of position, seniority or discipline has the right and duty to apply the STOP WORK policy if in his/her opinion or judgment, such activity is deemed to be a potential incident;
- There shall be no blame or fault put on any employee call for a STOP WORK order even if, upon investigation, the STOP WORK was deemed unnecessary. The STOP WORK order must be applied in good faith;
- Timing is a critical factor. There should not be any delay in calling for a STOP WORK order if the need arises.

Work that has ceased due to a STOP WORK order, shall not be resumed until all safety aspects are cleared to the satisfaction of the employee who initiated the STOP WORK order or the employee responsible for the STOP WORK order to be initiated, in the first place.

Forms:

Safety Meeting Attendance Record
SAFETY MEETING AGENDA:

1. Review of any safety inspections conducted since the last safety meeting.
2. Review any new DOSH/OSHA citation(s) to assist in correction of hazards.
3. Share lessons learned from recent accident investigations.
4. Inquire about any unreported injuries, near miss events, or safety concerns.

Other Subjects Discussed:

a. 

b. 

c. 

d. 

ATTENDANCE:

Note: By Initialing this form I am certifying my attendance and that I have properly reported all on the job injuries.

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1.0 Purpose

The purpose of this Procedure is to provide the recordkeeping requirements for occupational injuries and illnesses.

2.0 Scope

This Procedure applies to all Haskell Davis JV projects and locations.

3.0 Responsibilities

It shall be the responsibility of the Construction Manager to ensure that the requirements of this Procedure are adhered to.

It shall be the responsibility of all supervisors to ensure their employees report all occupational injuries and illnesses at the time of their occurrence.

It shall be the responsibility of the SSHO to implement and ensure the adherence to the requirements of this Procedure and report violations and/or noncompliance issues to project management for immediate corrective action.

It shall be the responsibility of all employees to practice safe work habits and report all occupational injuries and illnesses at the time of their occurrence.

4.0 Procedures

4.1. Requirements

4.1.1 Haskell Davis JV shall comply with all occupational injury and illness reporting requirements established by OSHA, state worker’s compensation agencies, and the Company’s worker’s compensation insurance carrier.

4.2. Forms Required for Accidents Resulting in Injury or Illness

4.2.1 First-aid Log

4.2.1.1 When an accident involving an injury or a suspected injury occurs, appropriate and timely medical attention shall be secured for those involved. If an accident involves first-aid treatment, an entry shall be made on the First Aid Log.

4.3. Incident Investigation Report
4.3.1. The Formal Investigation Form, (described in Incident Investigation,), answering each question in sufficient detail to determine a root cause and contributing causes and assign corrective action shall be completed for each incident for which a formal investigation is warranted.

4.4. Report of Injury

4.4.1. A Report of Injury shall be completed for every accident where an employee has sustained a recordable injury or illness, has an alleged injury, or has seen a physician as a first-aid case.

4.4.2. The Report of Injury shall be distributed as follows:

- Original - Claim's office of the Company's worker's compensation insurance carrier handling the claims for the location of the accident within 48 hours of the incident. The claims officer shall forward a copy to the state’s designated agency.
- Copy - HSE professional's project file (where it can be reviewed by OSHA)
- Copy - Injured employee's file
- Copy - Corporate HSE Manager within 48 hours of the incident.

4.5. OSHA 300 Log

4.5.1. Haskell Davis JV shall, strictly adhere to 29 CFR 1904 for determining the recordability and recordkeeping of occupational injuries and illnesses.

4.5.2. Within seven (7) calendar days of receiving information that a recordable injury or illness has occurred and entry shall be made on the OSHA 300 Log and 301 Incident Report forms.

4.5.3. If questions arise regarding recordability, the project Safety Manager shall present the facts of the case to the Corporate Safety Director for a determination.

4.5.4. Any attempt to falsify the records of Haskell Davis JV shall result in disciplinary action, up to and including termination.

4.5.5. At the end of each year a copy of the OSHA 300 and OSHA 300A Logs shall be signed by the Corporate Safety Director.

4.5.6. A copy of the annual OSHA summary of injuries and illness shall be posted in each establishment in a conspicuous place or places where notices to employees are customarily posted. The posted annual summary shall not be altered, defaced or covered by any other material.

4.5.7. The annual OSHA summary of injuries and illness shall be posted no later than February 1st of the year following the year covered by the records and the posting shall be kept in place until April 30th.

4.6. Request for Medical Opinion and Release to Return to Work

Printed copies of this policy are uncontrolled and may not reflect changes made after above revision date.
4.6.1. When an employee is sent to a physician, the Haskell Davis JV Request for Medical Opinion and Release to Return to Work shall be sent with the employee. An employee shall not be allowed to return to work without a return to work release from the physician.

4.7. Request for access to Medical and/or Exposure Records

4.7.1. When an employee's medical files are requested, the injured worker shall sign the Request for Access to Medical and Exposure Records and this document shall be maintained on file with the employee's records.

4.8. Establishing an individual injury/worker's compensation file

4.8.1. In order to ensure that records are maintained in a consistent and useful manner, Haskell Davis JV requires that individual injury/worker's compensation files be established in the following manner.

4.8.1.1. The file label shall read:

- Employee Name  Date of injury  Claim #

All information relating to the injury shall be placed in this file.

5.0  Record Retention

5.1. OSHA Records

5.1.1. OSHA 300 Logs, the privacy case lists, the annual summary, and the OSHA 301 Incident Report forms shall be retained for a minimum of five (5) years.

5.2. Formal Investigation Report

5.2.1. The original Investigation Report shall be filed in the injured person's workers compensation file. This form shall be retained for a minimum of 7 years.

5.3. Report of Injury

5.3.1. A copy shall be placed in the injured person's workers compensation file, which shall be archived for 30 years after the worker leaves employment.

5.4. Physician's Reports

5.4.1. Reports from physicians shall be placed in the injured person's workers compensation file, which shall be archived for 30 years after the worker leaves employment.

5.5. Physician's Release

5.5.1. When a physician releases a patient to return to work, they shall complete a Return to Work Form, indicating if the employee has restrictions or if the employee is being given a full release. If the employee does have restrictions imposed by the physician, then a full release shall be obtained when those restrictions are lifted.
5.5.2. The original form, which has been returned from a physician, shall be placed in an injured person's permanent workers compensation file, which shall be archived for 30 years after the worker leaves employment.
RESPIRATORY PROTECTION

6.0 Purpose

This Respiratory Protection Program was developed to ensure the safest possible working environment for our employees. The purpose of this policy is to establish respiratory protection requirements for the selection, issuance, use, inspection, cleaning, storage and repair of respirators used to control employee exposures to air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays or vapors and oxygen deficient atmospheres.

7.0 Scope

The respiratory protection program covers all employees who may require the use of respiratory protection. Respirators and medical evaluations shall be of no cost to the employee. Training will be conducted annually.

The use of respirators is required when occupational exposure levels exceed OSHA Permissible Exposure Limits (PELs) and engineering or administrative exposure controls are not feasible to implement.

The voluntary use of dust masks (filtering face piece respirators) is permissible in atmospheres that are not hazardous. Prior to use of the voluntary respirators (including filtering face pieces), they must be evaluated and approved by the respiratory program administrator to ensure that the respirator use will in itself not create a hazard. If filtering face piece respirators are used, Haskell Davis JV shall provide the users with the information contained in Appendix D of OSHA Standard 29 CFR 1910.134.

The program is administered by the Haskell Davis JV Corporate Safety Director or designee who has the knowledge and experience to understand OSHA's respiratory protection standard (29 CFR 1910.134), evaluate respiratory hazards at the facility/project, select appropriate respirators based on facility/project hazards or potential hazard, and train employees on the use of selected respirators.

8.0 Definitions

- **Air Purifying Respirator**: means a respirator in which the ambient air is passed through an air-purifying element that removes the contaminant(s). The air is passed through the air-purifying element by inhaling or pulled through by a blower.

- **Filtering Facepiece (dust mask)**: means a negative pressure particulate respirator with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium, e.g. 3M 8210 Dust/Mist Respirator.

- **High Efficiency Particulate Air Filter (HEPA)**: means a filter that removes from the air 99.9% or more of the aerosols having a diameter of 0.03 microns or greater.
• **Immediately Dangerous to Life or Health (IDLH):** means any condition that poses an immediate threat of irreversible adverse health effects that would interfere with an individual’s ability to escape unaided from an area (e.g., atmospheres with less than 19.5% or greater than 23.5% oxygen and/or atmospheres containing dangerous airborne concentrations of hazardous materials).

• **Permissible Exposure Limit (PEL):** means the maximum acceptable exposure concentration permitted for a particular substance often averaged over a period of 8 hours. The PEL is a defined limit enforced by OSHA.

• **Self-Contained Breathing Apparatus (SCBA):** means an atmosphere supplying respirator for which the breathing air source is designed to be carried by the user.

• **Supplied –Air Respirator (SAR) or Airline Respirator:** means an atmosphere supplying respirator for which the source of breathing air is drawn from a separate, stationary system or an uncontaminated environment.

• **Time Weighted Average (TWA):** means the average concentration of a particular contaminant averaged over a specific time period—usually 8 hours.

• **User Seal Check:** means an action conducted by the respirator user to determine if the respirator is properly seated to the face.

### 9.0 Procedures

#### 9.1. Respirator Use

Respirators are to be used only if it has been determined that engineering control measures are not feasible or during emergency situations with high exposure. Respirators and filter cartridges shall be provided which are applicable and suitable for the intended purpose, hazards and atmosphere where they will be used.

#### 9.2. Employee Respirator Training

Each employee required to wear a respirator shall receive annual training on the selection, use, maintenance and limitations of the specific respirators to be used for controlling contaminated air. This training shall be provided as part of initial and annual respiratory protection training. Retraining of employees shall also be performed when the following situations occur:

- A change in the workplace or type of respirator shall render the previous training obsolete.
- Inadequacies in the employee’s knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill.
- Any other situation arises in which retraining appears necessary to ensure safe respirator use.

Training is done by the Haskell Davis JV Safety Department before employees wear their respirators and annually thereafter as long as they wear respirators. Our supervisors who wear respirators or supervise employees who do, will also be trained on the same schedule.

Additional training will also be done when an employee uses a different type of respirator or workplace conditions affecting respiratory hazards or respirator use have changed.
Training will cover the following topics:

- Why the respirator is necessary,
- The respirator’s capabilities and limitations,
- How improper fit, use or maintenance can make the respirator ineffective,
- How to properly inspect, put on, seal check, use, and remove the respirator,
- How to clean, repair and store the respirator or get it done by someone else,
- How to use a respirator in an emergency situation or when it fails,
- Medical symptoms that may limit or prevent respirator use,
- Respiratory hazards to which employees are potentially exposed during routine and emergency situations,

9.3. Responsibilities

9.3.1. Management
- Provide sufficient resources for the successful application of this policy,
- Periodically review and update policy,
- The Safety Manager shall assist supervisors and employees in determining if their respiratory protection meets the requirements of this policy,
- The Safety Manager or his designee shall be responsible for maintaining respiratory protection records and shall be responsible for coordinating respiratory questionnaires and health examinations.

9.3.2. Supervision
- Enforce the content of this policy in accordance with Haskell Davis JV guidelines,
- Supervisors shall ensure that all employees are trained and fit tested annually,
- Be aware of the company’s Respiratory Protection Policy,
- Assist employees with respirator selection.

9.3.3. Employee
- Comply with the guidelines of this policy,
- The employee shall use the provided respiratory protection in accordance with instructions and training received in this policy,
- The employee shall guard against damage to the respirator,
- Notify tool room attendant of damage prior to use,
- When not in use the respirator shall be stored in the bag provided.

9.4. Employee Qualifications for Respirator Use

9.4.1. Medical Evaluation

Each employee, assigned tasks requiring the use of respirators, shall complete a respirator use questionnaire and/or receive a respiratory health examination. The respiratory questionnaire shall be
completed by the employee and reviewed by a professional licensed health care professional to determine that the employee is medically capable of wearing a respirator. If any of the mandatory questions are answered positively, the professional licensed health care professional shall seek additional information, discuss the results and/or require a physical examination. All questionnaires and medical evaluations shall be confidential.

9.4.2. Fit Testing

Employees wearing respirators with tight-fitting face pieces including Supplied Air Respirators (SARs) and Self-Contained Breathing Apparatus (SCBAs) shall be fit tested to ensure that selected respirators achieve a proper face to face piece seal.

Fit testing shall be performed before initial use of the selected respirator, whenever respirator size, make, or model is changed, and at least annually thereafter. Fit testing requirements shall comply with respiratory protection program requirements.

Every respirator wearer shall receive a qualitative (e.g., irritant smoke, saccharin solution or isoamyl acetate banana oil) or quantitative fit tests (Porta-Count® or Dynatech® Fit Testing Instruments) and fitting instructions including demonstrations and practice in how the respirator should be worn, how to adjust it, and how to determine if it fits properly (user seal check).

9.4.3. Facial Hair

The wearing of face piece respirators requires being clean-shaven, with no facial hair that interferes with the sealing surface of the face piece, or the operation of the inhalation or exhalation valves. All respirator wearers shall be clean-shaven.

9.4.4. Corrective Lenses

Eyeglasses with temple bars that extend through the sealing surface of a full-face piece respirator shall not be worn with a full-face piece respirator.

9.5. Evaluation of Workplace Respiratory Hazards

The following criteria shall be used to determine if respiratory protection is required.

When the SDS sheet of the substance you are working with recommends the use of respiratory protection.

A PPE hazard assessment or Haskell Davis JV’s /Client’s past exposure monitoring records indicate respiratory protection is required for a job or location.
9.7. Voluntary Respirator Use
Employees have the right to wear a respirator if they feel it is necessary. However, a medical evaluation, training and a fit test must be performed prior to an employee wearing a respirator. Additionally, employees who voluntarily use any respirator must be provided with Appendix D to Section 1910.134. This is mandatory information for employees using respirators when not required.

9.8. Respirator Selection
The appropriate respirators shall be selected from among those approved and certified by NIOSH/MSHA. Appropriate respirator cartridges shall be selected by utilizing the manufacturers’ cartridge selection guidelines. Types of respirators issued by Haskell Davis JV include, but are not limited to, 3M 6200, 3M 7000, North 7700 air purifying respirators, Scott Air-Pak 2.2 SCBA and Scott 804072-12 supplied air respirator.

Appropriate surveillance shall be maintained of work area conditions and the degree of employee exposure or stress that would affect respirator effectiveness.

9.9. General Requirements
Each employee shall inspect the respirator before each use. The straps, facepiece, valve assemblies, covers, cartridges, hoods, helmets, hoses, fittings and regulators should be examined for defects or malfunctions. Any defective or malfunctioning respirator shall not be used until properly repaired or replaced.

Employees shall perform a 10-second negative pressure test and a 10-second positive pressure test before each use of negative pressure respirators. Respirators that do not successfully pass this field test shall not be used.

Employees using respiratory protection must leave the contaminated area if they detect filter breakthrough or resistance and to wash or change cartridges.

Respirators shall be used according to manufacturers’ instructions and only in their NIOSH/MSHA approved configuration.

Air purifying respirators shall not be used in oxygen deficient atmospheres (containing less than 19.5% oxygen).

9.10. Work in IDLH Atmospheres
Self-Contained Breathing Apparatus (SCBA) operated in the pressure demand mode shall be used only for entry into Immediately Dangerous to Life or Health (IDLH) or unknown atmospheres. IDLH atmospheres can be those with less than 19.5% oxygen and/or those that contain dangerous airborne concentrations of a hazardous material.

If Supplied Air Respirators (SAR) are used in IDLH atmospheres, the wearer must be equipped with emergency escape bottles.
Anyone working in an IDLH atmosphere must be equipped with retrieval equipment.

Anyone wearing a Supplied Air Respirator or a Self-Contained Breathing Apparatus must be properly trained in their use. Refer to the Supplied Air Respirator Policy of this manual for further instructions.

9.11. Respirator Inspection

All respirators shall be inspected routinely before each use by the wearer. Respirator inspection shall include a check of the tightness of connections and condition of the facepiece, headbands, valves, connection tubes, canisters, and hoses. Rubber and elastomeric parts shall be inspected for pliability and signs of deterioration.

9.12. Respirator Cleaning and Storage

Respirators shall be cleaned and disinfected after each use to ensure that proper protection is provided for the wearer. Respirators shall be cleaned and disinfected according to instruction by the manufacturer. Respirators shall be stored after each use, in a sealed container or plastic bag to protect them from the environment. Respirators shall be stored after each use, in a manner that protects them from deformation such as being crushed by heavy objects.

9.13. Respirator Repair or Disposal

Only qualified personnel shall do replacement or repairs with parts designed for the respirator. No attempt shall be made to replace components or to make adjustments or repairs beyond the manufacturer’s recommendations. After repairs are made, respirators shall be cleaned, inspected and properly stored. When a respirator is deemed un-useable it shall be destroyed and disposed of.


We evaluate our respiratory program for effectiveness using the following steps:

- Checking fit-test results and health provider evaluations.
- Talking with employees who wear respirators about their respirators – how they fit, do they feel they are adequately protecting them, do they notice any difficulties in breathing while wearing them, do they notice any odors while wearing them, etc.
- Periodically checking employee job duties for changes in chemical exposure.
- Periodically checking maintenance and storage of respirators.
- Periodically checking how employees use their respirators.

9.15. Recordkeeping

The following records will be kept:

- A copy of this completed respirator program,
- Results of the Qualitative Fit Test (QLFT) or Quantitative Fit Test (QNFT) administered including:
  1. The name or identification of the employee tested,
  2. Type of fit test performed and name of the test administrator,
  3. Specific make, model, style, and size of respirator tested,
4. Date of test; and,
5. The pass/fail results for QLFTs or the fit factor and recording of the test results for QNFTs.

- Employee training records,
- Medical evaluation results shall be retained and made available as needed,
- Fit test records shall be maintained for respirator users until the next fit test is administered,
- The records will be kept at the Haskell Davis JV Corporate Office or Project Site Office.

10.0 Appendix D to Sec. 1910.134 Mandatory Information for Employees Using Respirators When Not Required

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirator's limitations.

2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.

3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.

4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.
SAFETY RESPONSIBILITIES

1.0 Purpose

This guideline will help to ensure that our Health-Safety-Environmental policies and procedures are developed and administered efficiently and effectively and will provide additional support to our overall commitment to safety, at all levels of the organization.

2.0 Scope

This policy applies to work performed by all departments, divisions, and work locations under the control of Haskell Davis JV, including Sub-contractors (where applicable).

3.0 Definitions

- **Management Team**: means the following:
  - President, Vice-President, Chief Financial Officer
  - Project sponsors, Project Managers, Shop Managers
  - SSHO, Safety Manager, Quality Manager, Accounting Manager

- **Supervisor**: includes FOREMEN, SUPERINTENTENTS, GENERAL FOREMEN, GENERAL SUPERINTENDENTS, and LEADMEN or other assigned individual that is responsible for the work of another employee.

4.0 Procedures

Each person assigned a title above, will be familiar with their responsibilities as listed herein, and be fully prepared and are duly authorized to take action on behalf of Haskell Davis JV, to ensure that our policies and procedures are administered in accordance with the Haskell Davis JV INJURY AND ILLNESS PREVENTION PROGRAM (IIPP).

4.1. Responsibilities

Haskell Davis JV has established the following health and safety accountabilities, to ensure the protection of employees from harm. Every employee will comply with safe and healthy work practices by incentives, training, re-training programs and disciplinary programs.

**Management Team Responsibilities**

- Provide a safe working environment for our employees and Sub-contractors
- Develop and administer a Health, Safety, and Environmental management program that meets or exceeds applicable requirements
- To make health, safety, and environmental protection a fundamental part of pre-construction job planning
- To initiate and implement corrective actions, to mitigate identified safety concerns
ACCIDENT PREVENTION PROGRAM

SAFETY RESPONSIBILITIES

- Provide workers and supervisors with adequate training and instruction, to do their jobs in a safe and efficient manner
- Revise policies and procedures on a regular basis, to ensure compliance with regulations

Superintendents

- Superintendents are expected to implement the safety program at each job location
- The Superintendent will designate competent persons for certain tasks, as required
- Conduct weekly safety meetings with foremen
- Routinely conduct weekly Health, Safety and Environmental Audits
- Correct and report any identified deficiencies
- Review audit deficiencies and corrections at weekly Tool Box meetings
- Set a personal example of safe behavior
- Ensure that employees get the proper training for the job at hand
- Ensure that all incidents, near misses, environmental issues are investigated, resolved and followed through to completion
- Observe environmental practices and make sure they comply with Haskell Davis JV Safety and Environmental policies.

General Foremen, Foremen/Supervisors

- Conduct daily safety meetings (JSA reviews) with their crews
- Set a personal example of safe behavior
- Enforce company safety and environmental rules
- Ensure that employees use assigned/required PPE properly
- Foremen are responsible to ensure employees have been trained on safe work procedures
- Participate in the investigation of accidents and near miss incidents affecting their crew or work.
- Assure that injured workers receive timely, proper medical treatment
- Correct all unsafe conditions and activities immediately and report those which cannot be corrected to the General Foreman or Superintendent
- Contribute ideas and suggestions for improving the safety program
- Initiate disciplinary action within work crew when appropriate (e.g. repeated violations, gross negligence, and willful disregard for safety requirements)
- Additional duties may be added to the above list as the company requires, but the specific duties outlined above should be considered a minimum

Employees/Crafts

- As a condition of employment all employees are expected to work safely and to follow established policies, procedures and work practices to ensure that their safety and health, and that of their fellow workers, is not jeopardized
- Correct all unsafe conditions and work practices immediately and report those which cannot be corrected to your supervisor
- Be aware of environmental requirements of Haskell Davis JV Safety manual
- Learn to recognize and minimize any potential environmental incidents

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ACCIDENT PREVENTION PROGRAM

SAFETY RESPONSIBILITIES

• Clean up and report all spills to foreman
• Report all incidents, injuries, or other unexpected events immediately to supervisor
• Cooperate with others at all times
• Ask for information or assistance when unsure
• STOP WORK- if imminent danger/hazard is observed or likely

Corporate Safety Manager

• Responsible and authorized with overall accountability for this injury and illness prevention program.
• Contribute to company growth by developing and implementing a comprehensive safety program, focused on minimizing the frequency and severity of accidents, injuries and occupational illnesses
• Coordinate safety activities of project managers, supervisors and safety committees
• Establish measurement and accountability for supervisory safety performance
• Investigate and evaluate business operations to develop corporate accident prevention and loss control programs, policies and procedures
• Provide technical support to project managers in preparing bid responses and participate in planning to integrate safety considerations into project
• Periodically visit project job sites to evaluate safety and environmental program effectiveness, identify accident producing conditions, and develop and assure implementation of corrective actions
• Establish and maintain OSHA records
• Develop safety training and orientations for new employees and supervisors
• Interview, select, train and supervise site safety supervisors
• Function as designated site safety representative if necessary
• Develop policies and procedures necessary to assure employees (including supervisors) are screened, evaluated, and selected based on their ability to work safely
• Assist with applicant interviewing and selection, employee counseling, and general personnel project work as assigned
• Develop professional business relationship with customer and competitor safety counterparts and other key management personnel to establish and maintain a strong and favorable company image
• Maintain the Haskell Davis JV Safety Policy Manual and update as needed.
• Implement training for supervision to ensure compliance with code requirements

Site Safety and Health Officer (SSHO)

• The SSHO shall support implementation of company safety and environmental programs at assigned job sites
• Prepare and submit incident reports to Haskell Davis JV and Client as needed
• They shall provide on-site management representation for safety function
• Assist the Superintendent and Foremen in fulfilling their safety responsibilities
• Conduct ongoing surveillance of job site to detect unsafe work practices and conditions, identify necessary corrective actions, and implement through line management whenever possible except in cases of imminent peril

Printed copies of this policy are uncontrolled and may not reflect changes made after the above revision date
• Observe environmental practices and make sure they comply with Haskell Davis JV policies
• Conduct a weekly Safety and Environmental Audit
• Review audit deficiencies and corrections at weekly Tool Box meeting
• Establish a cooperative working relationship with customer management and safety personnel, and attend customer safety meetings as Haskell Davis JV representative
• Evaluate requirements for safety supplies including company issued personal protective equipment and first aid supplies, coordinate with Haskell Davis JV Corporate Safety Manager and establish and maintain adequate quantities at job site
• Issue personal protective equipment
• Provide necessary training, including respirator fit tests
• Establish and maintain required jobsite records (training, accident, etc.)
• Provide support to foremen for planning and organizing their required weekly "job site" safety meetings. Attend these meetings whenever possible, and actively participate from time to time at own discretion
• Act as the lead investigator for serious injuries
• Coordinate with injured employees to minimize impact of injury
• Be the primary point of contact for OSHA/DOSH/CAL-OSH inspectors
SILICA

1.0 PURPOSE

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

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

2.0 SCOPE

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

3.0 RESPONSIBILITIES

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

3.1. Safety Department:

- Conduct job site assessments for Silica containing materials and perform employee Respirable Crystalline Silica hazard assessments in order to determine if an employee’s exposure will be above 25 μg/m\(^3\) as an 8-hour TWA under any foreseeable conditions.
- Select and implement the appropriate control measures in accordance with the Construction Tasks identified in OSHA’s Construction Standard Table 1; and, when warranted, including a
written Exposure Control Plan (ECP), exposure monitoring, Hazard Communication training, medical surveillance, housekeeping and others.

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

- Ensure that the materials, tools, equipment, personal protective equipment (PPE), and other resources (such as worker training) required to fully implement and maintain this Respirable Crystalline Silica Program are in place and readily available if needed.
- Ensure that Project Managers, Site Managers, Competent Persons, and employees are educated in the hazards of Silica exposure and trained to work safely with Silica in accordance with OSHA’s Respirable Crystalline Silica Construction Standard and OSHA’s Hazard Communication Standard. Managers and Competent Persons may receive more advanced training than other employees.
- Maintain written records of training (for example, proper use of respirators), ECPs, inspections (for equipment, PPE, and work methods/practices), medical surveillance (under lock and key), respirator medical clearances (under lock and key) and fit-test results.
- Conduct an annual review (or more often if conditions change) of the effectiveness of this program and any active project ECP’s that extend beyond a year. This includes a review of available dust control technologies to ensure these are selected and used when practical.
- Coordinate work with other employers and contractors to ensure a safe work environment relative to Silica exposure.

3.2. Project Manager:

- Ensure all applicable elements of this Respirable Crystalline Silica Program are implemented on the project including the selection of a Competent Person.
- Assist the Safety Department in conduct job site assessments for Silica containing materials and perform employee Respirable Crystalline Silica hazard assessments in order to determine if an ECP, exposure monitoring, and medical surveillance is necessary.
- Assist in the selection and implementation of the appropriate control measures in accordance with the Construction Tasks identified in OSHA’s Construction Standard Table 1; and potentially including (but not limited to) - a written Exposure Control Plan (ECP), exposure monitoring, Hazard Communication training, medical surveillance, housekeeping and others.
- Ensure that employees using respirators have been properly trained, medically cleared, and fit-tested in accordance with the company’s Respiratory Protection Program. This process will be documented.
- Ensure that work is conducted in a manner that minimizes and adequately controls the risk to workers and others. This includes ensuring that workers use appropriate engineering controls, work practices, and wear the necessary PPE.
- Where there is risk of exposure to Silica dust, verify employees are properly trained on the applicable contents of this program, the project-specific ECP, and the applicable OSHA Standards (such as Hazard Communication). Ensure employees are provided appropriate PPE when conducting such work.

3.3. Competent Person and/or Site Manager (Superintendent, Foreman, etc.)

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

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

4.0 DEFINITIONS

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

Action Level means a concentration of airborne Respirable Crystalline Silica of 25 μg/m³, calculated as an 8-hour TWA.

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

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

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

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

Permissible Exposure Limit (PEL) means the employer shall ensure that no employee is exposed to an airborne concentration of Respirable Crystalline Silica in excess of 50 μg/m³, calculated as an 8-hour TWA.

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

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

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

5.0 REQUIREMENTS

5.1. Specified Exposure Control Methods

When possible and applicable, Haskell Davis JV will conduct activities with potential Silica exposure to be consistent with OSHA’s Construction Standard Table 1. Supervisors will ensure each employee under their supervision and engaged in a task identified on OSHA’s Construction Standard Table 1 have fully and properly implemented the engineering controls, work practices, and respiratory protection specified for the task on Table 1 (unless Haskell Davis JV has assessed and limited the exposure of the employee to Respirable Crystalline Silica in accordance with the Alternative Exposure Control Methods Section of this program).
<table>
<thead>
<tr>
<th>Construction Task or Equipment Operation</th>
<th>Engineering and Work Practice Control Methods</th>
<th>Required Respiratory Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Stationary masonry saws</td>
<td>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.</td>
</tr>
<tr>
<td>2a</td>
<td>Handheld power saws (any blade diameter) when used outdoors</td>
<td>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.</td>
</tr>
<tr>
<td>2b</td>
<td>Handheld power saws (any blade diameter) when used indoors or in an enclosed area</td>
<td>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.</td>
</tr>
<tr>
<td>3</td>
<td>Handheld power saws for cutting fiber-cement board (with blade diameter of 8 inches or less) for tasks performed outdoors only</td>
<td>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.</td>
</tr>
<tr>
<td>4a</td>
<td>Walk-behind saws when used outdoors</td>
<td>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.</td>
</tr>
<tr>
<td>4b</td>
<td>Walk-behind saws when used indoors or in an enclosed area</td>
<td>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.</td>
</tr>
<tr>
<td>5</td>
<td>Drivable saws for tasks performed outdoors only</td>
<td>Use saw equipped with integrated water delivery system that continuously feeds water to the blade.</td>
</tr>
</tbody>
</table>
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### SILICA

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<tr>
<td></td>
<td></td>
<td>≤ 4 hours/shift</td>
</tr>
<tr>
<td>6 Rig-mounted core saws or drills</td>
<td>• Operate and maintain tool in accordance with manufacturer’s instructions to minimize dust emissions.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>• Use tool equipped with integrated water delivery system that supplies water to cutting surface.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Operate and maintain tool in accordance with manufacturer’s instructions to minimize dust emissions.</td>
<td></td>
</tr>
<tr>
<td>7 Handheld and stand-mounted drills</td>
<td>• Use drill equipped with commercially available shroud or cowling with dust collection system.</td>
<td>None</td>
</tr>
<tr>
<td>(including impact and rotary hammer drills)</td>
<td>• Operate and maintain tool in accordance with manufacturer’s instructions to minimize dust emissions.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 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.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Use a HEPA-filtered vacuum when cleaning holes.</td>
<td></td>
</tr>
<tr>
<td>8 Dowel drilling rigs for concrete</td>
<td>• Use shroud around drill bit with a dust collection system.</td>
<td>N95 (or Greater Efficiency) Filtering Facepiece or Half Mask</td>
</tr>
<tr>
<td>performed outdoors only</td>
<td>• Dust collector must have a filter with 99% or greater efficiency and a filter cleaning mechanism.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Use a HEPA-filtered vacuum when cleaning holes.</td>
<td></td>
</tr>
<tr>
<td>9a Vehicle-mounted drilling rigs for</td>
<td>• 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.</td>
<td>None</td>
</tr>
<tr>
<td>rock and concrete</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9b Vehicle-mounted drilling rigs for</td>
<td>• Operate from within an enclosed cab and use water for dust suppression on drill bit.</td>
<td>None</td>
</tr>
<tr>
<td>rock and concrete</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10a Jackhammers and handheld powered</td>
<td>• Use tool with water delivery system that supplies a continuous stream or spray of water at the point of impact.</td>
<td>None</td>
</tr>
<tr>
<td>chipping tools when used outdoors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10b Jackhammers and handheld powered</td>
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# ACCIDENT PREVENTION PROGRAM

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<td>≤ 4 hours/shift</td>
<td>&gt;4 hours/shift</td>
</tr>
</tbody>
</table>
| 10c Jackhammers and handheld powered chipping tools when used outdoors                                      | • 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. | None                                                                                                           |
| 10d Jackhammers and handheld powered chipping tools when used indoors or in an enclosed area                 | • 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. | N95 (or Greater Efficiency) Filtering Facepiece or Half Mask                                                  |
| 11 Handheld grinders for mortar removal (i.e., tuckpointing)                                                | • Use grinder equipped with commercially available shroud and dust collection system.  
• Operate and maintain tool in accordance with manufacturer’s instructions to minimize dust emissions.  
• Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism. | N95 (or Greater Efficiency) Filtering Facepiece or Half Mask                                                  |
|                                                                                                               |                                                                                                                                  | Powered Air-Purifying Respirator (PAPR) with P100 Filters                                                  |
| 12a 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.     | None                                                                                                           |
| 12b Handheld grinders for uses other than mortar removal when used outdoors                                | • 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.     | None                                                                                                           |
<table>
<thead>
<tr>
<th>Construction Task or Equipment Operation</th>
<th>Engineering and Work Practice Control Methods</th>
<th>Required Respiratory Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>≤ 4 hours/shift</td>
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</tbody>
</table>
| 12c Handheld grinders for uses other than mortar removal when used indoors or in an enclosed area | • 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. | None | N95 (or Greater Efficiency) Filtering Facepiece or Half Mask |
| 13a 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. | None | None |
| 13b Walk-behind milling machines and floor grinders | • 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 |
| 14 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 |
| 15a 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. | None | None |
<p>| 15b Large drivable milling machines (half-lane and larger) for cuts of | • Use machine equipped with exhaust ventilation on drum enclosure and supplemental water sprays designed to suppress dust. | None | None |</p>
<table>
<thead>
<tr>
<th>Construction Task or Equipment Operation</th>
<th>Engineering and Work Practice Control Methods</th>
<th>Required Respiratory Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>four inches in depth or less on any substrate</td>
<td>• Operate and maintain machine to minimize dust emissions.</td>
<td>≤ 4 hours/shift</td>
</tr>
</tbody>
</table>
| Large drivable milling machines (half-lane and larger) for cuts of four inches in depth or less on any substrate | • 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 |
| 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 |
| 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 | • Operate equipment from within an enclosed cab. | None | None |
| 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 | • 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 |
| Heavy equipment and utility vehicles for tasks such as grading and excavating but not including demolishing, | • Apply water and/or dust suppressants as necessary to minimize dust emissions. | None | None |
### Construction Task or Equipment Operation

<table>
<thead>
<tr>
<th>Construction Task or Equipment Operation</th>
<th>Engineering and Work Practice Control Methods</th>
<th>Required Respiratory Protection</th>
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<tr>
<td>abrading, or fracturing silica-containing materials</td>
<td></td>
<td>≤ 4 hours/shift</td>
</tr>
</tbody>
</table>

18b Heavy equipment and utility vehicles for tasks such as grading and excavating but not including demolishing, abrading, or fracturing silica-containing materials

- When the equipment operator is the only employee engaged in the task, operate equipment from within an enclosed cab.

|  |  | ≤ 4 hours/shift | None | >4 hours/shift | None |

When implementing the control measures specified in Table 1, Haskell Davis JV shall:

- For tasks performed indoors or in enclosed areas; provide a means of exhaust as needed to minimize the accumulation of visible airborne dust;
- For tasks performed using wet methods, apply water at flow rates sufficient to minimize release of visible dust;
- For measures implemented that include an enclosed cab or booth, ensure that the enclosed cab or booth:
  - Is maintained as free as practicable from settled dust;
  - Has door seals and closing mechanisms that work properly;
  - Has gaskets and seals that are in good condition and working properly;
  - Is under positive pressure maintained through continuous delivery of fresh air;
  - Has intake air that is filtered through a filter that is 95% efficient in the 0.3-10.0 μm range (e.g., MERV-16 or better); and
  - Has heating and cooling capabilities.
- Where an employee performs more than one task included on OSHA’s Construction Standard Table 1 during the course of a shift, and the total duration of all tasks combined is more than four hours, the required respiratory protection for each task is the respiratory protection specified for more than four hours per shift. If the total duration of all tasks on Table 1 combined is less than four hours, the required respiratory protection for each task is the respiratory protection specified for less than four hours per shift.

### 5.2. Alternative Exposure Control Methods

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

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

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

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

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

Within five working days after completing an exposure assessment, Haskell Davis JV will individually notify each affected employee in writing of the results of that assessment or post the results in an appropriate location accessible to all affected employees.
Whenever an exposure assessment indicates that employee exposure is above the PEL, Haskell Davis JV will describe in the written notification the corrective action being taken to reduce employee exposure to or below the PEL.

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

Once air monitoring has been performed, Haskell Davis JV will determine its method of compliance based on the monitoring data and the hierarchy of controls. Haskell Davis JV will use engineering and work practice controls to reduce and maintain employee exposure to Respirable Crystalline Silica to or below the PEL, unless Haskell Davis JV 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, Haskell Davis JV will nonetheless use them to reduce employee exposure to the lowest feasible level and shall supplement them with the use of respiratory protection.

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

5.3. Control Methods

Haskell Davis JV will provide control methods that are either consistent with Table 1 or otherwise minimize worker exposures to Silica. These exposure control methods can include engineering controls, work practices, and respiratory protection.

5.4. Respiratory Protection

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

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

- Where exposures exceed the PEL during periods necessary to install or implement feasible engineering and work practice controls;
- Where exposures exceed the PEL during tasks, such as certain maintenance and repair tasks, for which engineering and work practice controls are not feasible; and
- During tasks for which an employer has implemented all feasible engineering and work practice controls and such controls are not sufficient to reduce exposures to or below the PEL.

Housekeeping

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

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

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

5.5. Written Exposure Control Plan

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

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

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

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

5.6. Medical Surveillance

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

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

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

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

Haskell Davis JV will ensure that the examining PLHCP has a copy of the OSHA Respirable Crystalline Silica Construction Standard, this program, and the following information:

• A description of the employee's former, current, and anticipated duties as they relate to the employee's occupational exposure to Respirable Crystalline Silica;
• The employee's former, current, and anticipated levels of occupational exposure to Respirable Crystalline Silica;
• A description of any personal protective equipment (PPE) used or to be used by the employee, including when and for how long the employee has used or will use that equipment; and
• Information from records of employment-related medical examinations previously provided to the employee and currently within the control of Haskell Davis JV.

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

• A statement indicating the results of the medical examination, including any medical condition(s) that would place the employee at increased risk of material impairment to health from exposure to Respirable Crystalline Silica and any medical conditions that require further evaluation or treatment;
• Any recommended limitations on the employee's use of respirators;
• Any recommended limitations on the employee's exposure to Respirable Crystalline Silica; and
• A statement that the employee should be examined by a Specialist if the chest X-ray is classified as 1/0 or higher by the B Reader, or if referral to a Specialist is otherwise deemed appropriate by the PLHCP.

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

• The date of the examination;
ACCIDENT PREVENTION PROGRAM

SILICA

- A statement that the examination has met the requirements of the OSHA Respirable Crystalline Silica Construction Standard; and
- Any recommended limitations on the employee's use of respirators.

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

- Any recommended limitations on the employee's exposure to Respirable Crystalline Silica; and/or
- A statement that the employee should be examined by a Specialist if the chest X-ray is classified as 1/0 or higher by the B Reader, or if referral to a Specialist is otherwise deemed appropriate by the PLHCP.

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

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

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

In addition, Haskell Davis JV will obtain a written opinion from the Specialist within 30 days of the medical examination. The written opinion shall contain the following:

- The date of the examination;
- Any recommended limitations on the employee's use of respirators; and
- If the employee provides written authorization, the written opinion shall also contain any recommended limitations on the employee's exposure to Respirable Crystalline Silica.

5.7. Hazard Communication

Haskell Davis JV will include Respirable Crystalline Silica in the company’s Hazard Communication Program established to comply with the OSHA Hazard Communication Standard (29 CFR 1910.1200).

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

All employees will be trained in accordance with the provisions of the OSHA Hazard Communication Standard and the Training Section of this program. This training will cover concerns relating to cancer, lung effects, immune system effects, and kidney effects.
Haskell Davis JV will ensure that each employee with the potential to be exposed at or above the Action Level for Respirable Crystalline Silica can demonstrate knowledge and understanding of at least the following:

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

Haskell Davis JV will make a copy of the OSHA Respirable Crystalline Silica Construction Standard readily available without cost to any employee who requests it.

5.8. Recordkeeping

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

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

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

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

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

Haskell Davis JV will ensure that objective data are maintained and made available in accordance with 29 CFR 1910.1020. Objective data records will be kept for at least 30 years.
Haskell Davis JV will make and maintain an accurate record for each employee enrolled in the Medical Surveillance portion of this program. The record shall include the following information about the employee:

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

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

PROGRAM EVALUATION

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

APPENDICES

APPENDIX A - Written Exposure Control Plan (ECP) template
1.0 Purpose

To protect employees, the public, and the environment from accidental exposure to health hazards arising from accidental release of hazardous materials.

2.0 Scope

This policy applies to all Haskell Davis JV operations including, Home Office, Fabrication Facilities, Field Sites. Haskell Davis JV does not specialize in spill response and clean up. In the event that our work scope necessitates a spill response team and actions as outlined in this policy, Haskell Davis JV will rely on the client facility for training of our personnel to respond to a spill, or a professional response team will be secured before such work begins.

3.0 Definitions

- **Incidental Spill**: means spills of hazardous liquids of less than 1 gallon liquid or 10 lbs. of solids. These typically may be cleaned up by the user without involving a response team.
- **Minor Spill**: means spills of hazardous liquids of more than incidental size and less than 56 gallons liquid or 600 lbs. solids.
- **Serious Spill**: means spills of hazardous liquids greater than minor in size, or where spill involves contact of incompatible materials or entry into storm or city sewer system. Spills of hazardous materials meeting this definition will require external assistance, notification and reporting.
- **Spill Coordinator**: means the Spill Coordinator who will be the site safety representative, or in his absence, the senior management representative on the scene.

4.0 Procedures

Safety and protection of the environment are top priorities at Haskell Davis JV. Not only do we place a strong commitment on safety and health, but also proper waste disposal, reduction and recycling is cost effective and is an appropriate part of a good safety and health program. Our work is done in a wide range of jobsites. Some larger facilities have in-house environmental recycling and disposal programs. We encourage our employees to use and support these programs.

At jobsites where no program is in place, it may become necessary to contract a local recycler or disposal service such as Safety-Kleen Systems and Onyx Services when necessary. The following is a list of some of the items that when sent back to the Haskell Davis JV warehouse in appropriately labeled containers are sent to the waste site and recycled or disposed of properly.

- Oil based paint, sludge and solids
- Solvents and paint liquids
- Latex paints

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• Fluorescent light bulbs and ballasts
• Contaminated or used motor oil and oil filters
• Used antifreeze
• Fuels
• Aerosol flammables/paints and cleaners
• Alkaline, Lithium and Nickel-Cadmium (Ni-Cad) batteries
• Mercury

For more information about hazardous materials, refer to the corresponding Safety Data Sheet or the Hazard Communication section of this INJURY AND ILLNESS PREVENTION PROGRAM.

It is the intent of this policy to minimize the likelihood of spills involving hazardous materials and procedures to be implemented to minimize environmental impact and hazards to personnel should such a spill occur. Hazardous materials used in routine job site operations include paints, flammable liquids, and petroleum based oils and solvents.

Although stringent precautions will be exercised any time hazardous materials are being handled, unforeseen events may occur which could result in an accident or emergency situation. It is vital that immediate appropriate actions be taken by the involved employees to minimize adverse environmental and personnel hazards.

This plan is intended to address incidental and minor spills as defined below and provide transition and notification of appropriate external responders for serious spills.

4.1. Hazard evaluation

4.1.1. Operations analysis: Construction operations will be evaluated during the planning phase and weekly during jobsite safety inspections. Storage and use of hazardous materials will be evaluated and precautions identified and implemented where necessary.

4.1.2. Identification of contaminants: In most cases, contaminants will be identified by location of the source. In cases where unknown contamination is encountered during construction, e.g. contaminated soils, identification may be made by appearance or smell in some cases. If this is not sufficient, specimens may be collected and submitted to an environmental lab for analysis.

4.2. Monitoring

Recognition training for employees will occur as an integral part of new employee safety orientation. This will include how to recognize potential problems and questionable materials and odors such as refuse, oil slick, and color on soils or water, oily or chemical odors.

4.3. Spill prevention & work practices

4.3.1. Separate storage areas will be established for each of the following types of hazardous liquids: paints and solvents, petroleum base fuels and oils, acids, and bases. Each storage area will provide spill containment adequate for the liquids stored therein and will be prominently marked with the acceptable types of liquids which are compatible and can be stored there.
4.3.2. Spill kits shall be easily accessible, highly visible and shall contain the appropriate supplies for materials and quantities that may be spilled.

4.3.3. Employees shall be instructed on the proper response procedures for spilled materials. The training shall include materials that are available for use, proper waste disposal, and communication procedures.

4.3.4. Areas where chemicals may be used or stored shall be maintained using good housekeeping practices. This includes, but is not limited to, clean and organized storage, labeling, and secondary containment where appropriate.

4.3.5. Hazardous liquids will be transported within the jobsite by lift truck in their original sealed shipping containers, with no more than 3 - 55 gallon containers per pallet. Pallets will be provided with a solid sheet of plywood or particle board to increase drum stability and to prevent broken pallets. Barrels transported by pallet will be banded together. Single drums may be handled using the special forklift drum handling attachment.

4.3.6. All hazardous liquids will be stored at ground level in designated storage areas.

4.3.7. Only one drum will be opened for use at any time, and drum openings will be closed with original bungs or pump apparatus.

4.3.8. When hazardous chemicals are removed from their original shipping containers, quantities will be minimized to those immediately required and temporary containers will be labeled in accordance with the HazCom program Section 2.1 Haskell Davis JV Safety Manual.

4.3.9. Only individuals who have been trained and have job responsibilities for handling the specific chemical are authorized to open chemical shipping containers.

4.4. Spill response & emergency priorities

4.4.1. Injury prevention and treatment
4.4.2. Spill containment and pollution prevention
4.4.3. Cleanup and decontamination
4.4.4. Proper disposal of hazardous waste
4.4.5. Notification of external agencies

4.5. Person discovering spill

4.5.1. Report spill to job superintendent and/or site safety representative giving location of spill, type of substance, size of container involved, quantity released and rate of leakage.

4.5.2. Keep all personnel not required for assistance out of the immediate area of the spill.

4.5.3. Provide first aid to injured personnel, and decontaminate skin or clothing as necessary.

4.5.4. Initiate immediate corrective action to prevent additional spillage if necessary and can be done safely.

4.6. Spill Coordinator:

4.6.1. Determine the source, extent, and nature of the spill.

4.6.2. Assess the situation to determine whether evacuation of the area or entire job site is necessary.

4.6.3. Initiate partial or total job site evacuation if necessary.
4.6.4. Evaluate possible hazards to human health or the environment presented by the spill.
4.6.5. Assume operational control of response team and implement control and cleanup procedures.
4.6.6. Implement internal notification procedures.

4.7. Work limitations
Haskell Davis JV personnel may attempt to contain and clean up small spills of relatively non-hazardous chemicals such as fuel, oil or solvent type materials. Any spills involving more large quantities or more hazardous materials will be addressed by private or governmental agency HAZMAT teams.

4.8. Authorized personnel
The Haskell Davis JV Job Superintendent and/or Site Safety Representative are authorized to implement this policy, and act as Interim Spill Coordinator if needed.

4.9. Responsible individual
4.9.1. If the Spill Coordinator determines that the facility has had a release that could threaten human health or the environment and cannot be controlled within the scope of this plan, or if evacuation of the vicinity around the job site is advisable, he will immediately initiate the following notification procedures:
4.9.2. Contact appropriate regulatory agency. Refer to the site-specific plan for up to date contact numbers.

Provide the following information, if available:

4.9.3. Name and phone number of caller
4.9.4. Name and address of the job site
4.9.5. Time and type of incident
4.9.6. Name and estimated quantity of materials involved (to the extent known at the time)
4.9.7. Extent of injuries, if known
4.9.8. Possible hazards to human health or the environment outside the facility
4.9.9. Once the material involved in a release has been identified, control procedures described below will be implemented. The procedures involve physically controlling the spread of a spill in the event that a liquid waste is released and cleaning up spill residue from the spill of a liquid or solid.

4.10. Response team
On notification of a spill, response team will immediately report to spill area and don protective clothing and equipment as specified in the site-specific plan; taking the following into consideration.

4.10.1. Avoid all contact with unknown contaminants unless personal protective clothing and equipment is worn.
4.10.2. If spill involves ignitable liquids, immediately remove all potential sources of ignition.
4.10.3. Initiate immediate measures to prevent further leakage.
4.10.4. Transfer un-spilled liquids from damaged container into an empty and undamaged container previously used to store same material.

4.10.5. Dike, divert, or absorb liquids using absorbent materials available (dry soil may be used), and/or floor sweep compound to prevent entry into sewer system or offsite migration.

4.10.6. Further protect storm drains, sewers, ditches and drainages to prevent entry using earth dikes and polyethylene sheet.

4.10.7. Mark areas using traffic barricades and tape to warn others, restrict access, and prevent accidental contamination or trackout.

4.10.8. Clean up spilled material using absorbents, shovels or stiff brooms.

4.10.9. Spread second application of absorbent compound over spill area allowing a few minutes for material absorption, then sweep up and place in drum.

4.10.10. Put all contaminated soils and absorbents in a suitable properly labeled container as directed by spill coordinator.

4.10.11. Decontaminate all equipment used in cleanup as directed by Spill Coordinator, and replace supplies used.

4.10.12. Replace and restock spill equipment.

4.10.13. Provide assistance to spill personnel if necessary.

4.11. Personal & equipment decontamination

4.11.1. Individuals involved in cleaning up any quantity or type of spill will thoroughly wash their hands, face, and other exposed areas upon completion of work, prior to rest breaks/lunch, or as needed to remain uncontaminated.

4.11.2. Tools and equipment used for cleanup purposes will be thoroughly cleaned and decontaminated prior to being released for normal use, returned to rental/leasing company, or demobilized from the site.

4.12. Emergency medical care and treatment:

Emergency medical care and treatment is addressed in the site-specific HEALTH-SAFETY-ENVIRONMENT Plan and may be dependent on the nature and severity of personal exposure.

4.13. Reporting:

In the event that a spill of hazardous materials becomes reportable under government regulations, the Spill Coordinator will prepare a written report on the incident and submit it to the EPA Regional Administrator and ADEC within 15 days of the release.

The report will include the following:

4.13.1. The name, address, and telephone number of the owner and operator of the job site.
4.13.2. The name, address, and telephone number of the facility.
4.13.3. The date, time, physical location, and type of incident.
4.13.4. The name and quantity of material involved.
4.13.5. The extent of any resultant injuries.
4.13.6. An assessment of the actual or potential hazards to human health or the environment.
4.13.7. Estimated quantity and disposition of material cleaned up following the incident.
4.13.8. Any other information as appropriate.
1.0  Purpose

The purpose of this policy is to establish safety requirements at industrial and commercial sites for safe access to each elevation of the work area.

2.0  Scope

This policy is applicable to all Haskell Davis JV employees and Sub-contractors. This policy applies to all stairways and ladders used in construction, alteration, repair (including painting and decorating), and demolition workplaces covered under chapter 296-155 WAC, and also sets forth, in specified circumstances, when stairways are required to be provided.

3.0  Definitions

- Equivalent means alternative designs, materials, or methods that the employer can demonstrate will provide an equal or greater degree of safety for employees than the method or item specified in the standard.
- Failure means load refusal, breakage, or separation of component parts. Load refusal is the point where the structural members lose their ability to carry the loads.
- Handrail means a rail used to provide employees with a handhold for support.
- Lower levels means those areas to which an employee can fall from a stairway or ladder. Such areas include ground levels, floors, roofs, ramps, runways, excavations, pits, tanks, material, water, equipment, and similar surfaces. It does not include the surface from which the employee falls.
- Nosing means that portion of a tread projecting beyond the face of the riser immediately below.
- Platform means a walking/working surface for persons, elevated above the surrounding floor or ground.
- Point of access means all areas used by employees for work-related passage from one area or level to another. Such open areas include doorways, passageways, stairway openings, studded walls, and various other permanent or temporary openings used for such travel.
- Riser height means the vertical distance from the top of a tread to the top of the next higher tread or platform/landing or the distance from the top of a platform/landing to the top of the next higher tread or platform/landing.
- Spiral stairway means a series of steps attached to a vertical pole and progressing upward in a winding fashion within a cylindrical space.
- Stairrail system means a vertical barrier erected along the unprotected sides and edges of a stairway to prevent employees from falling to lower levels. The top surface of a stairrail system may also be a "handrail."

Printed copies of this policy are uncontrolled and may not reflect changes made after the above revision date
• Tread depth means the horizontal distance from front to back of a tread (excluding nosing, if any).
• Unprotected sides and edges means any side or edge (except at entrances to points of access) of a stairway where there is no stairrail system or wall 36 inches (.9 m) or more in height, and any side or edge (except at entrances to points of access) of a stairway landing, or ladder platform where there is no wall or guardrail system 39 inches (1 m) or more in height.

4.0 Procedures

Ladders shall be used to give safe access to all elevations that are not supplied with permanent or temporary stairways, or suitable platforms, ramps, or runways. Ladders shall not be used in the horizontal position as a platform, runway or scaffold. Ladders shall not be used for any other purpose other than their intended purpose. The construction, Installation, and use of ladders shall conform to ANSI A14.1, ANSI A14.2, ANSI A14.3, and ANSI A14.4, as applicable.

Supervisors shall ensure that all employees or Sub-contractors are trained to this directive and adhere to these procedures and guidelines.

4.1. General Requirements

A stairway or ladder shall be provided at all personnel points of access where there is a break in elevation of nineteen inches (48 cm) or more, and no ramp, runway, sloped embankment, or personnel hoist is provided.

Employees shall not use any spiral stairways that will not be a permanent part of the structure on which construction work is being performed.

A double-cleated ladder or two or more separate ladders shall be provided when ladders are the only means of access or exit from a working area for twenty-five or more employees, or when a ladder is to serve simultaneous two-way traffic.

When a building or structure has only one point of access between levels, that point of access shall be kept clear to permit free passage of employees. When work must be performed or equipment must be used such that free passage at that point of access is restricted, a second point of access shall be provided and used.

When a building or structure has two or more points of access between levels, at least one point of access shall be kept clear to permit free passage of employees.

All stairway and ladder fall protection systems required by this policy shall be provided and installed and shall comply with all other pertinent requirements of this policy before employees begin the work that necessitates the installation and use of stairways, ladders, and their respective fall protection systems.

Portable ladders shall have slip resistant feet.

Single-rail ladders shall not be used.

Three-legged ladders may be used for specific tasks, if accepted by the client.

The use of ladder climbing devices shall be in accordance with applicable standards.

Articulated ladders are allowed if they meet ANSI A14.2 standard.
Ladders shall be surfaced so as to prevent injury to an worker from punctures or lacerations and to prevent snagging of clothing.

Wooden ladders shall not be coated with any opaque covering, except for identification or warning labels that may be placed on only one face of a side rail.

A metal spreader bar or locking device shall be provided on each stepladder to hold the front and back sections in an open position.

Any ladder accessory, including but not limited to, ladder levelers, ladder stabilizers or stand-off devices, ladder jacks or ladder straps or hooks, that may be installed or used in conjunction with ladders must be installed and used per manufacturer's instructions.

4.2. Length of ladders

a. All portable ladders shall be of sufficient length and shall be placed so that workers will not stretch or assume a hazardous position.

b. Portable ladders used as temporary access shall extend at least 3ft (0.9 m) above the upper landing surface.

(1) When a 3ft (0.9-m) extension is not possible, a grasping device (such as a grab rail) shall be provided to assist workers in mounting and dismounting the ladder.

(2) In no case shall the length of the ladder be such that ladder deflection under a load would, by itself cause the ladder to slip from its support.

c. The length of portable stepladders shall not exceed 20 ft (6m).

d. When splicing of side rails is required to obtain the required length, the resulting side rail must be at least equal in strength to a one-piece side rail made of the same material.

4.3. Width of ladders

a. The minimum clear distance between the sides of individual rung/step ladders shall be 16 in (40.6 cm).

b. The minimum clear distance between side rails for all portable ladders shall be 12 in (30.4 cm).

4.4. Spacing of rungs, cleats, and steps on ladders.

a. On portable ladders, spacing of rungs shall be 8 in (20.3 cm) - 14 in (35.5 cm) on center and uniform.

b. On step stools, spacing shall be not less than 8 in (20.3 cm) or more than 12 in (30.4 cm) apart, as measured from their centerlines.

c. On extension trestle ladders, spacing on the base section shall be not less than 8 in (20.3 cm) or more than 18 in (45.7 cm) apart as measured from their centerlines. On the extension section, spacing shall not be less than 6 in (15.2 cm) or more than 12 in (30.4 cm) apart, as measured from their centerlines.

4.5. Set-up of ladders.

a. Ladders shall not be placed in passageways, doorways, driveways, or any locations where they may be displaced by any other work unless protected by barricades or guards.

b. Portable ladders shall be used at such a pitch that the horizontal distance from the top support to the foot of the ladder will not be greater than the vertical distance between these points.

c. Wooden job-made ladders, with spliced rails, shall be used at an angle such that the horizontal distance from the vertical plane is 1/8 the length of the ladder.
d. Ladders shall be secured by top, bottom, and intermediate fastenings, as necessary to hold them rigidly in place and to support the loads that will be imposed upon them.

e. The steps or rungs of all ladders shall be set to provide at least 7 in (17.7 cm) toe space from the inside edge of the rung to the nearest interference.

f. The top of a non-self-supporting ladder shall be placed with the two rails supported equally, unless the ladder is equipped with a single support attachment.

g. The step-across distance from the nearest edge of ladder to the nearest edge of equipment or structure shall be not more than 12 in (30.5 cm) or less than 2-1/2 in (6.4 cm).

4.6. Use of ladders

- Ladders shall be restricted to their intended use.
- Ladders shall not be loaded beyond their maximum intended, nor beyond the manufacturer's capacity as listed on the duty rating sticker.
- Ladders shall be inspected for visible defects on a daily basis and after any occurrence that could affect their safe use. Broken or damaged ladders shall be immediately tagged "DO NOT USE." or with similar wording, and withdrawn from service until restored to a condition meeting their original design.
- Ladders shall not be moved, shifted, or extended while occupied.
- Ladders shall not be climbed by more than one person at a time unless it is designed to be climbed by more than one person.
- Users must face the ladder when ascending or descending, and shall not carry objects that could cause injury in the event of a fall.
- Portable ladders used as means of access to ascend and descend to a work location do not require fall protection. However only light work for short periods of time shall be performed on portable ladders. No work requiring lifting of heavy materials or substantial exertion shall be done from ladders.
- When ladders are the only means of access to or from a working area for 25 or more workers, or when a ladder is to serve simultaneous two-way traffic, double-cleated ladders shall be used.
- Portable ladders shall have slip-resistant feet.
- The top or top step of a stepladder shall not be used, as a step unless it has been designed to be so used by the manufacturer.
- Ensure latches are in place before climbing an extension ladder.
- Keep loose tools off the steps and top platform.

4.7. Ladder Base

The ladder base must be placed with a secure footing. Portable ladder feet shall be in good working order and placed on a substantial base, and the area around the top and bottom of the ladder shall be kept clear. Ladders shall not be placed on boxes, barrels, or other unstable bases to obtain additional height. The ladder shall be properly placed to prevent slipping, or it shall be tied off or held in position by another employee.

4.8. Ascending or Descending

When ascending or descending, the climber must face the ladder with hips within the side rails. The ladder user should not lean outside the ladder side rails. Move the ladder instead. Each rung shall be used. Always use both hands to climb up and down so you can control your center of gravity and won’t
4.9. Working from a Ladder

Always inspect a ladder before using for physical defects. Ladders are not to be painted except for numbering purposes. Rungs must be free of grease and/or oil. Do not use ladders for skids, braces, workbenches or any purpose other than climbing. Once a ladder is properly set to perform work, the following safety precautions shall be taken:

- Keep loose tools off the steps and top platform.
- Never over reach on a ladder. Reaching farther than you should, moves the center of gravity and may cause the ladder or the ladder user to fall.
- The top or top step of a stepladder shall not be used as a step unless so designed by the manufacturer.
- Match the ladder to the job being performed. If the job requires frequent movement of the ladder, a manlift or scaffold may be more appropriate.
- Always maintain a 3-point stance on a ladder. Two feet and at least one hand. When working from a ladder 6 feet or higher, with both hands performing work, the ladder user shall use a fall arrest system.
- Employees shall not work from higher than the third rung from the top of an extension or straight ladder.
- Area around the base of the ladder shall be flagged off sufficiently to protect personnel working below from falling objects.
- If you must place a ladder over a doorway, barricade the door to prevent its use and post a warning sign.
- Only one person is allowed on a ladder at a time unless the ladder is designed for more than one person.
- Ladders shall not be moved, shifted or extended while occupied.

4.10. Job made ladders

- Job made ladders shall be made in accordance with ANSI A14.4.

4.11. Step Ladders

All stepladders shall have safety feet and/or safety treads. Stepladders are not to be used as a leaning ladder. The stepladder center locking mechanism shall be locked in place before the ladder is used, and its four legs placed on a level surface. An employee shall not work from higher than the third rung from the top of a straight ladder. Do not place tools or materials on the steps or platform of a stepladder.

4.12. Extension Ladders

In most cases, setting up large extension ladders is a 2-person job. In addition to the above general requirements, the following apply to extension ladders:
• Keep hands and fingers on the outside of the side rails
• Never use the rungs to adjust the length of the ladder
• After raising the extension portion of a two or more stage ladder to the desired height, check to ensure that the safety dogs or latches are engaged
• Raise extension ladders to the vertical position or against a wall before extending them. When accessing the top of an extension ladder to tie it off, someone else should hold the base of the ladder.
• The side rails should not extend less than 36 inches above the landing, roof or platform to provide an adequate handhold.

A simple rule for setting up a ladder is to place the base a distance from the vertical wall ¼ the working length of the ladder. If the foot of the ladder must be placed considerably closer than this distance, it shall be securely held or tied at the top and the bottom before beginning work. Care should be exercised to ensure the ladder is tied to a secure, immovable object. Conduit should not be used to secure a ladder.

4.13. Damaged Ladders

Ladder users shall inspect the ladder before use and if a defect is found or suspected, report it to the supervisor, or to the tool room. The use of ladders with broken or missing rungs or steps, broken or split side rails, or other faulty or defective construction is strictly prohibited. When ladders with such defects are discovered, they shall be immediately withdrawn from service and properly tagged with a Do Not Use tag. Identify the defect on the tag and return it to the tool room.
STOP WORK AUTHORITY

1.0 Purpose

The purpose of this policy is to increase the effectiveness of the Haskell Davis JV INJURY AND ILLNESS PREVENTION PROGRAM through the empowerment of all its personnel. This policy has been developed and implemented for the purpose of practicing and enforcing a “Stop Work Authority” in the workplace; whereby it is the intent of Haskell Davis JV to ensure all safe practices and safeguards necessary are implemented to abate all imminent hazards and conditions on its projects. Employees are encouraged to exercise their rights to stop work when an unsafe condition is observed.

2.0 Scope

This policy applies to all Haskell Davis JV operations at both Client and Haskell Davis JV sites and locations.

3.0 Procedures

3.1 Application

3.1.1. Any Haskell Davis JV or sub-contractor employee regardless of position or seniority, upon seeing a potentially dangerous situation, can use their Stop Work Authority to halt the operations and express his or concerns about safety, which will be addressed by all persons involved before starting the work up again.

3.1.2. When a Stop Work Intervention occurs, the Haskell Davis JV HSE department must be immediately notified by the on-site Supervisor. The Haskell Davis JV HSE Department will respond to the affected job site to conduct an observation / inspection to validate all safety concerns. All corrective actions must be undertaken and implemented at this time ensuring no imminent hazards exist before proceeding with work activities.

3.1.3. All identified hazards during the intervention process must be completely eliminated and/or controlled to a degree that minimizes the exposure insofar as practical prior to the work resuming. All necessary administrative, engineering, and personal protective equipment control measures must be prescribed in an effort to protect and/or prevent potential exposures from occurring.

3.1.4. Stop Work Intervention details of each occurrence must be clearly documented and filed with the HSE Department for further evaluation. Interventions must be investigated and analyzed by the HSE Department and all respective management to focus on the lessons learned and findings from each occurrence.

3.1.5. In an effort to strengthen Haskell Davis JV’s JHA process and Hazard Identification, intervention investigation results shall be utilized as guidance and education in prioritizing risk potentials and hazards in the workplace. Corrective actions taken resulting from a Stop
Work Intervention shall be documented for future mitigating measures. Follow up efforts shall be executed by the HSE Department and Supervision to ensure similar hazards don’t reoccur.

3.1.6. Employees are responsible to initiate a Stop Work Intervention when they feel it’s necessary. Management is responsible to create a culture where Stop Work Authority is exercised freely without fear of reprisal.

3.1.7. Employees shall not fear any form of reprisal or intimidation from Haskell Davis JV Management for exercising their Stop Work Authority.

3.2. Steps to Initiate Stop Work Authority

3.2.1. When an employee identifies an unsafe condition they shall initiate a Stop Work Intervention.

3.2.1.1. Any worker may stop work by announcing that there is a safety issue and requesting that everyone affected must stop work and move to a safe location if necessary.

3.2.1.2. The worker initiating Stop Work must then notify their immediate supervisor that Stop Work has been initiated and explain the safety concern.

3.2.2. The immediate supervisor will coordinate the Stop Work procedure.

3.2.3. Supervisors shall conduct Stop Work efforts in a positive manner.

3.2.4. All affected personnel and supervision shall be notified of the stop work issue.

3.2.5. Affected work shall not resume until the issue has been corrected.

4.0 Training

All Haskell Davis JV and sub-contractor personnel will receive training on Stop Work Authority during their onboarding process prior to their initial work assignment.

Additionally, the essence and concepts of this initiative is also embedded in the Haskell Davis JV JSA which is also strongly expressed during the employee training. The training will specifically emphasize the roles and responsibilities of the employees in exercising a Stop Work Intervention along with the accountability associated with not stopping, or proceeding with work when unsafe conditions are identified.

Haskell Davis JV shall retain records of training. Record of attendance for this training will be kept in the HSE Department for records retention. Employees will print and sign their name on a training attendance sheet, which will indicate the subject training topics and date of completion. Such records will be maintained for no less than one (1) year subsequent to the delivery and completion of the training.
SUBCONTRACTOR MANAGEMENT

1.0 Purpose

This policy is designed to ensure that our Sub-contractors maintain an acceptable standard for health and safety, while working under Haskell Davis JV and to ensure compliance with client and owner requirements.

2.0 Scope

This policy applies to all tier-Sub-contractors that have a contractual obligation to Haskell Davis JV, including pass-through contracts.

3.0 Definitions

- **Subcontractor**: is any entity performing work or services involving direct labor, on behalf of Haskell Davis JV, for a fee.
- **Pass-through Contract**: is a strategy where owner requirements are carried (passed-through) to each tier subcontractor.

4.0 Procedures

Subcontractor is expected to perform all work in a safe and professional manner, comply with all safety, health, and environmental requirements listed in the subcontract documents issued by Haskell Davis JV, and follow all applicable laws, codes, ordinances, rules, regulations, and other lawful orders of Federal, State, and local authorities. Subcontractor has the primary responsibility and obligation to provide a safe work environment for its employees, tier Sub-contractors, vendors, and visitors who may be exposed to hazards related to subcontractor’s work.

Subcontractor is responsible for the development, administration, and enforcement of their own particular safety, health, and environmental management program, regardless of any oversight provided by Haskell Davis JV. Subcontractor shall pass all imposed requirements through to lower tier Sub-contractors.

Subcontractor shall provide competent supervision to oversee and direct their work and employees at all times. Subcontractor supervision shall meet the definition and designation requirements of OSHA.

Subcontractor is required to maintain a Substance Abuse Prevention Program (SAPP) that is in compliance with Haskell Davis JV and OWNER requirements, as well as regulatory guidelines. All employees assigned to the project must successfully complete a pre-employment test, in accordance with an approved protocol.
The Haskell Davis JV Safety Director will meet with Sub-contractors for post-job safety performance reviews.

4.1. Industrial insurance (workers comp)

Haskell Davis JV assumes no responsibility for subcontractor Worker’s Compensation coverage required by applicable laws. Subcontractor will provide a copy of all First Report of Injury (New Claim Form) to Haskell Davis JV within two working days of an event.

4.2. Safety & health program

Subcontractors will be pre-qualified by a review of their safety programs, safety training documents, and safety statistics. A Prequalification Questionnaire which details four (4) year history of safety metrics, such as TRIR, EMR, DART, and Fatality Rate must be completed by all Sub-contractors and approved by the Haskell Davis JV Corporate Safety Director prior to contract award. A copy of the Haskell Davis JV safety program is available for review/copy upon request. Subcontractor may adopt any part of Haskell Davis JV’s program, as desired and appropriate for its work. Subcontractor will ensure that its plan is aligned with these requirements and applicable regulations. Use of any portion of Haskell Davis JV’s program and approval of Sub-contractor’s program does not relieve subcontractor responsibility for providing a safe workplace nor eliminate the potential for subcontractor to be subject to regulatory review, including citation for non-compliance.

Subcontractor safety and health program shall include or address the following; to the degree these issues are applicable to subcontractor’s particular scope of work.

- Identification of project- refer to RFP
- Description of Work- refer to Scope
- Responsibilities- Org Chart and authority
- HSE Objectives/goals
- General Rules of Employee Conduct
- Method for identifying and controlling hazards
- Personal Protective Equipment- Minimum and conditional guidelines
- Orientation and training plan
- Inspection and audit schedule
- Accident Reporting/Investigation/Correction
- Emergency Response Plan- provision for EMS/Fire
- Specific work-plans:
  - Fall Protection
  - Scaffolding
  - Unit/Vessel Entry
  - Crane Picks
  - Electrical Safety

4.3. Job Planning
4.3.1. Subcontractors shall be included in any required pre-job risk assessments and the planning of hazard mitigation relevant to their scope of work.

4.3.2. Subcontractors shall be included in any kick off meetings relevant to their scope of work.

4.3.3. Subcontractors shall be included in daily JSA safety meetings, hazard assessments and safety inspections.

4.4. Regulatory References- identify applicable codes/rules

Subcontractor will develop and submit detailed Job Hazard Analysis (JHA) for each significant phase of work. The JHA shall identify: Known hazards and planned mitigation measures.

Haskell Davis JV and subcontractor shall meet to review and discuss subcontractor’s approach and written plans, following award and prior to commencement of any work. A final revised copy of subcontractor plans shall be provided to Haskell Davis JV and MADE available to employees during completion of all work activities addressed by the plans.

4.5. Safety representatives

Subcontractor shall provide qualified and competent individuals to oversee all health, safety, and environmental issues related to its work. Safety representatives shall be provided as follows:

<table>
<thead>
<tr>
<th>Type of Project</th>
<th>Conditions</th>
<th># of Reps.**</th>
<th>Qualifications*</th>
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<tbody>
<tr>
<td>Small-Scale Short-term</td>
<td>&lt;35 employees and &lt;6 months</td>
<td>1 PT</td>
<td>OSHA-10</td>
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<tr>
<td>Small-Scale Long-Term</td>
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<td>1 PT</td>
<td>OSHA-30</td>
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<td>Large-Scale Short-Term</td>
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<td>1 FT +</td>
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<td>&gt;35 employees and &gt;6 months</td>
<td>1 FT +</td>
<td>OSHA-500/CSP/BS-BA</td>
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</tbody>
</table>

*All Safety Representatives will possess and maintain First Aid/CPR/AED/BBP training

** subcontractor will provide additional Safety Representatives for every additional 50 FT employees

Subcontractor shall provide names and list of qualifications of their safety representatives, for review and approval by Haskell Davis JV. Once approved by Haskell Davis JV, subcontractor may not change Safety Representatives without notification and approval from Haskell Davis JV.

4.6. First aid & medical care

Subcontractor is responsible for providing onsite first aid supplies, equipment, and treatment for its employees, regardless of any co-existent capability of Haskell Davis JV to provide similar services. Subcontractor may request and receive assistance in this area without retribution. Subcontractor is responsible for providing for emergency transportation to appropriate medical facilities.

Subcontractor is responsible for the safe and lawful acquisition, transportation, storage, use, and disposal of all chemicals related to or necessary for the completion of its work. Subcontractor will maintain a list of chemicals brought to the site and associated Safety Data Sheets (SDS).

4.7. Worksite clothing
All employees of subcontractor are required to comply with the following minimum dress/attire requirements. It is up to the subcontractor to monitor and enforce these requirements. Shirts shall have a minimum 4" sleeve length, pants shall be made of full-length durable materials, and boots shall be made of leather and suitable for construction. Subcontractor shall ensure that employees contain or remove all loose clothing, long hair, or jewelry that could become tangled or caught in tools, equipment, or machinery, or otherwise pose a danger to the employee or a co-worker.

4.8. Personal protective equipment

Subcontractor employees shall wear additional Personal Protective Equipment (PPE) as appropriate and suitable to protect the employees from general or specific workplace hazards. The use or provision of PPE does not relieve subcontractor from its duty to eliminate or reduce hazards using alternate methods. All PPE used shall conform to current ANSI, NIOSH, OSHA (or other approved agency) standards. Subcontractor is required to prepare a task-specific PPE analysis, in accordance with 29 CFR 1926 Subpart E.

4.9. Worksite inspections

Subcontractor is responsible for conducting ‘frequent and regular’ jobsite inspections, to evaluate and identify potential hazards. Haskell Davis JV requests that inspection frequency be at least weekly, to reduce the potential for persistent conditions.

Subcontractor shall inspect all tools and equipment in accordance with manufacturer’s guidelines or common industry standards. Inspections will be documented. Heavy equipment shall be inspected prior to use on site, for mechanical defects and leaks.

Subcontractor shall notify Haskell Davis JV of any regulatory inspections (OSHA, EPA, etc.) and allow Haskell Davis JV the opportunity to observe or participate in the inspection. Subcontractor will provide a copy of any citation, notice of violation, or similar document issued by a regulatory agency related to the completion of its work.

Haskell Davis JV will conduct monthly reviews of subcontractor’s inspection documentation and perform periodic inspections of subcontractor’s work and work areas to assess compliance with the inspection requirements.

4.10. Orientation & training

Subcontractor employees will be provided with sufficient information regarding tools, equipment, chemicals, and work practices to ensure the safe completion of all assigned work. Operators of heavy equipment must be qualified or certified, as appropriate, to operate equipment.

Each employee shall be provided with an overview of the project and associated hazards upon arrival to the site. Basic site orientation provided by Haskell Davis JV shall cover the following:

- Jobsite Safety Rules
- Emergency Procedures
- Security Rules
• Basic PPE Rules

Subcontractor shall provide additional information to its employees related to their specific policies, work assignments, and other associated requirements, prior to starting work, including:

• Hazardous Chemicals (SDS)
• Additional/specific PPE
• Specific Task Training
• Company-specific rules
• Disciplinary Action

4.11. Non-compliance

Subcontractor is responsible for the prompt correction of any violation of safety and health standards, identified safety hazards, or similar deficiencies related to the performance of its work. In the event that an apparent violation, unsafe condition, or unsafe act is witnessed or observed by Haskell Davis JV, subcontractor will be notified immediately of a Non-Compliance Event (NCE).

Failure to promptly correct the NCE may result in the following actions by Haskell Davis JV:

• Issue a formal stop work order (subcontractor is responsible for associated costs/delays)
• Haskell Davis JV may correct situation (costs may be back-charged to subcontractor)
• Termination of the subcontract or assessment of penalties

4.12. Submittals

Subcontractor shall submit documents and records, related to its work, according to the following schedule.

<table>
<thead>
<tr>
<th>Submittals</th>
<th>Title</th>
<th>Due</th>
<th>Copies</th>
<th>Dist.</th>
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<td>Prequalification Form</td>
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<td>SM</td>
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<td>SDS List</td>
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</tr>
<tr>
<td>Equipment Certification</td>
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<td></td>
</tr>
<tr>
<td>Accident Reports</td>
<td>2</td>
<td>1</td>
<td>PM</td>
<td></td>
</tr>
<tr>
<td>Inspection Reports</td>
<td>2</td>
<td>1</td>
<td>Available at site</td>
<td></td>
</tr>
<tr>
<td>Incident Register</td>
<td>3</td>
<td>1</td>
<td>SM</td>
<td></td>
</tr>
</tbody>
</table>

1-prior to job
2-during job
3-post job

5.0 Forms

5.1.1. SUBCONTRACTOR EVALUATION
SUBSTANCE ABUSE

1.0 Purpose

The primary purpose of this policy is to provide a consistent and reliable approach to preventing accidents and injuries due to Substance Abuse in the workplace.

2.0 Scope

The Haskell Davis JV Substance Abuse Policy applies to all active employees.

3.0 Definitions

- **Drug**: means any substance that has known mind or function altering effects on a person, including psychoactive substances prohibited or controlled by federal or state controlled substance laws.

- **Medication**: means a substance legally **prescribed** by a licensed medical practitioner, for particular and explicit use by the employee.

- **Sample**: means oral fluid (saliva), urine, hair or blood.

4.0 Procedures

4.1.1. Our policy on illegal drug use, marijuana and alcohol in the workplace is zero tolerance of any detectable levels in body fluids. Haskell Davis JV has a vital interest in maintaining a safe, healthy and efficient workplace for the benefit of its employees, clients, and the public. The use of performance impairing drugs can cause avoidable injuries to employees, damage to property and significant productivity losses.

4.1.2. The 2012 passage of Washington state initiative 502, legalizing possession of 1 ounce of Marijuana for recreational use, does not modify our drug-free workplace policy. Marijuana remains illegal under federal law, and is classified as a Schedule I controlled substance under the Controlled Substances Act (CSA), 21 U.S.C. § 801-971.

4.1.3. Haskell Davis JV wishes to ensure a safe and productive work environment, where employees are prohibited from:

- Unlawfully manufacturing, distributing, possessing or using controlled substances
- The misuse or abuse of prescribed medications
- Having detectable levels of illicit drugs or alcohol present in their bodies, during working hours
- Violations of federal and/or state laws relating to controlled substances

4.1.4. The only exception to this policy is the authorized possession, use and transportation of medication, prescribed by a physician and used according to prescription instructions, unless such use would pose a recognizable safety risk to the employee, other employees or...
the public. Employees under the influence of legally prescribed medications which have
hazard warnings relative to mental impairment shall not be authorized to operate heavy
machinery, hand power tools or any equipment requiring mental alertness.

4.1.5. Being under the influence of alcohol is hereby defined as a breath alcohol test level of
0.04 NG/ML. Violations are grounds for immediate dismissal.

4.1.6. The company drug and alcohol testing program will be implemented in accordance with
this procedure. Employees working on jobsites where customer requirements for drug
screening are more stringent will be tested in accordance with those requirements. Haskell
Davis JV shall not pay for cost of drug tests, program administration and for the employee’s
wages during the time necessary for follow up random testing associated with a worker
testing positive for a controlled substance. Each employee or applicant will be required to
sign a clinical consent form. Employees who are required to submit to reasonable suspicion
or post-accident testing agree to accept, at the company’s discretion, transportation to a
location where the test will be conducted and to their residence.

4.1.7. Unannounced searches of employees and their personal property for drugs or alcohol
may be conducted for cause while on company property or the property of Haskell Davis JV
customers whose policies mandate such actions. Entry onto Haskell Davis JV premises or
jobsites is conditioned upon and constitutes consent to search. Employees are expected to
cooperate in conducting such tests and searches. An employee’s refusal to consent will
result in denial of access. Denial of access will result in employee termination due to
unavailability for work.

4.1.8. All Haskell Davis JV employees are governed equally by this program. This includes all
management, office, and bargaining and non-bargaining unit craft personnel.

4.1.9. Depending on the size, location and duration of out of town jobs, the Haskell Davis JV
program coordinator may be the Haskell Davis JV Corporate Safety Director or a
responsible representative located at the jobsite.

4.2. Testing Levels

<table>
<thead>
<tr>
<th>DOT Cutoff Levels</th>
<th>DRUGS</th>
<th>SCREEN LEVEL (Ng/MI)</th>
<th>CONFIRMATION LEVEL (Ng/MI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>0.02% (BAC*)</td>
<td>0.04% (BAC*)</td>
<td></td>
</tr>
<tr>
<td>Amphetamines</td>
<td>500</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>Marijuana (THC)</td>
<td>50</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Cocaine</td>
<td>150</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Opiates</td>
<td>2000</td>
<td>2000 heroin/codeine</td>
<td></td>
</tr>
<tr>
<td>Phencyclidine (PCP)</td>
<td>25</td>
<td>25</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-DOT Cutoff Levels</th>
<th>DRUGS</th>
<th>SCREEN LEVEL (Ng/MI)</th>
<th>CONFIRMATION LEVEL (Ng/MI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>0.02% (BAC*)</td>
<td>0.04% (BAC*)</td>
<td></td>
</tr>
<tr>
<td>Amphetamines</td>
<td>300</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td>Barbiturates</td>
<td>300</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

*Printed copies of this policy are uncontrolled and may not reflect changes made after above revision date.*
4.2.1. If a confirmed result is 0.04 alcohol concentration or greater, the employee must be immediately removed from performing his/her duties. A confirmation result of 0.02 alcohol concentration or higher but lower than 0.04 requires the employee to be removed from the site for a minimum of 24 hours and subject to another alcohol test. Arrangements should be made for the employee’s safe transportation home.

4.2.2. Test results at or above the screening limits must confirm positive before a positive test result is issued. Alternative methods (e.g. GC/MS) must be used for confirmation testing. Laboratories should report positive test results to medical reviewing officer for specimens confirmed at or above these levels.

4.3. Pre-Employment Testing

4.3.1. Wherever possible, employees will be tested prior to reporting to jobsite. Where union contract does not provide for pre-screening, employees will be tested within 24 hours after arrival at job site, and will be classified as “provisional” pending favorable test report.

4.3.2. Each applicant for a position in the company will be subject to the company’s substance abuse policy.

4.3.3. All offers of employment to applicants will be contingent upon the applicant passing a drug test in accordance with the company’s policy.

4.3.4. On project sites where there is limited access to third party screening facilities a visual integrated drug screen cup will be used to initially screen perspective employees. In the event that this visual test method is positive for a controlled substance, the perspective employee being tested shall be required to submit to a more specific alternate chemical method in order to obtain a confirmed analytical result. Gas Chromatography/Mass Spectrometry (GC/MS) is the preferred confirmatory method. Clinical consideration and professional judgment will be applied to any visual test result, particularly when preliminary positive results are indicated.

4.3.5. If a perspective employee is found to be positive for a controlled substance where there is a valid medical reason, the employee will be provided with a physical demands analysis form to be reviewed and signed by the prescribing physician. In the event that the prescribing physician indicates that the perspective employee cannot safely perform their job duties while under the influence of the controlled substance, they may not be employed by the company.

4.3.6. An applicant who refuses to submit to a pre-employment testing when requested, or refuses to sign the company’s substance abuse policy consent form, will not be employed by the company.
4.3.7. If an applicant’s test is positive for any prohibited substance, the applicant will not be employed by the company.

4.4. Random Testing

4.4.1. Where applicable the random drug testing shall be performed to comply with NASAP standards.

4.4.2. Five percent (5%) of all subject employees (pool) will be randomly selected for testing each month. A minimum of 50% of pool will be tested annually. Names of those selected will be confidentially communicated to the Haskell Davis JV program coordinator, who will individually notify those to be tested. Upon notification the employee must go immediately to the collection site and submit samples for testing. Refusal to submit a sample or properly complete documentation for a random test will be considered a refusal to test, which will require discipline up to and including termination.

4.5. Reasonable Suspicion or For Cause Testing

4.5.1. Employees whose conduct or behavior is suggestive of alcohol or drug impairment in the opinion of two supervisory personnel will be tested. If the collection facility is off site, they will be transported by a non-impaired employee, first to the test facility, then to their residence pending receipt of test results.

4.5.2. Employees suspected of being unfit for duty will be escorted by a supervisor or designated company representative to the authorized testing location. The employee’s cooperation with the escort and the collection will be required.

4.5.3. Refusal to cooperate in the collection procedure or refusal to take the test will require discipline up to and including termination.

4.6. Post-Accident Testing

4.6.1. Employees involved in work related injury, regardless of severity, that requires professional medical treatment will be subject to a drug test.

4.6.2. Employees involved in an accident or safety related incident of any kind while in a company vehicle or while on company time or on company property, will be subject to a drug test.

4.6.3. The company may require an employee who contributed to an accident be tested.

4.7. Recordkeeping and Confidentiality

4.7.1. All drug test results will be treated as confidential. The craft shop steward will be used to confidentially contact craft personnel regarding any need to discuss test results with the medical reviewing officer. The craft shop steward will also be used to communicate positive test results to employees, and will be present if an employee is being requested to submit to a for-cause test. Records will be maintained under control of the program coordinator. Information released to supervisors will be limited to "pass" or "fail".

4.8. Specimen Collection
4.8.1. Collection facilities will provide for employee privacy and provisions for washing hands.
Witnessed collection will not be required without cause.

4.9. Medical Review Officer (MRO)

4.9.1. Responsibilities

A medical review officer will be contracted with the collection agency. This individual will be a licensed physician, and is responsible for:

4.9.1.1. Reviewing program administration, random test drawings, collection procedures and lab test results to assure they are in accordance with NIDA/DOT protocols.

4.9.1.2. Contacting individuals with confirmed positive lab test results by telephone or in person to ascertain if there is a reasonable explanation other than use of illicit drugs.

4.9.1.3. Making the medical determination of whether the test result is positive or negative based on all available information, including information obtained per (2) above.

4.9.1.4. Notifying the Haskell Davis JV program coordinator of all test results.

4.9.2. Name, address, phone number

For employees hired outside the Bellingham area, the Collection agency is:

Authorized ASAP Service center

U.S. Health Works
1867 Airport Way, Suite 130-B
Fairbanks, AK 99701
907-452-2178

4.9.3. North American Substance Abuse Program (NASAP) certified laboratory

4.9.4. Lab screening tests will conducted by a Pacific Toxicology Laboratory and will consist of EMIT test with all suspected positive's confirmed by two Gas Chromatography /Mass Spectroscopy (GC/MS) tests. The medical reviewing officer will review and confirm all suspected positive test results prior to communicating to the field. Positive test specimens will be retained by lab for a period of at least 12 months.

4.10. Disposition of employees who test positive or refuse testing:

4.10.1. Individuals refusing to take the test or sign the consent agreement will be terminated for failure to comply with company policy or will not be selected for employment.

4.10.2. Individuals found to be in possession of illegal or uncontrolled legal drugs, alcohol or other prohibited materials (including Marijuana) will be terminated and will not be eligible for rehire.

4.10.3. Individuals will be contacted and counseled regarding potentially positive test results by the MRO prior to his determining the test positive. Individuals confirmed positive by the MRO or who are otherwise determined to be involved in the sale or use of illegal or...
uncontrolled legal drugs will be counseled by the Haskell Davis JV program coordinator and
craft shop steward regarding their rights for re-testing and rehire, following which they will
be terminated.

4.10.4. Individuals terminated under this program will not be eligible for re-hire until they
present documented evidence of successful completion of a recognized employee
assistance program evaluation, and if evaluation establishes the need, completion of an
alcohol/drug rehabilitation program.

4.11. Employee Assistance Program (EAP) Training and Awareness

4.11.1. Supervisory personnel will receive an orientation on recognition of physical, behavioral
and performance indicators of probable drug use. Informational material including
company policy on use of illicit drugs, posters, and community service hot line phone
numbers will be posted in main jobsite trailer and Haskell Davis JV main shop.

4.12. Violations

Any employee who violated this substance abuse policy shall be subject to discipline up to and including
termination. Nothing in this policy changes the at-will employment relationship, and employees may be
terminated at any time, with or without cause or notice.

4.13. The following instances will be considered as "refusal to submit":

4.13.1. Any refusal to provide a specimen as directed. Pre-access refusals subsequent to the
donor completing the membership application shall carry the same consequences as failing
the pre-employment test.
4.13.2. Failure to provide a sufficient breath or urine sample with no medical explanation for
the failure.
4.13.3. Refusal to sign any of the required documents associated with specimen collection.
4.13.4. Providing false information to collector and/or on the CCF.
4.13.5. Failure to report for the collection or to stay at the collection site after the collection
process commences.
4.13.6. Failed to permit the observation or monitoring of a specimen if required.
4.13.7. Fail or decline to take an additional drug test the employer or collector has directed you
to take.
4.13.8. Fail to under a medical examination or evaluation as directed by the MRO as part of the
verification process.
4.13.9. Fail to cooperate with any part of the testing process (e.g. refuse to empty pockets
when directed by the collector, behave in a confrontational way that disrupts the collection
process, refuses to remove hat, coat, gloves, coveralls when directed or failure to wash
hands as directed.)
4.13.10. For an observed collection, failed to follow the observer’s instructions to raise
your clothing above the waist, lower clothing and underpants, and to turn around to permit
the observer to determine if you have any type of prosthetic or other device that could be
used to interfere with the collection process.
4.13.11. Possess or wear a prosthetic or other device that could be used to interfere with the collection process.

4.13.12. Admit to the collector that you adulterated or substituted the specimen.

4.13.13. The confirmed specimen reported to the MRO by the laboratory was diluted, adulterated or substituted. A dilute specimen requires immediate re-testing. If a second dilute specimen is submitted the test shall carry the same consequences as failing the pre-employment test.