

Appendix A – Management Plan

Attach a copy of the firm's management plan for this project. Per the evaluation criteria set forth in the Proposal Evaluation, the management plan shall include the following:

- 1) Provide a brief history and description of your company, including an overview and experience providing similar projects and services relating to the Contract being bid:
 - General Construction
 - Mechanical, Electrical, and Plumbing (MEP)
 - Roofing

- 2) Describe your general understanding of the JOC system to include the joint scoping of work, the preparation of price proposals and Job Order proposals, using the Construction Task Catalog®, meeting the contractual deadlines of proposal development, the rapid mobilization and start-up of Job Orders, and the expedient closeout of Job Orders)

- 3) Provide a subcontracting plan to include the purchasing of subcontractor services, and work to be accomplished with in-house forces. Identify the amount and type of subcontracting anticipated. Demonstrate in writing your ability to coordinate multiple subcontractors on multiple projects at multiple locations.

- 4) Provide a list of contemplated subcontractors.

- 5) The Contractor's input during the development of the Detailed Scope of Work is a valued component of any JOC program. Outline and describe the Value-Engineering processes you have employed over the last 5 years identifying what worked best and what did not.

- 6) Demonstrate your firm's ability to understand the Design and Build environment and how the JOC process can partner with this concept. UNM is seeking a full function contracting relationship that will allow a willing partnership in both design and execution of remodeling projects. Design and flexibility will be crucial to our customer base and successful. Proposers must be willing to cooperate with this process.

- 7) Please provide contact information for the person(s) who will be responsible for the following areas. If not applicable, write "Not Applicable"

Executive Contact:

Contact Person: Will Humbard

Title: President

Phone: 505-880-1819 Fax: 505-837-1516

Email: whumbard@heinm.com



HEI, Inc.
P.O. Box 31310
Albuquerque, NM 87190-1310
(505)880-1819 Fax (505)837-1516

Appendix A - Management Plan

Related Experience

For the past twenty-five years, HEI, Inc. has provided an extensive and diverse list of end users with electrical services through any number of combinations of our three internal departments (Commercial / Industrial Electrical, Data/Telecommunications Infrastructure & Specialty Systems). One of the largest portions of our customer base is in fact Healthcare Facilities and Institutions. The following list highlights a portion of our more recent customers, related facilities and sample scopes of work:

- University of New Mexico Health System
 - Sandoval Regional Medical Center
 - Comprehensive Cancer Center
 - Cancer Research Facility
 - Children's Psychiatric Center
 - Mental Health Center
 - Carrie Tingley Hospital
 - Artesia General Hospital
 - Outside Network Infrastructure
 - Fiber Optic Pathway and Connectivity
 - Copper Pathway and Connectivity
 - Inside Network Infrastructure
 - Fiber Optic Pathway and Connectivity
 - Copper Pathway and Connectivity
 - Network Racking and Grounding
- Presbyterian Health Services
 - Rust Medical Center – Rio Rancho, NM
 - Presbyterian Main Hospital – Albuquerque, NM
 - Kaseman Hospital – Albuquerque, NM
 - Socorro General Hospital – Socorro, NM
 - Lincoln County Medical Center – Ruidoso, NM
 - Plains Regional Medical Center – Clovis, NM
 - Presbyterian Espanola Hospital – Espanola, NM

- Vehicle Security Gates
 - CCTV
 - Infant Abduction Systems
 - Emergency Phone Systems
- State of New Mexico
 - Sequoyah Adolescent Treatment Center – Albuquerque, NM
 - Fire Alarm Design/Installation/Maintenance
 - New Mexico State Veterans’ Home – Truth or Consequences, NM
 - *Primary Distribution Upgrades
 - *Emergency Standby Generator Installation
 - °Emergency Power Restoration
 - New Mexico Behavioral Health Institute – Las Vegas, NM
 - Access Control
 - Penitentiary of New Mexico
 - Santa Fe repair perimeter lights
 - Santa Fe install new emergency service generators
 - Roswell install new emergency service generators
 - Las Cruces replace fire pump
 - °Western New Mexico upgrade primary service
 - Fort Bayard Medical Center – Santa Clara, NM
 - °Emergency Standby Generator Installation
 - °Radiant Heater Installation
 - Rehabilitation Center – Roswell, NM
 - Nurse Call
 - °Emergency / Egress Lighting Upgrades

*denotes Job Order Contract project
 °denotes Design Build project

Job Order Contract System

Most of the work conducted by HEI, Inc. begins with a customer reaching out to us requesting assistance in resolving a situation that possesses either an immediate impact to their operations or a foreseen impact in the future. The below listed process and methods have been developed over time to efficiently develop and define a detailed scope of work, accurate cost estimate, schedule of events, Owner/Contractor coordination, quality control and confirmation of completed deliverables.

- Joint Scope Meeting / Project Definition – (approx. 2-4-day composite duration)
 - A designated customer representative (Owner) provides notification and description of project objective including any available design drawings or narratives, relative background and/or contributing factors.
 - Upon receipt of notification, a Project Manager (PM) is assigned to the project. The PM will schedule a Joint Scope Meeting with the Owner within 2 days of receipt of notification to review the available information related to the scope of work and obtain any additional detailed information required to allow for the development of necessary design and cost proposals. A site visit is an imperative step in this process as it allows the PM to obtain information related to existing site conditions, facility operations, working logistics/restrictions as well as countless other contributing factors that impact the overall delivery of the project.
 - The PM will compile the available data and generate a detailed scope of work narrative, construction schedule and necessary design documents. Additional incidental resources, such as subcontractors or a Professional Engineer, may be integrated at this time, dependent upon the requirements of the scope of work.
- Proposal Package Development – (approx. 3-5-day composite duration)
 - Based upon the completed scope of work and related design documents, a detailed Job Order Proposal is generated by either the PM or Division Estimator (dependent upon overall project size or complexity).
 - A Job Order Proposal is generated by the PM and submitted to the Owner. The Job Order Proposal shall include the following:
 - Project Outline
 - Project Synopsis (description)
 - The proposed method of accomplishing the work
 - Proposed construction drawings
 - Type of site field verification performed
 - User impacts
 - Protection of Owner property during construction
 - Estimated construction time, illustrated by a brief critical path bar chart schedule
 - Subcontractor Listing
 - Construction Task Catalog® based line item proposal, with relevant Coefficients applied

- Subcontractor bids (3) for any Non-pre-priced Items, with summary accounting applying non-pre-priced Coefficient
 - Contractor's Design package
 - Proposal estimate quantity calculations such as square foot, cubic yard, etc, unit of measure take-off calculations to justify quantities
 - Supplemental Drawings and calculations to clarify scope of work
 - Manufacturer's supplied drawings, calculations, fabrications
 - Catalog/product technical information
- Negotiation - (approx. 3-day composite duration)
 - Upon completion of a detailed review of Job Order Proposal by the Owner, a reconciliation meeting is to be conducted to review the overall proposed package. All variations in scope of work and/or pricing designations will be reviewed and reconciled at this time. A revised Job Order Proposal will be provided if necessary.
 - Upon approval of the Job Order Proposal, a purchase order will be provided by the Owner.
- Construction – (duration dependent upon project specifics)
 - Upon receipt of the assigned Job Order, associated purchase order and authorization to proceed from the Owner, the PM will immediately assign a specific Superintendent to the project. (Note: projects of lesser magnitude are assigned a Foreman who is managed directly by the PM thus allowing for a more streamlined communication path that allows for a greater efficiency in delivering projects of appropriate size).
 - The PM is responsible for the overall delivery of the project with direct oversight of Owner coordination, contractual compliance, permitting compliance, material acquisition, schedule/milestone tracking, cost control and final Owner acceptance. The PM works closely with the Superintendent to guarantee the delivery of quality standards in the allotted timeframe and most importantly the safety of the Owner, Owner occupants and construction staff.
 - The Superintendent is responsible for the physical delivery of the project with direct oversight of daily schedule and coordination with Owner occupants, onsite construction staff activities as well as strict compliance with design, quality assurance, safety and related code compliance.
 - Dependent upon project scope, complexity and logistics, regularly scheduled construction progress and coordination meetings may be required among the construction team, Owner and affected occupant

representative. Such open lines of communication are important to maintain overall awareness of progress as well as creating an efficient path for situational mitigation.

- Project Acceptance and Close Out (approx. 1-2-day composite duration)
 - Efficient closeout of the Job Order is accomplished via final project site inspections by the PM, Superintendent, Owner and construction inspectors from the local authority having jurisdiction. Any items identified as requiring correction are tracked via a written “punch list” process until final approval and acceptance has been obtained. Final closeout is achieved upon the supply of such items including (but not limited to) Operation/Maintenance Manuals, As Built Drawings, Warranty Letters and Owner Training.

Subcontracting

While most of the work contracted will be performed by in-house resources, occasional specialty subcontractors are included in our project team. Such specialties include professional engineering services, independent / third party testing (when required by Owner of AHJ), directional drilling, complex concrete cutting and coring and incidental architectural modifications.

Seamless integration of such resources is essential to the successful execution of any scope of work regardless of scale. Long standing relationships with specific specialty contractors has developed a familiarity of expectations and workflow coordination among our project management teams and field personnel. It is this experience that allows quick response by our contracting partners at each critical step of a project including estimating, procurement, coordination, execution of work and project closeout. All in-house and subcontracted resources perform as one cohesive entity regardless of scope or scale of work.

Potential Subcontractors

- Allied Engineering – Professional Engineering Services
- Vertiv – Independent Third-Party Testing
- Albuquerque Directional Boring – Directional Drilling & Excavation
- Precision Concrete Services, INC. – Concrete Cutting & Coring
- Pelletier Construction, INC. – Incidental Architectural Modifications

Value Engineering

Job Order Contracting lends itself perfectly to implementing Value Engineering practices by both the Owner and Contractor. Direct lines of communication between the Owner and Contractor allow for a clear understanding of both short- and long-term objectives. HEI, INC. capitalizes on this process to assist the Owner in identifying opportunities for both cost savings and added value.

Such opportunities are:

- Reduced design and engineering costs and timelines
- Leveraging existing infrastructure of resources towards current and future objectives
- Application of alternate construction methods and/or materials
- Familiarity with Owner facilities, standards, process and procedures

Design Build & Job Order Contracting

Job Order Contracting is truly a partnership between the contractor and the Owner. The Joint Scoping process in fact streamlines the Design Build aspect of this form of construction. By pairing primary decision makers from both the Owner and Contractor, initial project development and underway construction project details can be identified and addressed in short time. This is especially critical for continued forward momentum when response is required to such events as updated requirements from the Owner after commencing of construction, unforeseen/hidden existing conditions or any other outside influences.

Appendix B – Contractor's Statement of Qualification

1. ORGANIZATION

Name: HEI, Inc. Address: _____

Principal Office: 3800 Vassar Drive NE, Albuquerque, NM 87107

Corporation Partnership Sole Proprietorship Joint
Venture
 Other

a. How many years has your organization been in business as a contractor? 25

b. How many years has your organization been in business under its present business name?
25

c. Under what other or former names has your organization operated? _____

d. Department of Work Force Solutions Contracting Registration # 002495720120723

Effective Dates: 7/23/22 to 7/23/24

e. Submit FEIN and Dunn & Bradstreet report.

Included as Attachment G

f. Describe any present or past litigation, bankruptcy or reorganization involving supplier. None

g. Felony Conviction Notice: Indicate if the supplier

- is a publicly held corporation and this reporting requirement is not applicable;
- is not owned or operated by anyone who has been convicted of a felony; or
- is owned or operated by and individual(s) who has been convicted of a felony and provide the names and convictions.

h. Describe any debarment or suspension actions taken against supplier
None

2. LICENSING

a. Name of license holder (or qualifying party) exactly as on file with the State of New Mexico Construction Industries Division:

Will E. Humbard, Deborah Lisotto, Todd Cleaveland

b. License Classification: EE98, ES07, EL01

c. License

Number: 61439 License Code: J

d. Issue Date: 3/21/2022 Expiration Date: 3/31/2025

e. Is the firm's contractor's license free of ever being suspended or revoked by the CID or by the appropriate licensing agency in any other state?
 Yes [] No (attach explanation)

f. Does your firm hold all applicable business licenses required by state and local law?

▪ License Number: BRC-2002-286109 Jurisdiction: Albuquerque
Name of License Holder, exactly as it appears on file with jurisdictional authorities.
HEI INC.

Issue Date: 6/14/22 Expiration Date: 6/13/23

▪ License Number: ZBL-990797 Jurisdiction: Bernalillo County

Name of License Holder, exactly as it appears on file with jurisdictional authorities.
HEI Inc

Issue Date: 4/6/22 Expiration Date: 4/6/23

▪ License Number: BR000123-01-2016 Jurisdiction: Los Alamos County

Name of License Holder, exactly as it appears on file with jurisdictional authorities.
HEI, Inc.

Issue Date: 1/24/22 Expiration Date: 1/19/23

g. Is your firm registered with the State of New Mexico's Purchasing Department with a Resident Preference Number? Yes [] No

Resident Preference Number: L2048295344 Issue Date: 5/11/22

Name of number holder, exactly as it appears on file with State Purchasing.
HEI, INC

h. Is your firm free from formal debarment from public works, federal, state or local jurisdictions?

Yes [] No (attach explanation*)

(1) Total number of current employees:

Project Managers	<u>3</u>
Estimators	<u>2</u>
Superintendents	<u>3</u>
Foremen	<u>4</u>
Tradesmen	<u>30</u>

Administration	<u>6</u>
Others	<u>4</u>

3. CAPACITY AND CAPABILITY TO PERFORM THE WORK

a. Resources.

(2) Does your firm have the immediate capacity to perform the work required for this project?

Yes No

(3) What is the number and location of support centers, if applicable, and location of corporate offices?

Corporate office = 3800 Vassar Dr, Albuquerque, NM, 87107

(4) What was your annual construction volume over the last three (3) fiscal years?

\$11 M

(5) What are your overall public sector sales, excluding Federal Government, for last three (3) years?

\$33M, which includes state and local government sales

(6) What is your strategy to increase market share in the public sector?

We work primarily through word of mouth and we expect to expand our sales in greenhouse facilities as we have a strong reputation in this growing industry.

(7) What differentiates your company from competitors in the public sector?

We are often able to provide turnkey solutions through our ability to work as a general contractor and self perform the electrical, data, security and fire alarm.

(8) Describe any green or environmental initiatives or policies.

We promote recycling whenever possible.

(9) Provide any necessary detail as it relates to standard ordering methods and payment terms.

We are open to other payment terms, but our standard is net 30 based on progress billings.

(10) If Contractor requires additional agreements with Participating Public Agencies, provide a copy of the proposed agreement herein.

4. SURETY

a. Firm's current surety company: Burke Insurance

Will this surety be used for the construction contract for this project?

Yes No (attach explanation*)

Contact Agent: Valerie Corral Telephone: 575-524-2222; ext 6

Years utilizing this surety: 13 Maximum capacity: \$15M

Aggregate Total of current surety in force: \$1M

- b. Is the surety company to be used on this project licensed to do business in the State of New Mexico?
 Yes No (attach explanation*)
- c. Is your firm free of having any construction contracts taken over by a surety for completion in the past five (5) years?
 Yes No (attach explanation*)
- d. **Complete Attachment A (Notarized Declaration of Surety) Provide a letter from your bonding company setting forth your company's available bonding capacity and availability and confirming that, if required, your company could provide labor and material payment bonds and performance bonds for certain projects up to the bonding capacity.**

5. SAFETY

- a. Does your firm have a written safety program compliant with current state regulations?
 Yes No (attach explanation*)
(NOTE: Selected contractor will be required to provide a copy of their firm's written safety program at the time of contracting.)
- b. Provide the Recordable Incident Rate for the past calendar year: 2.03
- c. Is your firm free of committing serious or willful violations of federal or state safety laws as determined by a final non-appealable decision of a court or government agency?
 Yes No (attach explanation*)
- d. Provide your safety record, safety rating, EMR and worker's compensation rate where available. Safety Record/Rating - See OSHA 300 Log in Attachment G
EMR = 1.79 Worker's Comp Electrical = 4.678

6. INSURANCE & CLAIMS HISTORY

- a. Is your firm free from any court judgments, pending litigation, arbitration and final agency decisions filed within the last five (5) years in a construction related matter in which the contractor, or any officer, is or was party?
 Yes No (attach explanation*)
- b. Has your firm during the past five (5) years been free of a determination by a court of competent jurisdiction that it filed a false claim with any federal, state, or local government entity?

Yes No (attach explanation*)

c. Does your firm have the ability to provide the required insurance in the limit stated in the project documents?

Yes No (attach explanation*)

d. **Complete Attachment B (Proof of Insurance)** by providing a letter from an insurance carrier stating that the firm is able to obtain insurance in the limits required in the RFP.

7. QUALITY ASSURANCE

a. Does your firm have a written Quality Assurance Program?

Yes No (attach explanation*)

b. **Complete Attachment C (Copy of Quality Assurance)** Program by providing a copy of the written Quality Assurance Program.

8. PROJECT SCHEDULING

a. Has the firm been involved with a construction project within the past five (5) years, where the schedule was not met?

Yes No

If yes, please explain

▪ Project 1 Name: _____

Reason for Delay: _____

▪ Project 2 Name: _____

Reason for Delay: _____

▪ Project 3 Name: _____

Reason for Delay: _____

b. Has the firm been assessed liquidated damages due to scheduling for any project in the past five (5) years?

Yes No

If yes, please list project(s)

▪ Project 1 Name: _____

▪ Project 2 Name: _____

▪ Project 3 Name: _____

9. LABOR CODE VIOLATIONS

- a. Has your firm, during the past five (5) years, been free of any determinations by a court or an administrative agency of repeated or willful violations of laws and/or regulations pertaining to the payment of prevailing wages or employment of apprentices of public works projects?
 Yes No (attach explanation*)
- b. **Complete Attachment D (Affidavit of Non-Violation of Labor Codes)** by providing requested affidavit of non-violation of labor codes.
- c. Is the firm free of all sub-contractor Fair Practices Act violations for the past five (5) years?
 Yes No (attach explanation*)

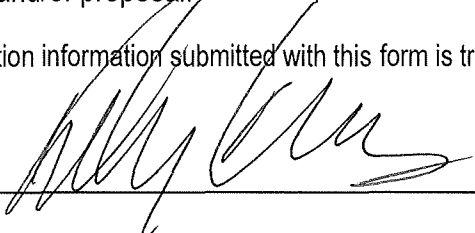
10. VALUE STATEMENT

UNM places a strong emphasis on diversity, quality management and sustainable efforts and strives to utilize these practices in its everyday activities. **Complete Attachment E (Copy of Value Statement)** by describing your firm's value system and note how you would demonstrate such practices on this project?

11. CONTRACTOR'S COMMENTS

- a. ***Complete Attachment F (Clarifications, and Explanations)** if you have selected any answers in the qualification statement that require further explanation. Note the question number and proceed with the explanation. This attachment may also be used if necessary to further clarify any of the answers to the above qualification questions, by noting the question number and posting the clarification.
- b. **Complete Attachment G (Additional Information (Optional))** if you would like to provide additional information about your firm and/or proposal.

The undersigned certifies that all of the qualification information submitted with this form is true and correct.

Signature of authorized representative  _____

Printed or typed name Kelly Adams

Title Director

Date 11/3/22

Company name HEI, Inc.

Address 3800 Vassar Drive NE

City/State/Zip Albuquerque/New Mexico/87107

Telephone 505-880-1819 Fax 505-837-1516

Email kadams@heinm.com

ATTACHMENTS INCLUDED - 12

Please check all attachments included in the proposal

- A Notarized Declaration of Surety
- B Proof of Insurance
- C Copy of Quality Assurance Program
- D Affidavit of Non-Violation of Labor Codes
- E Copy of Value Statement
- F Clarifications, and Explanations
- G Additional Information (Optional)

----- END OF **PRIMARY CONTRACTOR'S** QUALIFICATION STATEMENT -----

November 1, 2022

HEI, Inc.
3800 Vassar
PO Box 31310
Albuquerque, NM 87190-1310

Re: General Bonding Letter for UNM Job Order Contracting (JOC), RFP-2379-23

Burke Insurance Group LLC presently handles the bonding for HEI, Inc. Bonding credit is provided through The Cincinnati Insurance Company of Fairfield, Ohio. The Cincinnati Insurance Company is a listed surety with the Department of the Treasury.

At the present time, The Cincinnati Insurance Company has agreed to favorably consider extending the single at \$10 million and aggregate at \$15 million. Any specific requests for bonds will be underwritten on its own merits and will be based on the financial position of the company and the underwriting information available at the time that bonds are requested.

This letter should not be construed as an agreement to provide surety bonds for any particular project. Any specific requests for bonds will be underwritten on its' own merits and will be based on the underwriting information available at that time.

If you should need additional information regarding the bonding capacity for HEI, Inc., please let us know.

Sincerely,


William W. Burke, Jr.
Attorney In Fact, The Cincinnati Insurance Company


Notary

Commission Expires: February 8, 2026

VALERIE CORRAL
NOTARY PUBLIC
STATE OF NEW MEXICO
COMMISSION # 1137436
COMMISSION EXPIRES: 02-08-2026

HEI ATTACHMENT B

CERTIFICATION OF INSURANCE AVAILABILITY

Date: November 2,2022

I, Dianne Dawkins certify that I have reviewed the insurance requirements listed in

Certificate of Insurance for the RFP Number: 2379-23

Project: UNM Job order Contracting (JOC)

University of New Mexico OMNIA

and furth Certify HEI, Inc. has or can obtain the insurance coverage required by this project.

Signed: *Dianne Dawkins*

Title: Account Manager | Commercial Lines

Insurance Agency: Burke Insurance Group, LLC

Address- 1690 S. Telshor Blvd. Las Cruces, NM 88011

Telephone- 575-524-2222 Ext. 1



HEI, Inc.

Construction

Quality Manual

**Operating Policies of the
HEI Quality System**

Version: 2018

The documents provided by HEI, Inc. disclose proprietary company information that is copyright registered. Please hold these quality documents in confidence and do not share them with other organizations, even if you do not charge a fee.



QUALITY MANUAL

TABLE OF CONTENTS

1. Quality System Management and Responsibilities 6

1.1. Overview 6

1.2. HEI, Inc. Quality Policy 6

1.3. Quality Duties, Responsibilities, and Authority 6

1.4. Quality System Performance Measures 9

1.5. Customer Satisfaction Performance Measures 9

1.6. Exceptions 9

2. Project Quality Assurance/Quality Control Plan 10

2.1. Overview 10

2.2. HEI Project License and Qualification Requirements 10

2.3. Project Personnel and Qualifications 10

2.4. Project Quality Assurance/Quality Control Plan 11

2.5. Identification of Quality Controlled Work Tasks 12

2.6. Project Quality Inspection and Test Plan 12

2.7. Project Quality Communications Plan 12

2.8. Project Quality Training Plan 12

2.9. Customer Training On Operation and Maintenance 12

2.10. Project Records and Documentation Plan 13

2.11. Project Audit Plan 13

3. Contract Specifications 14

3.1. Overview 14

3.2. Contract Technical Specifications 14

3.3. Contract Drawings 14

3.4. Contract Submittals 14

3.5. Customer Submittal Approval 16

3.6. Contract Warranty 16

3.7. Contract Review and Approval 17

4. Design Review and Control 18

4.1. Overview 18

4.2. Design Input Review 18

4.3. Project Design Quality Assurance/Quality Control Plan 18

4.4. Design Progress Reviews 19

4.5. Design Output Verification and Approval 19

5. Project-Specific Quality Standards 20

5.1. Overview 20

5.2. Regulatory Codes 20



5.3. Industry Quality Standards 20

5.4. Material and Equipment Specifications..... 20

5.5. Work Process Specifications 21

5.6. Controlled Material Identification and Traceability 21

5.7. Measuring Device Control and Calibration..... 21

5.8. HEI Quality Standards 22

5.9. Application of Multiple Sources of Specifications 22

6. Project Purchasing 23

6.1. Overview..... 23

6.2. Qualification of Outside Organizations and Company Departments 23

6.3. Quality Responsibilities of Key Subcontractor and Supplier Personnel..... 24

6.4. Requirements for Subcontractor QC Plan 25

6.5. Subcontractor and Supplier Quality Policy 25

6.6. Project Subcontractor and Supplier List 26

6.7. Purchase Order Requirements 26

6.8. Project Purchase Order Approvals..... 26

7. Process Controls..... 27

7.1. Overview..... 27

7.2. Project Startup and Quality Control Coordination Meeting..... 27

7.3. Preparatory Project Quality Assurance/Quality Control Plan Planning..... 27

7.4. Weekly Quality Planning and Coordination Meetings..... 28

7.5. Process Control Standards..... 28

7.6. Daily Quality Control Report..... 30

7.7. Monthly Quality Control Report..... 30

8. Inspections and Tests 31

8.1. Overview..... 31

8.2. Required Work Task Quality Inspections and Tests..... 31

8.3. Material Inspections and Tests 31

8.4. Work in Process Inspections..... 32

8.5. Work Task Completion Inspections 32

8.6. Inspection of Special Processes 33

8.7. Independent Measurement and Tests 33

8.8. Commissioning Functional Acceptance Tests..... 33

8.9. Hold Points for Customer Inspection..... 33

8.10. Quality Inspection and Test Specifications 33

8.11. Inspection and Test Acceptance Criteria 33

8.12. Inspection and Test Status..... 34

8.13. Independent Quality Assurance Inspections 34

8.14. Inspection and Test Records..... 34

8.15. Project Completion and Closeout Inspection 35

9. Nonconformances and Corrective Actions 37

9.1. Overview..... 37



9.2. Nonconformances 37

9.3. Corrective Actions 38

10. Preventive Actions 39

10.1. Overview 39

10.2. Identify Preventive Actions for Improvement 39

10.3. Train Preventive Actions for Improvement 39

11. Quality System Audits 41

11.1. Overview 41

11.2. Project Quality System Audit 41

11.3. Company-wide Quality System Audit 41

12. Record and Document Controls..... 42

12.1. Overview 42

12.2. Quality System Documents 42

12.3. Document Controls..... 42

12.4. Record Controls 43

13. Appendix..... 44

13.1. Definitions of Terms 44



PROJECT QUALITY MANAGEMENT

The President forms a team consisting of a Quality Manager, Project Manager, and Superintendent.

First, the Quality Manager assembles a set of project specifications that includes customer specifications and requirements, regulations, industry standards, product instructions, and HEI quality standards. HEI operating policies assure compliance to the project specifications.

The Quality Manager evaluates personnel, subcontractors and suppliers, materials, and suppliers, and ensures that only those that are capable and qualified are included on the project. Training is provided to ensure that all personnel involved understand their project work task requirements as well as their quality responsibilities and authorities.

The Quality Manager then details how the quality is controlled throughout the construction process through a listing of all work task inspections and tests that will be performed.

As the project proceeds and prior to starting each construction work task, the Superintendent coordinates detailed quality requirements and resources, working conditions, and communicates them through a meeting with all interested parties. The Superintendent amends work task inspection checklists with items for heightened awareness based on the concerns of all parties.

The subcontractors and suppliers, Superintendent, and Quality Manager use inspection checklists to monitor conformance of each work task to the project specifications before, during, and at completion. Laboratory and functional tests are performed to assure performance results.

Should quality nonconformances occur, they are systematically segregated, controlled and corrected. Improvements are made to prevent recurrences.

Throughout the project, the Quality Manager performs on-site quality audits to ensure that the HEI Quality System is operating effectively.



1. QUALITY SYSTEM MANAGEMENT AND RESPONSIBILITIES

SYSTEM OF PERSONAL QUALITY ACCOUNTABILITY

1.1. OVERVIEW

Responsibilities for quality are specified not only for compliance with policies and procedures but also so that decisions are based on principles that ensure quality.

Documented responsibilities ensure that expected behaviors are communicated throughout the company rather than left to discretionary interpretation.

1.2. HEI, INC. QUALITY POLICY

Quality is everyone's responsibility. The President holds everyone in the organization personally accountable for adhering to the HEI Quality System policies and procedures.

The HEI, Inc. Quality Policy describes the HEI commitment to quality and reinforces compliance with the Quality System.

The President communicates the Quality Policy message throughout the company so that all employees understand their respective quality responsibilities.

The President reviews the HEI Quality Policy with all employees at least annually.

The President ensures that a copy of the HEI Quality Policy is distributed to all employees and is posted in all offices.

1.3. QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

1.3.1. PRESIDENT: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

While everyone is responsible for quality, the President is the one person in the company ultimately responsible for quality. Regardless of other duties, quality responsibilities of the President include:

- Ensuring that each employee understands his or her quality responsibilities as well as HEI quality policies
- Establishing company quality policies and objectives
- Conducting management reviews of the HEI Quality System
- Ensuring the availability of necessary resources and information for effective operation of the Quality System
- Demonstrating commitment to the HEI Quality System and its integrity
- Ensuring achievement of HEI quality objectives
- Continuously improving the Quality System

1.3.2. PRESIDENT: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

The President is responsible for ensuring company-wide effectiveness of the Quality System. Regardless of other duties, the President is responsible for:



- Fully implementing all provisions of the HEI Quality System and related documents.
- Manage the operation of the HEI Quality System
- Implement and manage all phases of quality control
- Ensuring that the Quality System is established and implemented by persons doing work that impacts quality
- Ensuring that the Quality System is maintained
- Acting as HEI liaison with parties outside the company on matters relating to quality
- Review and approval of all Quality System documents

1.3.3. QUALITY MANAGER: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

The Quality Manager is responsible for ensuring the overall effectiveness of the Quality System for a specific project. Regardless of other duties, the Quality Manager is responsible for:

- Planning project quality controls required by the HEI quality systems and contract requirements
- Fully implementing all provisions of the HEI Quality System and related documents on the project.
- Manage the operation of the HEI Quality System on the project.
- Implement and manage all phases of quality control
- Communicating project-specific quality requirements to all affected departments, subcontractors and suppliers, and customers
- Ensuring that the Quality System is established and implemented by persons doing work that impacts quality
- Monitoring progress of activities
- Ensuring that the Quality System is maintained
- Acting as the project quality liaison with parties outside the company on matters relating to quality
- Reporting to senior management on performance of the Quality System, including needed improvements
- Review and approval of all project Quality System records
- Review and approval of project quality-related contract submittals
- Managing all project inspection and quality control activities
- Controlling corrective actions
- Resolving quality nonconformances

The Quality Manager has the authority to:

- Stop work when continuing work may adversely affect quality or cover up a defect
- Prevent the use of equipment or materials that may adversely affect quality or cover up a defect
- To direct the removal and replacement of any non-conforming work, equipment, or material by HEI, any subcontractor, or any supplier.
- Suspend work and/or supply of materials by any staff member, subcontractor personnel, or supplier as deemed necessary to assure quality results.

Alternate Quality Managers acting in the role of the project Quality Manager has the same quality duties, responsibilities and authority as the project Quality Manager.

1.3.4. PROJECT MANAGER: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

The Project Manager is the one person responsible for management of a specific project. Regardless of other duties, the Project Manager is responsible for:

- Demonstrating commitment to the HEI Quality System and its integrity
- Ensuring achievement of project quality objectives



- Providing adequate resources for effective operation of the Quality System on the project
- Ensuring that each design employee understands his or her quality responsibilities as well as HEI quality policies
- Ensuring that each project employee understands his or her quality responsibilities as well as HEI quality policies
- Conducting management reviews of the HEI Quality System
- Ensuring the availability of necessary resources and information for effective operation of the HEI Quality System

The Project Manager has authority to:

- Stop work when continuing work adversely affects quality or covers up a defect
- Prevent the use of equipment or materials that would adversely affect quality or cover up a defect
- Suspend work and/or supply of materials by any staff member, subcontractor personnel, or supplier as deemed necessary to assure quality results.

1.3.5. SUPERINTENDENT: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

A Superintendent verifies that work performed by subcontractors and suppliers and HEI work crews conforms to HEI quality standards. The President appoints one or more Superintendents for each project.

A Superintendent has specific responsibilities for:

- Ensuring that work meets government regulatory and code requirements, customer requirements, contract requirements, contract technical specifications, contract drawings, approved contract submittals, and company quality standards and specifications
- Ensuring that subcontractors and suppliers begin work in accordance with HEI start-work policies
- Ensuring that subcontractors and suppliers receive a notice to work only when conditions will not adversely affect quality results
- Conducting quality inspections, tests, and recording findings
- Accurately assessing subcontractor quality and on-time performance
- Ensuring that quality standards are achieved before approving subcontractor or work crew completion of work

The Superintendent has the authority to:

- Stop work when continuing work may adversely affect quality or cover up a defect
- Prevent the use of equipment or materials that may adversely affect quality
- Direct the removal or replacement of any non-conforming work, equipment, or material
- Suspend work and/or supply of materials as deemed necessary to assure quality results

Alternate Superintendent has the same quality duties, responsibilities and authority as the Superintendent. Multiple Superintendents may be assigned to the project.

1.3.6. ALL EMPLOYEES: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

All employees have quality responsibilities that include:

- Conformance to project quality requirements
- Compliance with the project quality plan
- Meeting or exceeding all applicable regulations, codes, industry standards, and manufacturer specifications as well as meeting or exceeding our customers' contract and individual requirements.
- Fully implementing and complying with all provisions of the HEI Quality Manual.



All employees have the authority to:

- Stop work when continuing work may adversely affect quality or cover up a defect
- Prevent the use of equipment or materials that may adversely affect quality

1.4. QUALITY SYSTEM PERFORMANCE MEASURES

Company-wide quality performance measures evaluate the effectiveness of the Quality System. The following indicators are the primary measures of quality performance:

- Number of customer correction items identified at the project closeout quality inspection
- Customer satisfaction feedback

At least annually, President(s) evaluate HEI quality performance and set improvement goals.

1.5. CUSTOMER SATISFACTION PERFORMANCE MEASURES

HEI obtains feedback after project completion on whether customer quality expectations are being met, and to what extent. The President analyzes customer satisfaction data to determine opportunities for improvement and address any items of customer dissatisfaction.

1.6. EXCEPTIONS

Exceptions to the HEI Quality System and customer contract requirements are tightly controlled:

- Exceptions to compliance to contract specifications are approved only by the customer and the Quality Manager.
- Exceptions to the HEI Quality System not specified by contract requirements are approved only by President or the Quality Manager.

Exceptions are recorded in memoranda, change orders (Section 3.4.6 Change Order), or otherwise clearly documented.



2. PROJECT QUALITY ASSURANCE/QUALITY CONTROL PLAN

2.1. OVERVIEW

After HEI is awarded a contract to carry out a construction project, the President forms a team consisting of a Quality Manager, Project Manager, and Superintendent.

First, the Quality Manager develops a set of project specifications that align project requirements with customer specifications and requirements, regulations, industry standards, product instructions, and HEI quality standards.

The Quality Manager evaluates personnel, subcontractors and suppliers, materials, and suppliers, and ensures that only those that are capable and qualified are included on the project. Training is provided to ensure that all personnel involved in the project understand their quality responsibilities and authorities.

The Quality Manager then details how the quality is controlled throughout the construction process through a quality inspection and test plan that specifies requirements and pass/fail criteria for quality inspections and tests. HEI operating policies assure compliance to the project specifications.

As the project proceeds and prior to starting each construction task, the Superintendent coordinates detailed requirements and resources, site conditions, and communicates them through a meeting with all interested parties. The Superintendent amends inspection specific checklists with items for heightened awareness based on the concerns of all parties.

The subcontractors and suppliers and Superintendent use the quality inspection forms to monitor execution of the construction process through a series of quality inspections before, during, and at the completion of each construction task. Laboratory and functional tests are performed to assure performance results.

Should nonconformances occur, they are systematically controlled and corrected. Improvements are made to prevent recurrences.

Throughout the project there are standard operating procedures and forms for creating, maintaining, and controlling quality documents and records.

Throughout the project, the Quality Manager performs on-site quality audits to ensure that the HEI Quality System is operating effectively.

2.2. HEI PROJECT LICENSE AND QUALIFICATION REQUIREMENTS

The Quality Manager identifies company license and qualification credentials required by contract specifications and government regulators. The Quality Manager obtains records, certificates, and license records that provide verification of HEI credentials.

2.2.1.1. REQUIRED COMPANY LICENSES AND CERTIFICATIONS

The Quality Manager defines quality-related company credentials for each project work task that affects quality.

2.3. PROJECT PERSONNEL AND QUALIFICATIONS



2.3.1. PROJECT ORGANIZATION CHART

The President defines the organization chart for the project. The organizational chart includes job titles, names of assigned personnel, and organizational and administrative interfaces with the customer. The organization chart defines lines of authority as indicated by solid connection; dotted lines indicate lines of communication. The lines of authority preserve independence of quality control personnel from the pressures of production.

The President assesses the qualification requirements for each position on the project organization chart, qualifications of each person, and then appoints only qualified persons to the project organization.

2.3.2. APPOINTMENT OF KEY PROJECT PERSONNEL

The President forms a project management team consisting of:

- A Quality Manager
- A Project Manager
- A Superintendent
- A Quality Manager (if required)

The President appoints qualified persons to each project management job position with specific quality responsibilities and authorities. The President assesses the qualifications of each person before the appointment is made.

The President keeps a record of the appointment and signs the document. The person accepts the appointment by signing a declaration as a competent person.

Work steps for maintaining appointment of key project personnel are specified in Standard Operating Procedure 2.3.2 Appointment of Key Project Personnel.

2.3.3. PERSONNEL QUALIFICATIONS

The Quality Manager qualifies employee capabilities to ensure that they are capable of completely carrying out their assigned quality responsibilities including the following capabilities:

- Knowledge of Company quality standards
- Knowledge of job responsibilities and authority
- Demonstrated skills and knowledge
- Demonstrated ability
- Demonstrated results
- Required training
- Required experience

The Quality Manager also evaluates independent contractor personnel on the same standards that apply to employees.

2.3.3.1. REQUIRED LICENSES AND CERTIFICATIONS

The Quality Manager defines quality-related credentials for each project job position that affects quality.

2.4. PROJECT QUALITY ASSURANCE/QUALITY CONTROL PLAN

Before project work begins, the Project Manager prepares a construction process plan that defines the sequence of each work task and related quality inspections. The construction process plan is documented through an integrated and coordinated set of documents that includes:



- A schedule consisting of a sequence of each work task and activities required to complete a project
- The customer contract (Section 3 Contract Specifications) including contract technical specifications and contract drawings
- Required quality inspections and tests (Section 8.2 Required Work Task Quality Inspections and Tests) and the project Quality Inspection and Test Plan when required
- The Contract Submittal Schedule (Section 3.4.1 Contract Submittal Schedule)

2.5. IDENTIFICATION OF QUALITY CONTROLLED WORK TASKS

The Quality Manager identifies each phase of construction work task that requires separate quality controls. Each work task triggers a set of requirements for quality control inspections before, during and after work tasks.

2.6. PROJECT QUALITY INSPECTION AND TEST PLAN

The Quality Manager prepares quality inspection and test plans for a project that identifies:

- Each required quality inspection and/or test
- Inspection and test specifications for each required quality inspection or test
- Hold points for customer quality inspection
- Specification requirements for each quality inspection and test

2.7. PROJECT QUALITY COMMUNICATIONS PLAN

After HEI is awarded a contract, the Project Manager plans the methods of communications among the customer, subcontractors and suppliers and HEI.

2.8. PROJECT QUALITY TRAINING PLAN

The Quality Manager ensures that all employees receive training relevant to their quality responsibilities.

The Quality Manager ensures that all subcontractors and suppliers receive training on relevant elements of the HEI Quality System, Project Quality Assurance/Quality Control Plan, and quality standards.

The Quality Manger identifies the training needs of all personnel performing activities that affect quality. Training topics may include:

- The HEI Quality System
- The HEI Quality Policy
- Operating policies identified in the Quality Manual
- Quality standards cited in the Quality Manual, or project documents, or records
- Relevant quality standard operating procedures

2.9. CUSTOMER TRAINING ON OPERATION AND MAINTENANCE

During the project closeout phase, the Quality Manager trains customers on the operation and maintenance of the completed project, including as applicable:

- A review of as-built drawings
- Installed product identification and warranty requirements
- A review of documentation regarding start-up, operation, and shutdown
- Normal adjustments and maintenance requirements
- Limitations on use



2.10. PROJECT RECORDS AND DOCUMENTATION PLAN

The Quality Manager identifies the quality records that will be maintained during the planning and execution of the project. Considerations include:

- Contract requirements for maintaining records
- The size of the project
- Types of activities
- The complexity of processes and their interactions
- The competence of personnel
- The duration of the project
- The need to demonstrate completion of work
- The need to demonstrate due diligence for quality system related activities
- Balancing the cost and benefits of maintaining the record

2.11. PROJECT AUDIT PLAN

The Quality Manager identifies the frequency of project quality audit that will be conducted during the project and the job position that will conduct the audits. Considerations include:

- The size of the project
- The complexity of processes and their interactions
- The duration of the project



3. CONTRACT SPECIFICATIONS

DEFINE CUSTOMER QUALITY EXPECTATIONS

3.1. OVERVIEW

Fulfilling customer contract expectations is a primary objective of the HEI Quality System. To ensure that customer expectations will be fulfilled, HEI clearly defines the requirements for each contract before it is approved.

The Project Manager ensures that the information in customer contracts clearly defines customer expectations and that the necessary details are provided to set requirements for construction.

3.2. CONTRACT TECHNICAL SPECIFICATIONS

The Project Manager obtains contract technical specifications from the customer.

For each specific contract, The President identifies supplemental technical specifications on the Project Quality Assurance/Quality Control Plan when they are not otherwise specified by the contract or the approved drawings. Superintendents have jobsite access to contract technical specifications for the construction activities they supervise.

All HEI activities comply with the contract technical specifications.

3.3. CONTRACT DRAWINGS

The Project Manager obtains customer supplied drawings that have been approved by local government regulators. Superintendents have jobsite access to approved architectural drawings for the construction they supervise.

All HEI activities comply with the drawing details and specifications cited in the drawings.

3.3.1.1. AS-BUILT RED-LINE DRAWINGS

As the project progresses, the Superintendent will mark the original design drawings to indicate as-built conditions including changes to specified materials, dimensions, locations, or other features.

3.4. CONTRACT SUBMITTALS

The Quality Manager prepares submittals that provide additional details of how HEI plans to carry out quality-related aspects of the customer contract, contract technical specifications, and contract drawings and reporting of quality records to the customer.

The Quality Manager lists, schedules, and approves all quality-related submittals that are required by the project including submittals prepared by subcontractors and suppliers. The Quality Manager must review all submittals for compliance with the requirements of the HEI Quality System. The Quality Manager must sign approval of each contract submittal.

HEI extends compliance to contract specifications to all customer approved submittals. All HEI activities comply with customer approved submittals.



3.4.1. CONTRACT SUBMITTAL SCHEDULE

The Project Manager identifies submittals that apply to a specific contract and when they should be submitted, including:

- Contract requirement reference (if applicable)
- Submittal type: Shop drawing, product data, quality inspection and test plan, request for information, or allowances and unit prices
- Description
- Due date for submission to customer by HEI
- Due date for approval by the customer. Due dates may be a number of days after a project plan milestone.
- Approval date

3.4.2. SHOP DRAWING SUBMITTALS

The Project Manager or Purchasing and Estimating Manager prepare shop drawing submittals that supplement contract drawings. Shop drawings are required when additional details are necessary for fabrication or installation. The following information is included, as applicable:

- Dimensions established by field measurement
- Relationships to adjoining construction
- Identification of products and materials
- Fabrication and installation drawings
- Diagrams showing locations of field-installations
- Shop fabricated manufacturing instructions
- Templates and patterns
- Design calculations
- Compliance with specified standards
- Seal and signature of professional engineer if required
- Additional requirements as specified in the contract, contract technical requirements, or contract drawings.

HEI extends contract specifications to include customer approved shop drawings.

3.4.3. PRODUCT DATA SUBMITTALS

The Project Manager prepares product data submittals that consist of the manufacturer's product information. The information included in this submittal is:

- Manufacturer, trade name, model or type number
- Description
- Intended use
- Size and physical characteristics including drawings when applicable
- Finish and color characteristics
- Product manufacturer's installation instructions, when applicable
- Additional requirements as specified in the contract, contract technical requirements, or contract drawings.

3.4.4. ALLOWANCES AND UNIT PRICES SUBMITTALS

When customer contracts specify allowances and unit prices that the customer will select after the contract is awarded, the Project Manager prepares an allowance and unit price submittal for customer approval.



When a customer selects or approves an allowances and unit prices, the customer indicates the allowance and unit price selection on the signed submission return.

HEI extends compliance to contract specifications to customer approved allowances and unit prices.

3.4.5. REQUEST FOR INFORMATION (RFI) SUBMITTALS

The Project Manager submits a request for additional information to the customer when errors are found or when required information is not contained in the contract, contract technical specifications, or contract drawings.

Should any number of contract technical specifications or contract drawings result in conflicting requirements, the Quality Manager submits a request for information to the customer to select the standard that applies.

HEI extends compliance to contract specifications to customer requests for information.

3.4.6. CHANGE ORDER SUBMITTALS

Contract requirements or contract technical specifications may require a change after the contract is awarded. The Project Manager submits the change order to the customer for approval, including any contract price adjustments.

When a customer approves a change order, the customer signs the submission return.

HEI extends contract specifications to include customer approved change orders.

3.4.7. MOCK-UP SUBMITTALS

The Superintendent prepares mock-up submittals as required by contract. Additionally, the Quality Manager specifies mock-up requirements when they are necessary to ensure customer expectations are clearly identified.

The Quality Manager ensures that each mock-up demonstrates specific elements of form and/or function, and that they are specified in the submittal documents.

HEI extends contract specifications to include customer approved mock-up submittals.

3.5. CUSTOMER SUBMITTAL APPROVAL

The Project Manager obtains the signature of an authorized customer representative on the submittal form.

HEI extends compliance to contract specifications to customer approved submittals.

Work in the affected area of a pending submittal requirement does not start until the customer approves the submittal.

3.6. CONTRACT WARRANTY

The Project Manager ensures that customer contracts clearly specify warranty coverage including:

- Scope
- Starting date
- Duration



The Project Manager ensures that customer contracts also clearly specify owner responsibility for:

- Restrictions of use
- Maintenance requirements
- Exclusions for customer supplied materials or equipment
- Timely notification of problems

3.7. CONTRACT REVIEW AND APPROVAL

The President conducts customer contract reviews to ensure that:

- Customer requirements and specifications are complete
- Customer requirements and specifications are compatible with the relevant regulations, HEI quality standards, and Quality System requirements
- HEI has the capability to deliver the completed project in the time allotted

Before construction begins, the President makes sure that all contract requirements are clearly understood, all discrepancies are resolved, and all requirements are agreed upon. Once these requirements are met, the President signs the contract.



4. DESIGN REVIEW AND CONTROL

4.1. OVERVIEW

HEI ensures that the designs have well defined specifications, stakeholders have input as the designs progress, qualified personnel carry out the design work, and final designs are verified to meet all contract and regulatory requirements. Design control applies to architectural and engineering design. Process controls apply to approved designs that have additional detail provided by shop drawings, product selections, or requests for information.

4.2. DESIGN INPUT REVIEW

The Quality Manager ensures that the information in design inputs clearly defines customer expectations and that the necessary details are provided to set requirements for design.

The Quality Manager obtains design specifications from the customer and conducts a customer design input review to ensure that:

- Customer design input requirements and specifications are complete
- Design process review milestones are specified when necessary
- Customer design output requirements and specifications are complete for review milestones as well as the completed design
- Customer design requirements and specifications are compatible with the relevant regulations, HEI quality standards, and Quality System requirements
- HEI has the capability to deliver the completed design in the time allotted

The Quality Manager identifies supplemental design specifications that supplement customer specifications when they are needed to ensure a quality design.

Before design work begins, the Quality Manager makes sure that all design requirements are clearly understood, all discrepancies are resolved, and all requirements are agreed upon. Once these requirements are met, the Quality Manager approves the design input.

The Quality Manager ensures that design input documents are verified by qualified personnel. The person responsible must verify:

- Design input specification are approved by a customer authority
- Design input specifications are complete
- Design input requirements and specifications are compatible with the relevant regulations, HEI quality standards, and Quality System requirements
- HEI has the capability to deliver the completed project in the time allotted

4.3. PROJECT DESIGN QUALITY ASSURANCE/QUALITY CONTROL PLAN

The Quality Manager prepares a project-specific design review plan that includes:

- A listing of company and customer stakeholders, reviews they will participate in, and how their input will be used to amended design requirements. The project organization chart Includes interfaces between various groups and personnel for producing and reviewing the design.
- Design output deliverables, including required drawings, and engineering calculations
- Identification of who will perform design output verification activities and the criteria they will use.



- The Quality Manager reviews the design process project plan with the customer and other interested parties. The customer approves the plan after any discrepancies are resolved and the plan is agreed upon. Design work may begin only after the customer approves the plan.

4.4. DESIGN PROGRESS REVIEWS

The Quality Manager holds review meetings with interested parties at key design milestones. The Quality Manager identifies the key design milestones, the design output required for the review, and a list of reviewers.

Two design reviews are required: one is an input design review and the other is the final design review. The Quality Manager identifies other design reviews necessary to ensure a quality result. Design reviews may be specified at the completion of design work tasks, site assessments, preliminary engineering, preliminary design, percentage completion stages, and on a calendar schedule.

The Quality Manager identifies customer and company reviewers appropriate for each design milestone. Reviewers may include persons that have a stake in any of the following: quality, safety, constructability, scheduling, maintenance, purchasing, estimating, or cost control.

At each review, the Quality Manager reviews reviewer recommendations for amendments to the design specifications. The Quality Manager submits selected design amendments for customer approval. Customer approved design amendments are design requirements.

4.5. DESIGN OUTPUT VERIFICATION AND APPROVAL

The Quality Manager ensures that design output documents are verified by qualified personnel independent of the person performing the work. The person responsible must verify:

- The completed design meets requirements specified by the design input
- The completed design meets approved design amendments
- Engineering calculations are correct
- Completeness of records per the Design Project Quality Assurance/Quality Control Plan including inputs, reviews, communications, and verification activities.



5. PROJECT-SPECIFIC QUALITY STANDARDS

APPLICABLE REGULATIONS, INDUSTRY, and COMPANY STANDARDS

5.1. OVERVIEW

HEI personnel and subcontractors and suppliers are accountable for compliance to standards-based written specifications.

To achieve expectations reliably and consistently, specifications are clearly spelled out, not only for results but also for processes. Specifications apply to materials, work steps, qualified personnel and subcontractors and suppliers, safe work rules, and environmental work conditions.

Standards ensure that results are specified rather than left to discretionary practices.

5.2. REGULATORY CODES

All HEI construction activities comply with the relevant regulations. The Quality Manager identifies regulatory requirements applicable to the jurisdictions served, including:

- Applicable Federal regulations
- Applicable State regulations
- Applicable building codes and local addenda to building codes
- Applicable Fire Code
- Applicable Fuel and Gas Code
- Applicable Mechanical Code
- Applicable Plumbing Code
- Additional regulations specified by the customer contract

The Quality Manager identifies regulatory requirements that apply to a specific project on the Project Quality Assurance/Quality Control Plan.

The Superintendent had jobsite access to relevant codes and government regulations.

5.3. INDUSTRY QUALITY STANDARDS

All HEI construction activities comply with generally accepted good workmanship practices and industry standards.

The Quality Manager identifies supplemental requirements for industry standards that apply to a specific project on the Project Quality Assurance/Quality Control Plan when it is not otherwise specified by the contract, contract technical specifications, or approved drawings.

5.4. MATERIAL AND EQUIPMENT SPECIFICATIONS

The Quality Manager ensures that all types of materials and equipment that affect quality are identified and controlled.

The Quality Manager evaluates the expected use of materials and equipment and identifies types of materials and equipment that may affect project quality. For each item, the Quality Manager sets specifications for their intended use, including:



- Compliance to contract requirements
- Compliance to code and industry standards and listing requirements
- Structural integrity
- Performance
- Durability
- Appearance
- Product identification for traceability.

The Quality Manager identifies controlled material and equipment that apply to the project.

The Quality Manager ensures that purchase orders for listed materials and equipment include the relevant specifications as specified in section 6.7 Purchase Order Requirements.

Only approved materials are used in the construction process.

5.5. WORK PROCESS SPECIFICATIONS

The Quality Manager ensures that work processes are controlled to ensure that the specified requirements are met. When appropriate, the Quality Manager will specify project quality standards for work processes that may include:

- References to documented procedures such as manufacturer's installation instructions
- Procedures for carrying out process steps
- Methods to monitor and control processes and characteristics
- Acceptability criteria for workmanship
- Tools, techniques and methods to be used to achieve the specified requirements.

5.6. CONTROLLED MATERIAL IDENTIFICATION AND TRACEABILITY

The Quality Manager determines types of project materials that require quality controls.

For each type of quality controlled material, the Quality Manager determines lot control traceability requirements, if any, and specifies the means of lot identification. Identification methods may include physical labels, tags, markings and/or attached certification documents.

When lot controlled materials are received, the Superintendent verifies that materials have the specified lot identifications.

The Superintendent maintains lot identification at all production phases from receipt, through production, installation, or assembly, to final completion. Acceptable methods for preserving lot identification include physically preserving observable lot identifications, recording the lot identification on a work task quality inspection form or other work record, or collecting the physical lot identifier as a record along with supplemented with location.

If lot controlled materials are without lot identification, the Superintendent deems the materials as nonconforming and segregates them and/or clearly marks them to prevent inadvertent use. The Superintendent treats the material according to the company policy for nonconformances. Only the Quality Manager can re-identify or re-certify the materials.

5.7. MEASURING DEVICE CONTROL AND CALIBRATION

The Quality Manager evaluates the project requirements and determines if there are measuring devices that require controls to assure quality results.



For each type of device the Quality Manager identifies:

- Restrictions for selection
- Limitations on use.
- Calibration requirements including the frequency of calibration. All calibrations must be traceable to national measurement standards.

When a measurement device is found not to conform to operating tolerances, the Quality Manager validates the accuracy of previous measurements.

5.8. HEI QUALITY STANDARDS

HEI quality standards supplement contract requirements when they are necessary to ensure quality.

The Quality Manager identifies supplemental requirements for HEI Quality standards that apply to a specific project on the Project Quality Assurance/Quality Control Plan.

When HEI quality standards differ from industry standards or product manufacturer instructions, the Quality Manager justifies that the standard reliably achieves quality results and then documents the justification.

All HEI construction activities conform to the company quality standards.

5.9. APPLICATION OF MULTIPLE SOURCES OF SPECIFICATIONS

Should multiple sources of specifications apply to a work task, the higher level of specification applies.

When there are equal levels of specifications that conflict, the specifications are applied in this order:

- Submittals approved by the customer
- Contract technical specifications
- Contract drawings
- Government regulations that exceed requirements of items below
- HEI quality specifications, including subcontract specifications
- HEI Quality Manual
- Product installation instructions
- Industry standards
- Generally accepted practices

Should multiple sources of conflicting specifications apply to a project, the Quality Manager defines the standards that apply to the specific project on the Project Quality Assurance/Quality Control Plan.



6. PROJECT PURCHASING

SPECIFY and VERIFY Subcontractor and Supplier QUALITY CAPABILITIES

6.1. OVERVIEW

HEI verifies the qualifications of subcontractors and suppliers to ensure that they are capable of completely carrying out their assigned responsibilities. Quality requirements are defined, verified, and documented before they are approved for a project.

6.2. QUALIFICATION OF OUTSIDE ORGANIZATIONS AND COMPANY DEPARTMENTS

The Quality Manager qualifies outside organization and company work department capabilities to ensure that they are capable of completely carrying out their assigned quality responsibilities before approving and signing the contract, purchase order, or work order.

Subcontractors and suppliers must meet all Quality System requirements by either 1) working under the HEI Quality System or 2) operating their own quality program as long as it meets HEI Quality System requirements.

6.2.1.1. REQUIRED CREDENTIALS

The Quality Manager defines quality-related credentials for each project work task that affects quality including required:

- Organization and personnel licenses
- Personnel training
- Organization and personnel certifications
- Organization and personnel experience

6.2.1.1.1. INDEPENDENT LABORATORY CREDENTIAL REQUIREMENTS

Independent laboratories performing tests or quality inspections have additional requirements for certification by a nationally recognized testing accreditation organization as appropriate for the scope of the inspection or test:

- NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
- NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- The American Association of State Highway and Transportation Officials (AASHTO)
- International Accreditation Services, Inc. (IAS)
- U. S. Army Corps of Engineers Materials Testing Center (MTC)
- American Association for Laboratory Accreditation (A2LA) program

6.2.1.1.2. REQUIRED CAPABILITIES

- Senior person designated as Quality Manager
- Knowledge of Company quality standards
- Demonstrated capability to complete work to Company quality standards
- Demonstrated skills, knowledge, and experience
- Effective self-inspection process
- Access to codes, standards and product instructions
- Equipment availability



- Production capacity
- Demonstrated results

For critical components, the Quality Manager determines if a source quality inspection is necessary to validate supplier quality and delivery capabilities.

6.2.1.3. SUBCONTRACTORS AND SUPPLIERS AND COMPANY DEPARTMENT QUALIFICATION ASSESSMENTS

When the qualification assessment identifies minor nonconformances to the subcontract requirements, the Quality Manager may approve a provisional subcontract. The provisional subcontract supplements the subcontract with requirements for actions that address correction of the nonconformances. All nonconformances must be corrected before work in the affected area begins.

6.3. QUALITY RESPONSIBILITIES OF KEY SUBCONTRACTOR AND SUPPLIER PERSONNEL

A subcontractor senior officer is required to appoint a Subcontractor QC Manager and Superintendent to the project with specific quality responsibilities and authorities.

6.3.1. SUBCONTRACTOR QC MANAGER: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

The Subcontractor QC Manager is responsible for ensuring effectiveness of the Subcontractor QC Plan for the project. Regardless of other duties, the Subcontractor QC Manager is responsible for:

- Planning and fully implementing project quality controls required by the HEI quality systems and contract requirements
- Manage the operation of the Subcontractor QC Plan on the project.
- Implement and manage all phases of quality control
- Communicating project-specific quality requirements to all affected departments, subcontractors and suppliers and HEI
- Ensuring that the Subcontractor QC Plan is established and implemented by persons doing work that impacts quality
- Monitoring progress of activities
- Acting as the project quality liaison HEI on matters relating to quality
- Review and approval of all project Quality System records
- Review and approval of project quality-related contract submittals
- Managing all project inspection and quality control activities
- Controlling corrective actions
- Resolving quality nonconformances

The Subcontractor QC Manager has the authority to:

- Stop work when continuing work may adversely affect quality or cover up a defect
- Prevent the use of equipment or materials that may adversely affect quality or cover up a defect
- To direct the removal and replacement of any non-conforming work.
- Suspend work and/or supply of materials by any staff member, subcontractor personnel, or supplier as deemed necessary to assure quality results.

Alternate Subcontractor QC Managers acting in the role of the project Subcontractor QC Manager has the same quality duties, responsibilities and authority as the project Subcontractor QC Manager.

6.3.2. SUPERINTENDENT: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

A Superintendent verifies that work conforms to HEI quality standards. President appoints one or more Superintendents for each project.



A Superintendent has specific responsibilities for:

- Ensuring that work meets government regulatory and code requirements, customer requirements, contract requirements, contract technical specifications, contract drawings, approved contract submittals, and company quality standards and specifications
- Ensuring that subcontractors and suppliers begin work in accordance with HEI start-work policies
- Ensuring that subcontractors and suppliers receive a notice to work only when conditions will not adversely affect quality results
- Conducting quality inspections, tests, and recording findings
- Accurately assessing subcontractor quality and on-time performance
- Ensuring that quality standards are achieved before approving subcontractor or work crew completion of work

The Superintendent has the authority to:

- Stop work when continuing work may adversely affect quality or cover up a defect
- Prevent the use of equipment or materials that may adversely affect quality
- Direct the removal or replacement of any non-conforming work, equipment, or material
- Suspend work and/or supply of materials as deemed necessary to assure quality results

Alternate Superintendent has the same quality duties, responsibilities and authority as the Superintendent.

Multiple Superintendents may be assigned to the project.

6.4. REQUIREMENTS FOR SUBCONTRACTOR QC PLAN

The Subcontractor QC Plan extends the HEI Quality Assurance/Quality Control Plan into the subcontractor operations. The Quality Manager identifies key subcontractors and suppliers that require a Subcontractor QC Plan.

The Quality Manager must approve the Subcontractor QC Plan before the subcontractor can begin work.

Subcontractors and suppliers that do not require a Subcontractor QC Plan work under the HEI Subcontractor QC Plan.

6.5. SUBCONTRACTOR AND SUPPLIER QUALITY POLICY

The Quality Manager ensures that key subcontractors and suppliers adopt a quality policy that includes the following items:

Our objective is to safely deliver 100 percent complete construction work that meet all contract and HEI Quality Assurance/Quality Control Plan requirements the first time, every time. Our commitment to quality means:

- Compliance with HEI Quality Assurance/Quality Control Plan requirements.
- Compliance for fully implementing and complying with all provisions of this Subcontractor QC Plan.
- Our quality standards meet or exceed all applicable regulations, codes, industry standards, and manufacturer specifications as well as with our customers' contract and individual requirements.
- We ensure that only knowledgeable, capable, and qualified employees carry out the planning, execution, and control of our work.
- We stand behind our work. We conduct a series of quality inspections for each work task: before work begins, at first article completion, while work is in process, and at completion.
- We inspect all materials before use.



- Should problems be found, we prevent them from cover-up, inadvertent use, and then quickly correct them.
- We are always improving. We make systematic improvements to remove quality risks and enhance quality performance.

We conduct our work with dignity and respect for the customer, our subcontractor partners, and ourselves.

6.6. PROJECT SUBCONTRACTOR AND SUPPLIER LIST

The Quality Manager identifies key subcontractors and suppliers for each project work task on the Project subcontractor and supplier List form.

Each selected supplier must be previously qualified as specified in section 6.2 Qualification of Outside Organizations and Company Departments.

The selected suppliers are listed on the Project subcontractor and supplier List form.

6.7. PURCHASE ORDER REQUIREMENTS

The Project Manager ensures that materials, equipment and services are purchased only from the supplier listed on the Project Subcontractor and Supplier List form (see section 6.6 Project Subcontractor and Supplier List.)

The Project Manager holds outside organizations to the same quality requirements that must be met by HEI. The Project Manager ensures that subcontracts and purchase orders clearly specify quality requirement expectations including:

- Conformance to the HEI Quality System or the subcontractor's own quality program as long as it meets HEI Quality System requirements.
- Conformance to contract specifications (Section 3 Contract Specifications)
- Conformance to project quality standards (Section 5 Project-Specific Quality Standards)
- Quality Management practices including
 - Performance of self-inspections.
 - Control of quality non-conformances and responsive corrections
 - Prevention of non-conformances
 - Controls that ensure completion of post-construction service work
 - Participation in quality training
- Preparation of submittals
- Participation in project planning meetings
- Participation in work task planning meetings
- Handling, storage, packaging, and delivery, as applicable
- Product or material identification for traceability

6.8. PROJECT PURCHASE ORDER APPROVALS

The Project Manager ensures that contracts and purchase orders are issued only to qualified outside organizations. The Project Manager must review, approve, and sign each purchase order.

The outside organization must agree to the purchase order terms and specifications, and then sign the contract or purchase order.



7. PROCESS CONTROLS

HOW WORK IS CARRIED OUT

7.1. OVERVIEW

The construction process plan defines how project work is to be done and approved for the overall project. The construction process plan is communicated to all key personnel, subcontractors and suppliers in a startup meeting. As the project proceeds, work task plans provide additional details of how each individual work task is carried out. Work tasks planning meetings are used to communicate expectations of the work task plan to key personnel responsible for carrying out the work task.

7.2. PROJECT STARTUP AND QUALITY CONTROL COORDINATION MEETING

Prior to the commencement of work, the Project Manager holds a meeting to discuss and coordinate how project work will be performed and controlled. Key personnel from HEI, subcontractors and suppliers meet to review expectations for project quality results as well as quality assurance and quality control policies and procedures including:

- Key requirements of the project
- The Project Quality Assurance/Quality Control Plan
- Required quality inspections and tests
- The project submittal schedule
- Quality policies and heightened awareness of critical quality requirements
- Project organization chart and job responsibilities
- Methods of communication and contact information
- Location of project documents and records

7.3. PREPARATORY PROJECT QUALITY ASSURANCE/QUALITY CONTROL PLAN PLANNING

7.3.1. WORK TASK REQUIREMENTS REVIEW

In preparation for the start of an upcoming work task, the Superintendent reviews an integrated and coordinated set of documents that collectively define quality requirements for the work task including:

- Objectives and acceptance criteria of the work task
- Quality standards that apply to the work task
- Work instructions, process steps, and product installation instructions that apply to the work task
- Shop drawings
- Submittals
- Tools and equipment necessary to perform the work
- License, certification, or other qualification requirements of personnel assigned to work
- Required records of the process and resulting product
- The subcontractor contracted to perform the work, if applicable
- Customer contract requirements
- Required quality inspections and tests
- Method for clearly marking nonconformances to prevent inadvertent use
- Location of quality system records and documents
- Personnel training



7.3.2. PREPARATORY SITE INSPECTION

The Superintendent also performs a quality inspection of the work area and:

- Assesses completion of required prior work
- Verifies field measurements
- Assures availability and receiving quality inspection status of required materials
- Identifies any nonconformances to the requirements for the work task to begin
- Identifies potential problems

7.3.3. WORK TASK PREPARATORY QUALITY PLANNING MEETINGS

Prior to the start of a work task, the Superintendent conducts a meeting with key company, subcontractor personnel responsible for carrying out, supervising, or inspecting the work, and interested customer representatives.

During the meeting, the Superintendent communicates the work task quality requirements and reinforces heightened awareness for critical requirements. Topics for a work task quality plan meeting include:

- Conflicts that need resolution
- Required quality documents and a verification of availability to personnel carrying out, supervising, or inspecting the work task
- Record keeping requirements and the availability of necessary forms
- Review methods and sequences of installation
- Special details and conditions
- Standards of workmanship
- Heightened awareness of critical quality requirements
- Quality risks
- Work tasks quality inspection form

7.4. WEEKLY QUALITY PLANNING AND COORDINATION MEETINGS

The Superintendent conducts a meeting with key company, subcontractor and supplier personnel responsible for carrying out, supervising, or inspecting the work, and interested customer representatives.

The meeting is held on a nominal weekly schedule. During the meeting, the Superintendent facilitates coordination among the participants, communication among the participants, and reinforces heightened awareness for critical requirements.

The Superintendent maintains a record of the meeting event on the Daily Quality Control Report.

7.5. PROCESS CONTROL STANDARDS

7.5.1. JOB-READY START WORK STANDARDS

Work on a work task starts only when conditions do not adversely impact quality, comply with government regulations, contract technical specifications, industry standards, or product installation instructions.

The Quality Manager identifies supplemental start-work requirements that apply to a specific project when they are necessary to assure quality results.

7.5.2. WORK IN PROCESS STANDARDS



Work is conducted only when conditions do not adversely impact quality, comply with government regulations, contract technical specifications, industry standards, or product installation instructions.

The Quality Manager identifies supplemental work in process requirements that apply to a specific project when they are necessary to assure quality results.

7.5.3. PROTECTION OF COMPLETED WORK STANDARDS

Completed work is protected from damage as specified by government regulations, contract technical specifications, industry standards, or product installation instructions.

The Quality Manager identifies supplemental protection requirements that apply to a specific project when they are necessary to assure quality results.

7.5.4. MATERIAL STORAGE

The Superintendent ensures all materials will be delivered, stored and handled in a manner that protects them from damage, moisture, dirt and intrusion of foreign materials.

Delivery of materials will be planned according to the work progress to minimize storage on site, where there are higher possibilities of damages and deterioration of materials.

Stored materials will be segregated to prevent cross contamination and limit losses should a delivery be rejected.

The Superintendent surveys stored materials during daily jobsite reviews and identifies any material that have incurred damage or otherwise become defective and therefore unfit for use.

7.5.5. CONTROLLED USE OF MATERIALS

The Project Manager ensures that contracts and purchase orders are awarded only to outside organizations qualified to perform the work task and/or supply materials as required for the specific project.

Only approved materials are used in the construction process. Only approved materials are specified in purchase and/or subcontracts.

Materials that are defective, deteriorated, damaged, or not approved are not used. The Superintendent clearly marks such materials for non-use or otherwise holds them aside.

When customer-supplied materials are lost, damaged, or otherwise found unsuitable for use, the Superintendent reports such findings to the customer.

When subcontractor-supplied materials are damaged or otherwise found unsuitable for use, the Superintendent reports such findings to the subcontractor.

The Superintendent ensures that construction uses only materials specified in the contract technical specifications, contract drawings, and approved submittals. Substitutions are made only by agreement of the customer and documented by a change order (see section 2.1.3.6).

7.5.5.1. CONTROLLED PRODUCT USE AND INSTALLATION

HEI construction activities conform to manufacturers' product use and installation instructions that apply to the construction process.



When installing a product, the Superintendent has access to all applicable product installation instructions.

7.6. DAILY QUALITY CONTROL REPORT

The Superintendent records a summary of daily work activities. The report will include:

- Schedule Activities Completed
- General description of work activities in progress.
- Problems encountered, actions taken, problems, and delays
- Meetings held, participants, and decisions made
- Subcontractor and Supplier and Company Crews on site
- Visitors and purpose
- General Remarks
- Improvement Ideas
- Weather conditions

7.7. MONTHLY QUALITY CONTROL REPORT

When a monthly quality control report is required by the Project Quality Plan, the Superintendent records a monthly status report. The report includes:

- A summary of work completed and work in progress
- Outstanding issues
- Issues resolved during the reporting period
- Outstanding potential change orders
- Project status with current project costs and estimated completion date
- A cost analysis summarizing actual costs to date and estimated future costs
- Project pictures as appropriate



8. INSPECTIONS AND TESTS

ASSURE COMPLIANCE

8.1. OVERVIEW

Inspections are necessary to verify that work processes and results conform to both contract requirements and HEI quality standards.

Qualified personnel inspect every project throughout the construction process. Additional reviews validate the accuracy of the field quality inspections and ensure that the quality standards apply uniformly.

An inspection and test plan defines the quality inspections and tests required for a specific project.

Personnel may only inspect work activities for which they have been qualified by the Quality Manager.

8.2. REQUIRED WORK TASK QUALITY INSPECTIONS AND TESTS

The Quality Manager identifies each Task that is a phase of construction that requires separate quality controls to assure and control quality results. Each Task triggers a set of requirements for quality control inspections before, during and after work tasks.

Tasks are divided into two categories:

- Discrete Tasks are standard type of work where a completion inspection is performed one time at the completion of a phase of work.
- Process Tasks are tasks where completion inspections are performed continuously. Continuous inspections are required when there is a limited window of time to perform a completion inspection before the next task begins. Process tasks may also be characterized by independent monitoring of a work process, such as welding, where the observer verifies conformance to work procedures.

Process tasks undergo additional quality controls that continuously monitor compliance to specifications.

Independent quality audits are conducted to verify that the task quality controls are operating effectively.

Construction projects may execute a work task multiple times in a project, in which case a series of quality inspections are required for each work task.

8.3. MATERIAL INSPECTIONS AND TESTS

Material quality inspections and tests ensure that purchased materials meet purchase contract quantity and quality requirements. The Superintendent inspects or ensures that a qualified inspector inspects materials prior to use for conformance to project quality requirements.

The Superintendent ensures that each work task that uses the source inspected materials proceed only after the material has been accepted by the material quality inspection or test.

8.3.1.1. SOURCE INSPECTIONS



Source quality inspections are required when quality characteristics cannot or will not be verified during subsequent processing. The Quality Manager determines if a source inspection is necessary to validate supplier quality before materials are delivered to the project jobsite.

The Superintendent ensures that each work task that uses the source inspected materials proceed only the material has been accepted by the source inspection.

8.4. WORK IN PROCESS INSPECTIONS

Work in process quality inspections continuously verify compliance project quality standards beginning at the start of a work task, as work is conducted, and continues until the work task is complete.

8.4.1.1. INITIAL JOB-READY INSPECTIONS

For each work task, the Superintendent or a qualified inspector performs job-ready quality inspections to ensure that work activities begin only when they should begin. Job-ready quality inspections verify that conditions conform to the project quality requirements.

8.4.1.2. INITIAL WORK IN PROCESS INSPECTION

For each work task, the Superintendent or a qualified inspector performs an initial work in process inspection when the first representative portion of a work activity is completed.

8.4.1.3. FOLLOW-UP WORK IN PROCESS INSPECTIONS

The Superintendent or a qualified inspector performs ongoing work in process quality inspections to ensure that work activities continue to conform to project quality requirements. Punch Items

If the Superintendent or inspector observes an item for correction prior to a work task completion inspection, the item is identified for correction. During the work task completion inspection each punch item correction is verified.

Any outstanding punch items remaining after the work task completion inspection is deemed a nonconformance.

8.4.2. ADDITIONAL INSPECTION REQUIREMENTS FOR PROCESS TASKS

For each process task, a qualified person inspects the ongoing completion work for conformance to project quality requirements. This is in addition to discrete task completion inspections that are performed one time at the end of a phase of work.

The continuous monitoring inspections are conducted before starting other work activities that may interfere with an inspection.

8.5. WORK TASK COMPLETION INSPECTIONS

For each work task, the Quality Manager or a qualified inspector inspects the completion of each work task to verify that work conforms to project quality requirements.

Completion quality inspections are performed for each work task. Completion quality inspections are conducted before starting other work activities that may interfere with an inspection.

Any outstanding punch items remaining after the work task completion inspection is deemed a nonconformance.



8.6. INSPECTION OF SPECIAL PROCESSES

The Quality Manager identifies special processes where the results cannot be verified by subsequent inspection or testing and determines if continuous work in process inspections are required. For these special processes, a qualified inspector continuously inspects the work process.

8.7. INDEPENDENT MEASUREMENT AND TESTS

The Quality Manager ensures that quality tests that apply to a specific project are clearly identified. Tests for a project include:

- Customer required quality tests as specified by the contract, contract technical specifications, contract drawings, and approved submittals.
- Additional quality tests necessary to assure quality results.

8.8. COMMISSIONING FUNCTIONAL ACCEPTANCE TESTS

A functional test is performed on each functional system. A qualified inspector performs functional acceptance tests to verify that a system meets predetermined acceptance criteria including:

- The equipment and systems operate as intended
- The equipment and systems perform as intended
- Documentation for operation and maintenance is complete

Each functional test has a documented testing procedure that includes:

- Step-by-step work instructions for conducting the test
- Data recording requirements
- Acceptance criteria
- A determination of pass or fail

8.9. HOLD POINTS FOR CUSTOMER INSPECTION

The Superintendent stops work when reaching a hold point specified on the inspection and test plan. The Superintendent ensures that work proceeds only with customer approval.

8.10. QUALITY INSPECTION AND TEST SPECIFICATIONS

Specifications for each inspection or test are clearly understood before the inspection or test is performed including:

- Items to be inspected/tested
- Inspections/tests to be performed
- Testing schedule frequency
- Specification references including contract drawing identification number and version, if applicable, and/or contract technical specification number and version, if applicable
- Performing party
- Witness parties
- Certificates required
- Checklists/procedures
- Reference standards

8.11. INSPECTION AND TEST ACCEPTANCE CRITERIA



Inspections assess conformance of materials or work for each work task to project quality requirements, including applicable:

- Contract technical specification
- Contract drawings
- Approved shop drawings
- Approved product submittals
- Approved allowances and unit prices
- Product identification requirements
- Approved submittals
- HEI quality standards

The material or completed work task is accepted only when it meets all project quality requirements.

8.12. INSPECTION AND TEST STATUS

The status of each quality control inspection or test is clearly marked by tape, tag, or other easily observable signal to ensure that only items that pass quality inspections is accepted.

For each quality controlled work task, the Quality Manager determines the appropriate method of identification to show inspection and test status.

For each quality controlled material, the Quality Manager determines the appropriate method for identifying quality inspection and test status.

8.13. INDEPENDENT QUALITY ASSURANCE INSPECTIONS

The Quality Manager and/or qualified inspectors perform independent quality assurance inspections that verify that task quality controls are operating effectively.

The Quality Manager selects a representative portion of task completion inspections performed by the Superintendent. Those tasks are independently inspected by the Quality Manager and/or qualified inspectors. The findings are compared to the findings of the inspections performed by the Superintendent. Any deviations are addressed by corrective actions and preventive actions as necessary.

8.14. INSPECTION AND TEST RECORDS

8.14.1. INSPECTION RECORDS

The Quality Manager prepares an inspection form for each work task. The Quality Manager lists on the form checkpoints for heightened awareness including:

- Initial job-ready inspection requirements
- Inspection and tests
- Work in process inspection requirements
- Completion quality inspections
- Other quality requirements as necessary to reduce quality risks

The person responsible for the inspection, records work task inspection results on the work task inspection form.

8.14.2. TEST RECORDS

Test result data include as appropriate:



- Reference to the inspection and test plan item
- Description or title of the inspection activity
- Drawing identification number and version, if applicable
- Technical specification number and version, if applicable
- Location of the inspection activity
- Acceptance criteria
- Nonconformances
- Validation that nonconformances are corrected, reinspected or retested, and confirmed to meet Quality System requirements.
- Any open items to be completed at a later date.
- Inspector's name and signature indicating compliance with all requirements of the Quality System
- Quality rating scores as appropriate
- Date of inspection or test
- Certificate, if applicable
- Conspicuous statement of final result as either "CONFORMS" or "DOES NOT CONFORM"

8.15. PROJECT COMPLETION AND CLOSEOUT INSPECTION

8.15.1. PRE-FINAL HEI INSPECTION

Near the end of the project, or a milestone established in the Project Quality Inspection and Test Plan, the Quality Manager will inspect the completed project and verify conformance to contract specifications.

The Quality Manager records nonconforming items.

The Superintendent assigns a planned date by which the deficiencies will be corrected. The date may be assigned for all items or individual items as necessary. After corrections have been made, the Superintendent verifies the completion of each item.

Then the Quality Manager conducts a follow-up inspection and verifies that all nonconforming items have been corrected to meet contract specifications. Any remaining deficiencies are recorded and managed as nonconformances.

When the pre-final HEI inspection process is complete, the Quality Manager then notifies the customer that the project is ready for the customer's final inspection. The customer is also notified of any remaining nonconformances and their planned resolution.

8.15.2. PRE-FINAL CUSTOMER INSPECTION

If the customer performs a pre-final inspection, the Quality Manager records nonconforming items and assigns a planned date by which the deficiencies will be corrected.

The Superintendent assigns a planned date by which the deficiencies will be corrected. The date may be assigned for all items or individual items as necessary. After corrections have been made, the Superintendent verifies the completion of each item.

After corrections have been made, the Quality Manager will conduct a follow-up inspection and verify that all nonconforming items have been corrected to meet contract specifications. Any remaining deficiencies are recorded and then managed as nonconformances.



When the pre-final customer inspection process is complete, the Quality Manager then notifies the customer that the project is ready for the customer's Final inspection. The customer is also notified of any remaining nonconformances and their planned resolution.

8.15.3. FINAL ACCEPTANCE CUSTOMER INSPECTION

If the customer performs a final inspection, the Quality Control Manager, Superintendent, and Project Manager will participate in the inspection. The Quality Manager records nonconforming items and assigns a planned date by which the deficiencies will be corrected. The date may be assigned for all items or individual items as necessary. After corrections have been made, the Superintendent verifies the completion of each item.

After corrections have been made, the Quality Manager will conduct a follow-up inspection and verify that all nonconforming items have been corrected to meet contract specifications. Any remaining deficiencies are recorded managed as nonconformances.

When the final customer inspection process is complete, the Quality Manager then notifies the customer that the project is ready for the customer's follow-up verification. The customer is also notified of any remaining nonconformances and their planned resolution.



9. NONCONFORMANCES AND CORRECTIVE ACTIONS

9.1. OVERVIEW

Should a nonconformance be identified by an inspection there is a systematic method to control the item, correct it, and ensure that project quality is not adversely impacted by the event.

A nonconformance is any item that does not meet project specifications or HEI Quality System requirements.

9.2. NONCONFORMANCES

9.2.1. MARKING OF NONCONFORMANCES AND OBSERVATIONS

When the Quality Manager, Superintendent, inspector, or customer identifies a nonconformance or an observation, the item is quickly and clearly marked by tape, tag, or other easily observable signal to prevent inadvertent cover-up.

9.2.2. CONTROL THE CONTINUATION OF WORK

After the item is marked, the Superintendent determines if work can continue in the affected area:

CONTINUE WORK: When continuing work does not adversely affect quality or hide the defect, work may continue in the affected area while the disposition of the item is resolved. The Superintendent may place limitations on the continuation of work.

STOP WORK ORDER: When continuing work can adversely affect quality or hide the defect, work must stop in the affected area until the disposition of the item resolved. The Superintendent identifies the limits of the affected area. The Superintendent quickly and clearly identifies the boundaries of the stop work area.

9.2.3. NONCONFORMANCE REPORT

9.2.3.1. RECORDING OF NONCONFORMANCES

If nonconformances or observed items exist by the work task completion inspection, the Superintendent or inspector records the nonconformances on a nonconformance report.

The Superintendent sends the nonconformance report to the Quality Manager.

9.2.3.2. QUALITY MANAGER DISPOSITION OF NONCONFORMANCE REPORTS

When the Quality Manager receives a Nonconformance Report, he or she makes an assessment of the affect the reported nonconformance has on form, fit, and function. The Quality Manager may assign a disposition of either:

REPLACE: The nonconformance can be brought into conformance with the original specification requirements by replacing the nonconforming item with a conforming item.

REPAIR: The nonconformance can be brought into conformance with the original requirements through completion of required repair operations.

REWORK: The nonconformance can be made acceptable for its intended use, even though it is not restored to a condition that meets all specification requirements. The Quality Manager may specify



standards that apply to the completion of rework. Rework nonconformances must be approved by the customer.

USE AS-IS: When the nonconforming item is satisfactory for its intended use. Any use as-is items that do not meet all specification requirements must be approved by the customer.

9.2.4. CORRECTION OF NONCONFORMANCES

The Superintendent verifies that corrective actions eliminate the nonconformance to the requirements of the original specifications or as instructed by the disposition of the nonconformance report, and then removes, obliterates, or covers the nonconformance marker.

Furthermore, the Superintendent ensures that previously completed work is reinspected for similar nonconformances and corrective actions are taken to avert future occurrences (see section 9.3 Corrective Actions).

9.3. CORRECTIVE ACTIONS

9.3.1. CONTROL OF CORRECTIVE ACTIONS

When a nonconformance is found, the Superintendent ensures that:

- Previously completed work is reinspected for similar nonconformances
- Corrective actions are taken to avert future occurrences

The Quality Manager identifies requirements for corrective actions with respect to frequency, severity, and detectability of quality nonconformances items found during and after completion of work activities.

When a solution requires changes to HEI quality standards, the Quality Manager makes modifications as necessary by making changes to:

- Material specifications
- Personnel qualifications
- Subcontractor and Supplier qualifications
- Company standards
- Inspection processes

9.3.2. CORRECTIVE ACTION TRAINING

The Superintendent initiates corrective action training to address quality nonconformances. Personnel and subcontractors and suppliers performing or inspecting work participate in the training.

Heightened awareness during quality inspections verifies and documents compliance with the corrective action improvement items. A qualified Superintendent inspects corrective actions during regular quality inspections and records observations on the quality inspection form.

The Superintendent notifies affected subcontractors and suppliers of selected preventive action training requirements.

The Superintendent evaluates the effectiveness of the improvements. The Quality Manager reviews improvement results recorded on quality inspection records and monthly field reviews. When the Quality Manager determines that the improvement actions are effective, the item is no longer treated as a preventive action.



10. PREVENTIVE ACTIONS

PREVENT NONCONFORMANCES

10.1. OVERVIEW

Fixing problems found during quality inspections is not sufficient. Systematic prevention of recurrences is essential for improving quality.

HEI makes changes to solve the problem. Solutions may involve a combination of enhanced process controls, training, upgrade personnel qualifications, improved processes, or use of higher-grade materials.

Follow-up ensures that a problem is completely resolved. If problems remain, the process is repeated.

10.2. IDENTIFY PREVENTIVE ACTIONS FOR IMPROVEMENT

The Quality Manager identifies preventive action improvement priorities with respect to frequency, severity, and detectability of quality correction items found during and after completion of work activities. The Quality Manager also reviews company quality performance and customer feedback.

More specifically, the Quality Manager assesses:

- Customer corrective items
- Superintendent quality inspection results
- Code official inspection results
- Post-construction service
- Management field reviews
- Annual system review
- Customer satisfaction surveys

The Quality Manager documents quality items requiring preventive action improvement.

The Quality Manager leads the company in finding solutions to address the causes of problems.

When a solution requires changes to HEI quality standards, the Quality Manager makes modifications as necessary by making changes to:

- Material specifications
- Personnel qualifications
- Subcontractor and Supplier qualifications
- Company standards
- Inspection processes

10.3. TRAIN PREVENTIVE ACTIONS FOR IMPROVEMENT

The Quality Manager initiates preventive action training to address quality improvement items. Personnel and subcontractors and suppliers performing or inspecting work participate in the training.

Heightened awareness during quality inspections verifies and documents compliance with the preventive action improvement items. A qualified Superintendent inspects hotspots during regular quality inspections and records observations on the quality inspection form.



The Quality Manager notifies affected subcontractors and suppliers of selected preventive action training requirements.

The Quality Manager evaluates the effectiveness of the improvements. The Quality Manager reviews improvement results recorded on quality inspection records and monthly field reviews. When the Quality Manager determines that the improvement actions are effective, the item is no longer treated as a preventive action.



11. QUALITY SYSTEM AUDITS

AUDITS and IMPROVEMENT

11.1. OVERVIEW

Audits ensure that the elements of the HEI Quality System are functioning as intended.

11.2. PROJECT QUALITY SYSTEM AUDIT

The Quality Manager conducts monthly Project Quality System audits that verify proper operation of the Quality System on a project. At least monthly, the Quality Manager audits:

- Quality system framework
- Quality system management and responsibilities
- Customer contract specifications
- Design control
- Project-specific quality standards
- Project purchasing
- Process control plans
- Inspections and tests
- Nonconformances and corrective actions
- Preventive actions
- Quality records and documents

The Quality Manager takes corrective actions to ensure compliance with Quality System requirements. The effectiveness of changes is then evaluated and documented.

Requirements for managing audit nonconformances are addressed in section 9.2 Nonconformances.

11.3. COMPANY-WIDE QUALITY SYSTEM AUDIT

At least annually, the Quality Manager audits the suitability and effectiveness of the HEI Quality System.

The audit assesses:

- HEI quality improvement activities
- Customer performance evaluations and satisfaction measurement results
- Quality performance measures
- Monthly field reviews
- Internal and external Quality Audit results
- Process performance and product conformance results
- Preventive and corrective action status
- Follow up on actions from previous Management Reviews
- Other changes (i.e. business climate, scope of work changes, etc.) that could affect the Quality System

Changes are initiated to improve Quality System performance. The Quality Manager documents Quality System changes in the HEI Quality Assurance Manual, initiates needed improvements, and assesses their effectiveness.



12. RECORD AND DOCUMENT CONTROLS

12.1. OVERVIEW

HEI ensures that quality related documents and records are created, current versions are in use, complete, identifiable, and stored properly.

12.2. QUALITY SYSTEM DOCUMENTS

12.2.1. QUALITY MANUAL

The Quality Manager maintains the HEI Quality Manual that documents HEI quality policies. Each policy identifies the titles of personnel responsible.

The Quality Manager ensures that the Quality Manual and documents related to a work task are accessible to personnel performing the work.

The Quality Manager maintains, improves, and updates the manual as necessary. At least annually, the Quality Manager determines if updated versions of standards and product installation instructions are available. If so, the Quality Manager updates the Quality System documentation accordingly.

12.3. DOCUMENT CONTROLS

The President controls all company-wide quality system documents including:

- Approval of all quality system documents and for adequacy prior to issue or reissue.
- Ensures that applicable documents are available and usable at points of use
- Prevents unintended use of obsolete documents

The Quality Manager controls project-specific quality system documents including:

- Approval of all project quality documents and for adequacy prior to issue or reissue.
- Ensures that applicable documents are available and usable at points of use
- Prevents unintended use of obsolete documents

12.3.1. CONTROL OF SYSTEM DOCUMENTS

The Quality Manager controls documents related to the HEI Quality System including:

- Quality System Manual
- Quality System Procedures
- Project Management Procedures (including interface and coordination with customers and regulatory agencies with jurisdiction over jobsites)
- Government regulations
- Industry standards
- Procurement specifications

The Quality Manager ensures that records of the distribution of Quality System documents are kept. When new versions are distributed, obsolete versions are destroyed or controlled to prevent inadvertent use.

12.3.2. CONTROL OF PROJECT DOCUMENTS

The Project Manager controls documents related to specific customer contracts including:



- Customer contracts
- Contract technical specifications
- Contract drawings
- Shop drawing submittals and approvals
- Product data submittals and approvals
- Allowances and unit price submittals and approvals
- Requests for information and customer responses
- Subcontracts
- Inspection and test plans

12.4. RECORD CONTROLS

The Quality Manager verifies records for conformance to the Quality System Requirements and approves all Quality System records.

Records demonstrating conformance with and operation of the Quality System are retrievable for at least five years. The Quality Manager verifies records for conformance to the Quality System Requirements.

12.4.1. QUALITY SYSTEM RECORDS CONTROL

The Quality Manager verifies the completeness, accuracy, and retention of project-specific Quality System records including:

- Annual reviews
- Quality improvement records

12.4.2. PROJECT RECORDS CONTROL

The Quality Manager verifies the completeness, accuracy, and retention of project-specific Quality System records including:

- Inspection and test records
- Quality submittals to the customer
- Project quality system audits
- Field reviews
- Calibration certificates
- Daily log reports
- Incident reports
- Redline drawings
- Qualified personnel approvals
- Qualified subcontractor approvals
- Quality improvement records
- Project Quality records specified by customer contract, or contract technical specifications

The Quality Manager assigns record control responsibilities and document location that apply to a specific project.



13. APPENDIX

13.1. DEFINITIONS OF TERMS

Acceptance - The process of deciding, through inspection, whether to accept or reject a product.

Audit – An audit determines if the quality system is performing as documented and whether the quality system is implemented. An audit consists of a systematic and objective examination to determine whether quality management activities and associated results comply with planned arrangements, and whether these arrangements are implemented effectively and suitably to achieve set objectives.

Certification - Statements by inspectors, officials, engineers, or product manufacturers attesting that product, system or material meets stated specification requirements.

Conformance – An item meets the requirements of relevant specifications, contracts or regulations; also the state of meeting the requirements.

Contract Project Quality Assurance/Quality Control Plan – See Project Quality Assurance/Quality Control Plan.

Corrective Action – a specific action to resolve a known condition or conditions, which adversely affect quality. Corrective Action must address remedial action to correct the known discrepancy whereas preventive action prevents recurrence based on the identified root cause.

Definable feature of work – See Task.

Design Data - Calculations, mix designs, analyses or other data pertaining to a part of work.

Disposition – A statement describing the manner in which a nonconformance is to be resolved.

Experienced - When used with an entity or individual, "experienced" means having successfully completed work similar in nature, size, and extent.

Feature of Work – See Task.

FOW – Feature of Work

Inspection and Test Plan – A record of requirements, frequency and responsibilities for activities such as measuring, examining, testing and gauging one or more characteristics of a product or service, and comparing the results with specified requirements to determine conformity to the Contract Specification. Inspections and tests are detailed in the applicable procedures and results recorded on forms appended to these procedures.

Inspection - The act of examining, measuring, or testing to determine the degree of compliance with requirements.

ISO 10005 – an international standard titled *“Quality Management – Guidelines for Quality Plans”* that specifies required elements of a project-specific quality plan.

ISO 9001 – an international standard titled *“Quality Management System – Requirements”* that specifies required elements of a quality management system.

Mock-up Sample – an assembly or portions of an assembly constructed on the project site that establishes standards by which the ensuing work can be judged. Mockups are constructed to verify selections made under sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials



and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples.

Nonconformance – Non-fulfillment of a specification which affects form, fit or function and renders the quality of an item or service unacceptable or indeterminate in regard to meeting all relevant specifications. Examples of nonconformance include: physical defects, test failures, incorrect or inadequate documentation or deviation from prescribed processing, inspection or test procedures.

Non-conformance Report – A record of the identification, and resolution of a nonconformance.

Product Data - Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance and other characteristics of materials, systems or equipment for some portion of the work.

Observation – Feedback provided to work crews for the purposes of heightened awareness of an item that if not addressed by a completion inspection may result in a nonconformance.

Procedure -- Specified way to perform an activity.

Product Samples - Physical examples of materials, equipment or workmanship that illustrate functional and aesthetic characteristics of a material or product and establish standards by which the work can be judged. Color samples from the manufacturer's standard line (or custom color samples if specified) to be used in selecting or approving colors for the project

Project – Unique process consisting of a set of coordinated and controlled activities with start and finish dates, undertaken to achieve an objective conforming to specific requirements, including the constraints of time, cost and resources.

Project Quality Assurance/Quality Control Plan - A document setting out the specific quality objectives, practices, resources and sequence of activities relevant to a particular Contract or project.

Quality Assurance - Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed work will comply with requirements.

Quality Audit - A formal review/investigation to determine whether the quality characteristics of a product or service meet the defined quality criteria.

Quality Control – the performance of tasks which ensure that work is performed according to plans and specifications

Quality Manual – Documents consisting of HEI policies for quality management methods instituted as a company. Standard operating procedures supplement the quality manual policies with work steps. This manual is copyright 2011 Caldrea Quality. Forms are also part of this manual with step by step instructions.

Records - Documentary evidence of the specification of individual items, standards of work, and compliance with the Quality Management System requirements.

Reject – A disposition of a nonconformance for an item unsuitable for its intended purpose and economically or physically incapable of being reworked or repaired.



Repair – A disposition of a nonconformance for an item acceptable for its intended use even though it is not restored to a condition which meets all specification requirements.

Rework – A disposition of a nonconformance for an item that can be brought into conformance with the original requirements through re-machining, reassembling, reprocessing, reinstallation, or completion of the required operations.

Shop Drawings - Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work. Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to integrate the product or system into the project. Shop drawings show how multiple systems and interdisciplinary work will be coordinated

Standard Operating Procedure - A document that details the purpose and scope of an activity, and specifies how it is to be carried out. The output from a procedure provides objective evidence (in the form of records) of the compliance to the quality system requirements.

Subcontractor - A company, organization or individual providing a service or product, which may include labor, plant, materials or other facilities or resources

Task – A definable features of work. A task which is separate and distinct from other tasks and has separate control requirements. A task could be identified by different trades or disciplines, or it could be separate phases of work by the same trade. At minimum each section of the specifications is a task; however, there are frequently more than one definable feature under a particular section.

Test Reports - Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accord with specified requirements.

Use-As-Is – A disposition of a nonconformance for an item that will satisfy its intended use, even though it does not meet all design/functional requirements.

Verify - The process of confirming the soundness or effectiveness.



Attachment D

Affidavit of Non-Violation of Labor Codes

Supplemental to Subcontractor's Statement of Qualifications

Name of Firm: HEI, Inc.

Address: 3800 Vassar Dr, Albuquerque, New Mexico, 87107

Project: UNM Job Order Contracting (JOC)

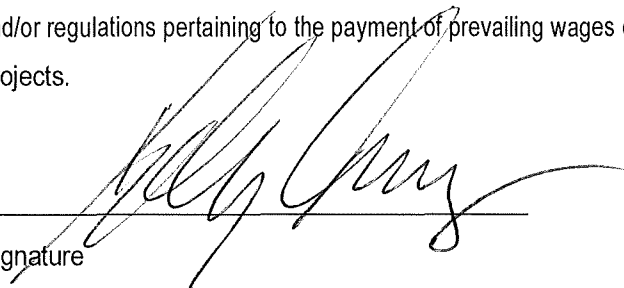
Reference: Job Order Contracting

Request for Proposal No: RFP-2379-23

Affidavit of Non-violation of Labor Codes

To: The University of New Mexico

The undersigned officer of HEI, Inc. hereby states that
HEI, Inc. has, during the past five
years, been free of any determinations by a court or an administrative agency, of repeated or willful violations of laws
and/or regulations pertaining to the payment of prevailing wages or employment of apprentices of public works
projects.



Signature

10/31/2022

Date

Kelly Adams

Name

Director

Title

NOTARY

State of New Mexico)

)

County of Bernalillo)

Signed or attested before me on 11/3/2022 by Kristen Sweeney

STATE OF NEW MEXICO

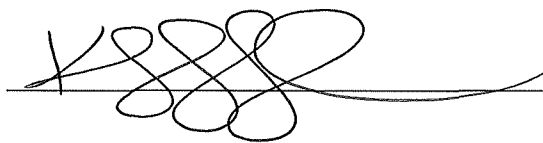
NOTARY PUBLIC

Kristen Sweeney

seal

Commission Number 1127060

My Commission Expires September 9th, 2023



My Commission Expires: 9/9/2023

HEI
Attachment E

VALUE STATEMENT

HEI's culture is driven by respect, transparency, collaboration and direct feedback. We have zero tolerance for discrimination of any kind. We place the utmost of importance on the quality of our people and their work. We strive to leave the world a better place for future generations by being mindful of our corporate footprint and ensuring that every level of management and craft focus on ways to streamline process and reduce waste.

Our diversity is shown in every department of HEI: from management, office staff to our field crews. HEI's diversity is not only gender and ethnicity but age and experience. We have found through twenty plus years of business, diversity is an important part of our evolution. These different philosophies and perspectives have helped us collectively grow as a company. Energy and new ideas utilizing current technologies make all our projects come together in a cohesive and collective way. We recognize that everyone's input is valuable and only through acceptance of other people's differences can we grow and achieve collective solutions to everyday problems on the jobsite.

HEI's structure puts quality and safety above all. The diversity and longevity of our staff is what keeps our quality control in check. Our management team from the owner to the department project managers to the field supervisors all work together. Constant communication in this chain ensures that we exceed our customer's expectations. HEI does not employ a "sales" staff. Our project managers acquire the jobs and assign the field staff in each department. They work together to establish the schedule of events to deliver all projects on time following all specifications and standards established in the construction documents. This team remains in place from the beginning of the project to its completion. Inspections by our PM's throughout the project ensure timelines are met, material is ordered on time and installation practices are followed. This "cradle to grave" project approach promotes quality and safety throughout every project.

HEI promotes sustainable values on all projects. We believe in a lean approach to our projects. This includes everything from eliminating extra steps during submittal, procurement and installation to utilizing pre-fabrication techniques when possible. We believe in reducing environmental impact and waste by evaluating every step of a process and every material being used. When possible, we will utilize material from factories that follow sustainable practices such as reducing packaging, reducing emissions and/or using recycled content. Once on the project site we will separate any waste into recyclable and not recyclable prior to disposing of it.

HEI ATTACHMENT G FEIN

DEPARTMENT OF THE TREASURY
INTERNAL REVENUE SERVICE
AUSTIN TX 73301

DATE OF THIS NOTICE: 02-17-1998
NUMBER OF THIS NOTICE: CP 575 G
EMPLOYER IDENTIFICATION NUMBER: 85-0449865
FORM: SS-4 (TELE-TIN)
1817104644 B

X

HEI INC
HOWE ELECTRIC
3800 VASSAR NE
ALBUQUERQUE NM 87107

FOR ASSISTANCE CALL US AT:
1-800-829-1040
1-800-829-1040

OR WRITE TO THE ADDRESS
SHOWN AT THE TOP LEFT.

IF YOU WRITE, ATTACH THE
STUB OF THIS NOTICE.

WE ASSIGNED YOU AN EMPLOYER IDENTIFICATION NUMBER (EIN)

Thank you for your Tele-TIN phone call. We assigned you employer identification number (EIN) 85-0449865. This EIN will identify your business account, tax returns, and documents, even if you have no employees. Please keep this notice in your permanent records.

Use your complete name and EIN shown above on all federal tax forms, payments, and related correspondence. If you use any variation in your name or EIN, it may cause a delay in processing, incorrect information in your account, or cause you to be assigned more than one EIN.

If you're required to deposit for employment taxes (Forms 941, 943, 940, 945, CT-1, or 1042), excise taxes (Form 720), or income taxes (Form 1120), we will send an initial supply of Federal Tax Deposit (FTD) coupon books within five to six weeks. You can use the enclosed coupons if you need to make a deposit before you receive your supply.

Based on the information shown on your Form SS-4, you must file the following forms(s) by the date we show.

Form 941	04/30/1998
Form 1120	03/15/1999
Form 940	01/31/1999

If the due date has passed please complete the form and send it to us by 03-04-1998. If we don't receive the form by that date additional penalties and interest will be charged. If you weren't in business or didn't hire employees for the tax period shown, please file the form showing that you have no liability.

If you need help in determining what your tax year is, you can get Publication 538, Accounting Periods and Methods, at your local IRS office.

If you have any questions about the forms shown or the date they are due, you may call us at 1-800-829-1040 or write to us at the address shown above.

LIVE REPORT

HEI, INC.
 Tradestyle(s): -
 ACTIVE SINGLE LOCATION

D-U-N-S Number: 19-665-1137
Phone: +1 505 880 1819

Address: 3800 Vassar Dr Ne, Moved From: 3800 Vasser Drive Ne, Albuquerque, Nm, Albuquerque, NM, 87107, United States Of America
Web: www.heinm.com
Endorsement: PDF

Summary

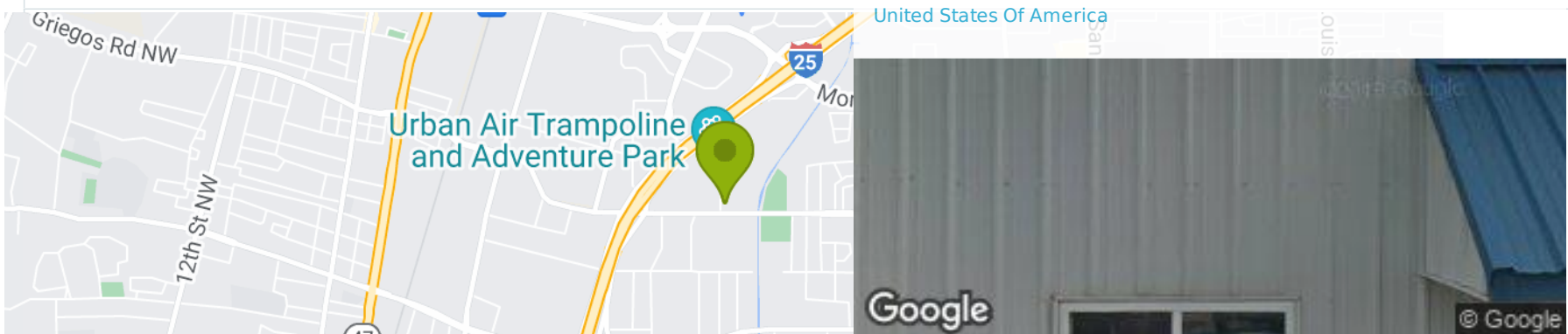
KEY DATA ELEMENTS (Formerly: SCORE BAR)

KDE Name	Current Status	Details
PAYDEX®	↓ 79	2 days beyond terms
D&B Rating	1R2	1R indicates 10 or more Employees, Credit appraisal of 2 is good
Bankruptcy Found	● No	
Failure Score	↓ 76	Low to Moderate Risk of severe financial stress.
Delinquency Score	↑ 84	Low to Moderate Risk of severe payment delinquency.

COMPANY PROFILE

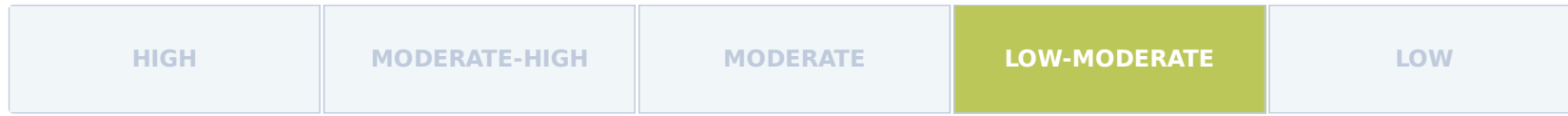
D-U-N-S 19-665-1137	Mailing Address PO Box 31310 Albuquerque, NM, 87190, UNITED STATES	Employees 48
Legal Form Corporation (US)	Telephone +1 505 880 1819	Age (Year Started) 36 Years (1986)
History Record Clear	Website www.heinm.com	Named Principal Will Humbard, PRESIDENT
Date Incorporated 01/23/1998	Present Control Succeeded 1998	Line of Business Security systems services
State of Incorporation NEW MEXICO		SIC 73829901
Ownership Not publicly traded		NAICS 561621

Street Address: 561621
 3800 Vassar Dr Ne, Moved From: 3800 Vasser Drive Ne, Albuquerque, Nm, Albuquerque, NM, 87107, United States Of America



OVERALL BUSINESS RISK

Dun & Bradstreet thinks...



Overall assessment of this organization over the next 12 months:	Stable Condition
Based on the predicted risk of business discontinuation:	High Likelihood Of Continued Operations
Based on the predicted risk of severely delinquent payments:	Low Potential For Severely Delinquent Payments

D&B MAX CREDIT RECOMMENDATION

MAXIMUM CREDIT RECOMMENDATION

US\$ 90,000

The recommended limit is based on a low probability of severe delinquency.

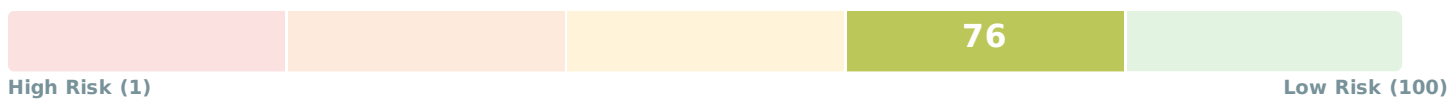
FAILURE SCORE (Formerly Financial Stress Score)

Company's Risk Level

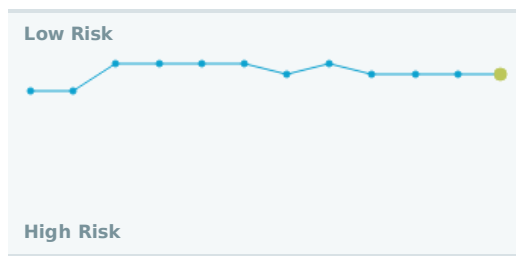
LOW-MODERATE

Probability of failure over the next 12 months

0.11 %



Past 12 Months



DELINQUENCY SCORE (Formerly Commercial Credit Score)

Company's Risk Level

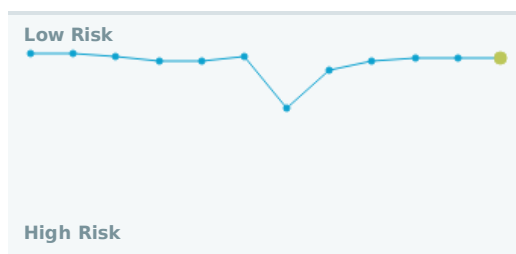
LOW-MODERATE

Probability of delinquency over the next 12 months

2.13 %

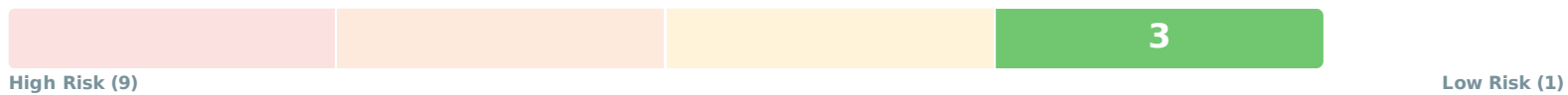


Past 12 Months

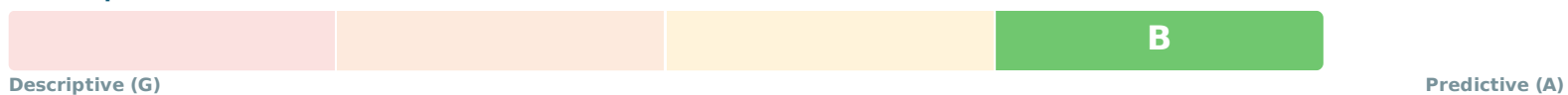


VIABILITY RATING SUMMARY

Viability Score



Data Depth Indicator

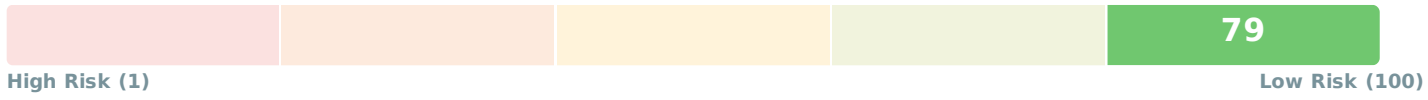


Portfolio Comparison



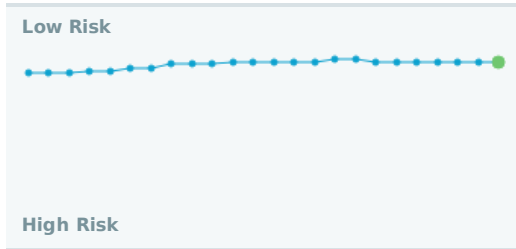
High Risk (9)	Low Risk (1)
Financial Data	Unavailable
Trade Payments	Available: 3+Trade
Company Size	Medium: Employees: 10-49 or Sales: \$100K-\$499K
Years in Business	Established

D&B PAYDEX® ⓘ

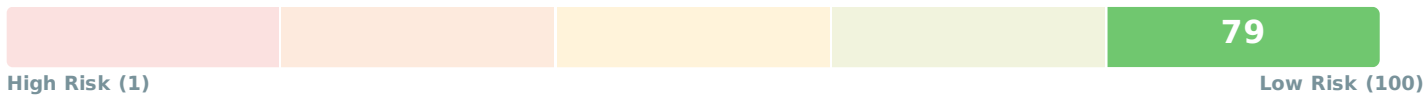


2 days beyond terms

Past 24 Months

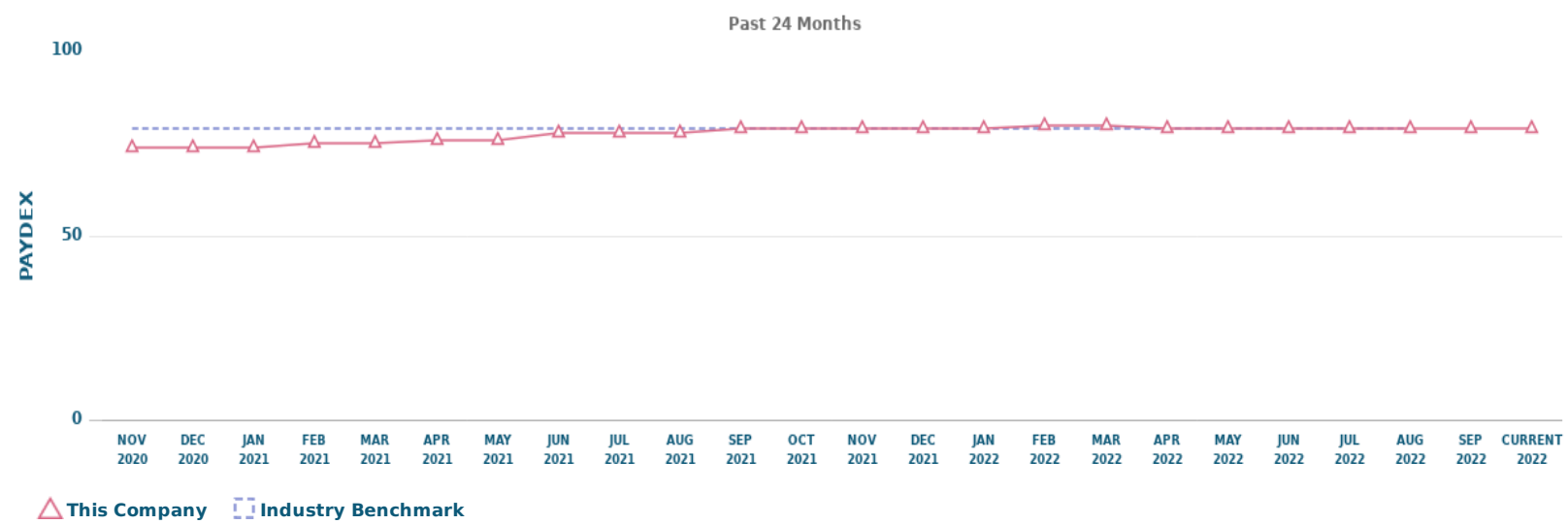


D&B PAYDEX - 3 MONTHS ⓘ



2 days beyond terms

PAYDEX® TREND CHART ⓘ



SBRI ORIGINATION



No SBRI Origination Score data is currently available.

D&B RATING ⓘ

Employee Size

1R: 10 employees and over

Risk Indicator

2: Low Risk

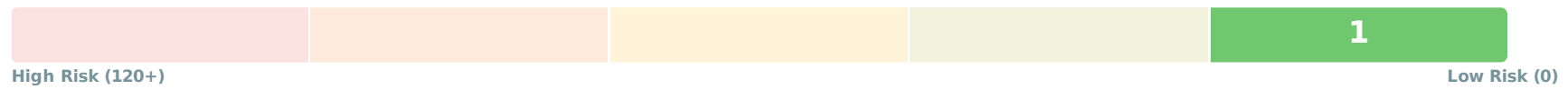
LEGAL EVENTS

Events	Occurrences	Last Filed
Bankruptcies	0	-
Judgements	0	-
Liens	0	-
Suits	0	-
UCC	5	10/10/2019

DETAILED TRADE RISK INSIGHT™

Days Beyond Terms
1 Days

3 Months
From Sep-22 to Nov-22



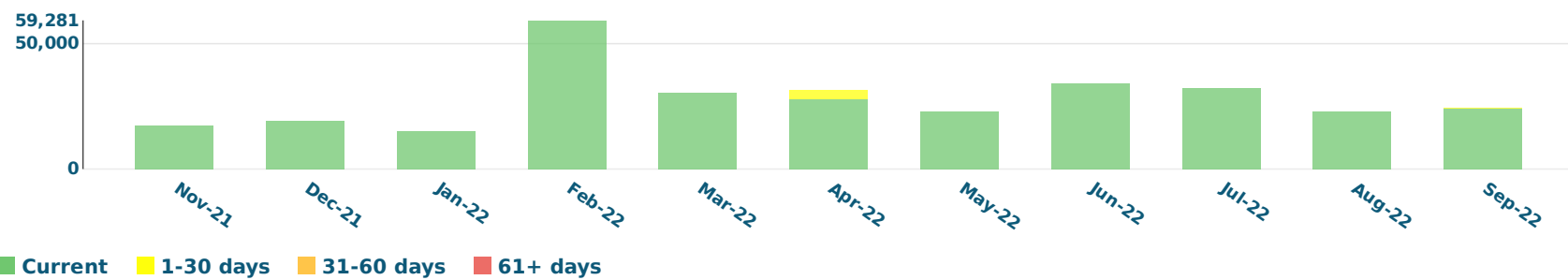
Dollar-weighted average of **13** payment experiences reported from **12** companies.

Recent Derogatory Events

Status	Aug-22	Sep-22	Oct-22
Placed for Collection	-	-	-
Bad Debt Written Off	-	-	-

DETAILED TRADE RISK INSIGHT™ 12 MONTH TREND

Total Amount Current and Past Due -



FINANCIAL OVERVIEW - BALANCE SHEET

1. 09/30/2010
2. ()
Source: D&B

TRADE PAYMENTS

Highest Past Due:

250

Highest Now Owing 10,000	Total Trade Experiences 32	Largest High Credit 50,000
-----------------------------	-------------------------------	-------------------------------

FINANCIAL OVERVIEW - PROFIT AND LOSS

1. 09/30/2010
2. ()
Source: D&B

OWNERSHIP

This company is a Single Location.

FINANCIAL OVERVIEW - KEY BUSINESS RATIOS

Key Business Ratios	Business Ratio
Current Ratio	5
Sales to Net Working Capital	7.4

Source: D&B

ALERTS



There are no alerts for this D-U-N-S Number.

WEB & SOCIAL POWERED BY FIRSTRAIN



No Data Available

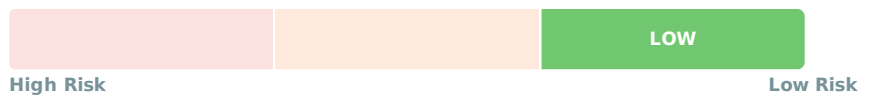
COUNTRY/REGIONAL INSIGHT



United States Of America

Near-term economic outlook has deteriorated as the Fed pursues aggressive rate hikes; damage from hurricane Ian expected to disrupt business continuity in and around Florida for weeks to come.

Risk Category



Available Reports

[Country Insight Snapshot \(CIS\)](#)

High-level view of a single country's cross-border risk exposure, with particular focus on the current political, commercial, and macroeconomic environments.

[Country Insight Report \(CIR\)](#)

In-depth analysis of the current risks and opportunities within a single country and its regional and global context.

STOCK PERFORMANCE

History

Performance

Daily High
52-Week High

P/E:
EPS:
Div/Yield

The scores and ratings included in this report are designed as a tool to assist the user in making their own credit related decisions, and should be used as part of a balanced and complete assessment relying on the knowledge and expertise of the reader, and where appropriate on other information sources. The score and rating models are developed using statistical analysis in order to generate a prediction of future events. Dun & Bradstreet monitors the performance of thousands of businesses in order to identify characteristics common to specific business events. These characteristics are weighted by significance to form rules within its models that identify other businesses with similar characteristics in order to provide a score or rating.

Dun & Bradstreet's scores and ratings are not a statement of what will happen, but an indication of what is more likely to happen based on previous experience. Though Dun & Bradstreet uses extensive procedures to maintain the quality of its information, Dun & Bradstreet cannot guarantee that it is accurate, complete or timely, and this may affect the included scores and ratings. Your use of this report is subject to applicable law, and to the terms of your agreement with Dun & Bradstreet.

Risk Assessment

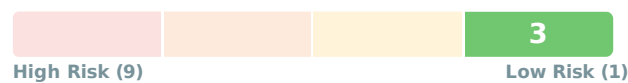
D&B VIABILITY RATING SUMMARY

The D&B Viability Rating uses D&B's proprietary analytics to compare the most predictive business risk indicators and deliver a highly reliable assessment of the probability that a company will go out of business, become dormant/inactive, or file for bankruptcy/insolvency within the next 12 months. The D&B Viability Rating is made up of 4 components:

Viability Score

Compared to All US Businesses within the D&B Database:

- Level of Risk: **Low Risk**
- Businesses ranked **3** have a probability of becoming no longer viable: **3 %**
- Percentage of businesses ranked **3**: **15 %**
- Across all US businesses, the average probability of becoming no longer viable: **14 %**



Portfolio Comparison

Compared to All US Businesses within the same MODEL SEGMENT:

- Model Segment : **Established Trade Payments**
- Level of Risk: **Low Risk**
- Businesses ranked **3** within this model segment have a probability of becoming no longer viable: **3 %**
- Percentage of businesses ranked **3** with this model segment: **11 %**
- Within this model segment, the average probability of becoming no longer viable: **5 %**



Data Depth Indicator

Data Depth Indicator:

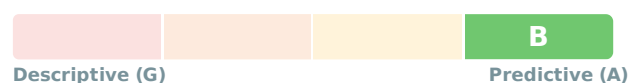
- ✓ Rich Firmographics
- ✓ Extensive Commercial Trading Activity
- ✓ Basic Financial Attributes

Greater data depth can increase the precision of the D&B Viability Rating assessment.

To help improve the current data depth of this company, you can ask D&B to make a personalized request to this company on your behalf to obtain its latest financial information. To make the request, click the link below. Note, the company must be saved to a folder before the request can be made.

Request Financial Statements

Reference the FINANCIALS tab for this company to monitor the status of your request.



Company Profile:

Company Profile Details:

- Financial Data: **False**
- Trade Payments: **Available: 3+Trade**
- Company Size: **Medium: Employees: 10-49 or Sales: \$100K-\$499K**
- Years in Business: **Established: 5+**



Financial Data

False

Trade Payments

Available:
3+Trade

Company Size

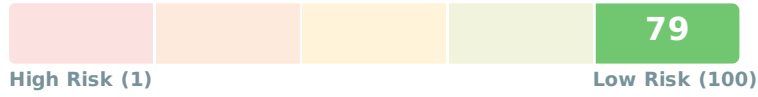
Medium

Years in Business

Established

D&B PAYDEX

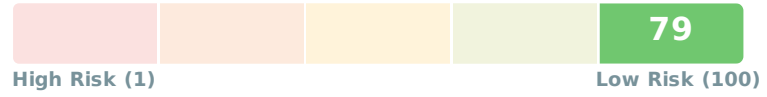
D&B 3 MONTH PAYDEX



When weighted by amount, Payments to suppliers average days_beyond_terms

- High risk of late payment (Average 30 to 120 days beyond terms)
- Medium risk of late payment (Average 30 days or less beyond terms)
- Low risk of late payment (Average prompt to 30+ days sooner)

Industry Median 79
Equals 2 Days Beyond Terms

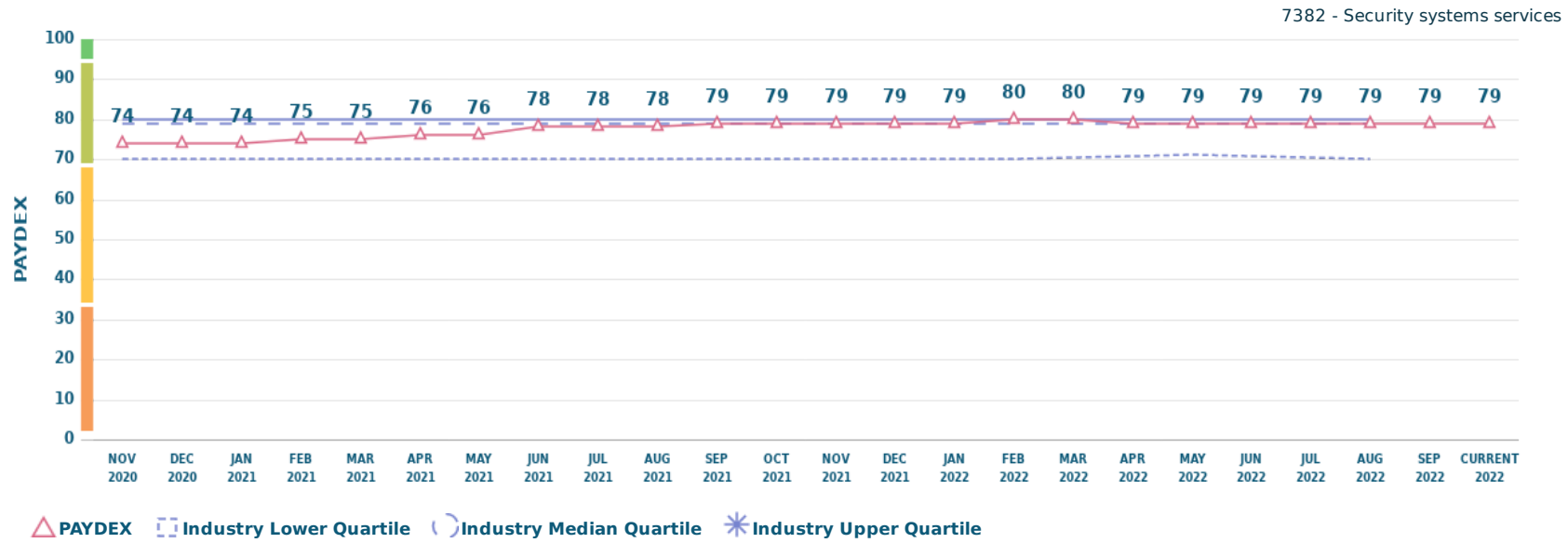


Based on payments collected 3 months ago.
When weighted by amount, Payments to suppliers average 2 days beyond terms

- High risk of late payment (Average 30 to 120 days beyond terms)
- Medium risk of late payment (Average 30 days or less beyond terms)
- Low risk of late payment (Average prompt to 30+ days sooner)

Industry Median 79
Equals 2 Days Beyond Terms

Business and Industry Trends



Equals

D&B RATING

Current Rating as of 01/31/2022

Employee Size
1R: 10 employees and over

Risk Indicator
2: Low Risk

Previous Rating

Employee Size
1R: 10 employees and over

Risk Indicator
3: Moderate Risk

History since 08/17/2006

Date Applied	D&B Rating
12/16/2013	1R3
04/20/2012	2A2
04/13/2011	3A1
02/03/2011	3A2
03/16/2010	1R3

Trade Payments

TRADE PAYMENTS SUMMARY (Based on 24 months of data)

Overall Payment Behaviour
2
Days Beyond Terms

Highest Now Owing:
US\$ 10,000

% of Trade Within Terms
84%

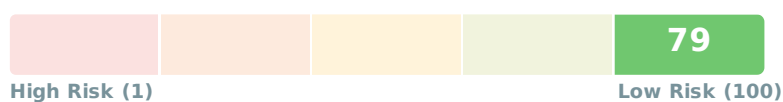
Total Trade Experiences:
32
Largest High Credit:
US\$ 50,000
Average High Credit:
US\$ 6,659

Highest Past Due
US\$ 250

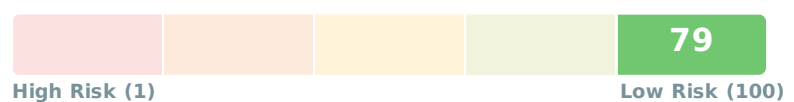
Total Unfavorable Comments :
0
Largest High Credit:
US\$ 0

Total Placed in Collections:
0
Largest High Credit:
US\$ 0

D&B PAYDEX



D&B 3 MONTH PAYDEX



When weighted by amount, Payments to suppliers average days_beyond_terms

- High risk of late payment (Average 30 to 120 days beyond terms)
- Medium risk of late payment (Average 30 days or less beyond terms)
- Low risk of late payment (Average prompt to 30+ days sooner)

Industry Median 79
Equals 2 Days Beyond Terms

Based on payments collected 3 months ago.

When weighted by amount, Payments to suppliers average 2 days beyond terms

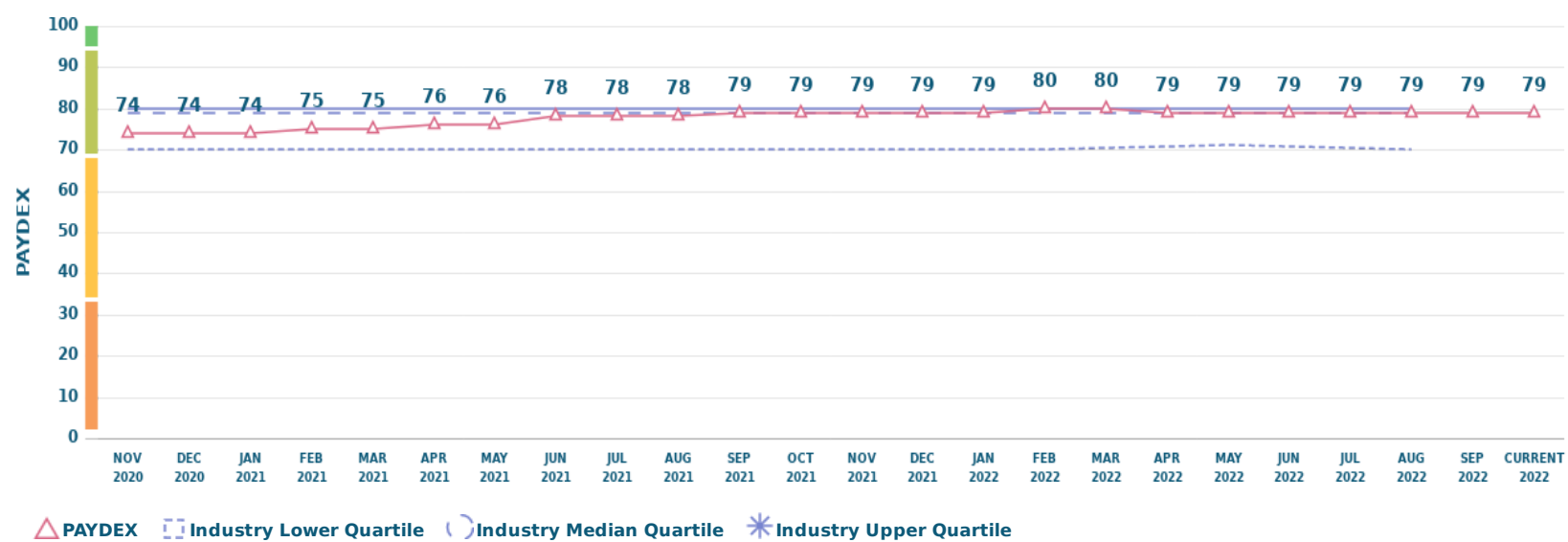
- High risk of late payment (Average 30 to 120 days beyond terms)
- Medium risk of late payment (Average 30 days or less beyond terms)
- Low risk of late payment (Average prompt to 30+ days sooner)

Industry Median 79
Equals 2 Days Beyond Terms

BUSINESS AND INDUSTRY TRENDS

Based on 24 months of data

7382 - Security systems services



	12/20	1/21	2/21	3/21	4/21	5/21	6/21	7/21	8/21	9/21	10/21	11/21	12/21	1/22	2/22	3/22	4/22	5/22	6/22	7/22	8/22	9/22	10/22	Current 2022	
This Business	74	74	74	75	75	76	76	78	78	78	79	79	79	79	79	80	80	79	79	79	79	79	79	79	79
Industry Quartile																									
Upper	80	-	-	80	-	-	80	-	-	80	-	-	80	-	-	80	-	-	80	-	-	80	-	-	-
Median	79	-	-	79	-	-	79	-	-	79	-	-	79	-	-	79	-	-	79	-	-	79	-	-	-
Lower	70	-	-	70	-	-	70	-	-	70	-	-	70	-	-	70	-	-	71	-	-	70	-	-	-

TRADE PAYMENTS BY CREDIT EXTENDED (Based on 12 months of data)

Range of Credit Extended (US\$)	Number of Payment Experiences	Total Value	% Within Terms
100,000 & over	0	US\$ 0	0
50,000 - 99,999	1	US\$ 50,000	100
15,000 - 49,999	3	US\$ 70,000	100
5,000 - 14,999	4	US\$ 37,500	90
1,000 - 4,999	8	US\$ 12,500	92
Less than 1,000	10	US\$ 3,150	59

TRADE PAYMENTS BY INDUSTRY (BASED ON 24 MONTHS OF DATA)

[Collapse All](#) | [Expand All](#)

Industry Category-	Number of Payment Experiences	Largest High Credit (US\$)	% Within Terms (Expand to View)	1 - 30 Days Late (%)	31 - 60 Days Late (%)	61 - 90 Days Late (%)	91 + Days Late (%)
▼32 - Stone, Clay, Glass, and Concrete Products	1	50	50	50	0	0	0
3273 - Mfg readymix concrete	1	50	50	50	0	0	0
▼42 - Motor Freight	1	1,000	100	0	0	0	0

Transportation and Warehousing							
4213 - Trucking non-local	1	1,000	100	0	0	0	0
▼45 - Transportation by Air	1	250	0	100	0	0	0
4513 - Air courier service	1	250	0	100	0	0	0
▼48 - Communications	1	2,500	100	0	0	0	0
4812 - Radiotelephone commun	1	2,500	100	0	0	0	0
▼50 - Wholesale Trade - Durable Goods	12	50,000	75	25	0	0	0
5063 - Whol electrical equip	8	40,000	99	1	0	0	0
5085 - Whol industrial suppl	2	50,000	99	0	1	0	0
5084 - Whol industrial equip	1	250	0	100	0	0	0
5045 - Whol computers/softwr	1	250	100	0	0	0	0
▼51 - Wholesale Trade - Nondurable Goods	1	1,000	100	0	0	0	0
5172 - Whol petroleum prdts	1	1,000	100	0	0	0	0
▼59 - Miscellaneous Retail	1	50	100	0	0	0	0
5943 - Ret stationery	1	50	100	0	0	0	0
▼60 - Depository Institutions	2	250	100	0	0	0	0
6021 - Natnl commercial bank	2	250	100	0	0	0	0
▼61 - Nondepository Credit Institutions	1	10,000	100	0	0	0	0
6153 - Short-trm busn credit	1	10,000	100	0	0	0	0
▼73 - Business Services	5	15,000	77	24	0	0	0
7389 - Misc business service	3	15,000	100	0	0	0	0
7359 - Misc equipment rental	2	7,500	53	47	0	0	0

TRADE LINES						
Date of Experience	Payment Status	Selling Terms	High Credit (US\$)	Now Owes (US\$)	Past Due (US\$)	Months Since Last Sale
09/22	Pays Promptly	-	40,000	5,000	0	1

Date of Experience	Payment Status	Selling Terms	High Credit (US\$)	Now Owes (US\$)	Past Due (US\$)	Months Since Last Sale
09/22	Pays Promptly	-	15,000	10,000	0	1
09/22	Pays Promptly	-	10,000	5,000	0	1
09/22	Pays Promptly	-	10,000	0	0	Between 6 and 12 Months
09/22	Pays Promptly	-	2,500	0	0	Between 6 and 12 Months
09/22	Pays Promptly	-	2,500	100	0	1
09/22	Pays Promptly	-	2,500	2,500	0	1
09/22	Pays Promptly	-	1,000	500	0	1
09/22	Pays Promptly	-	1,000	1,000	0	1
09/22	Pays Promptly	-	1,000	0	0	Between 2 and 3 Months
09/22	Pays Promptly	N30	250	250	0	1
09/22	Pays Promptly	N30	250	250	0	1
09/22	Pays Promptly	-	50	50	0	1
09/22	Pays Promptly	-	50	0	0	Between 6 and 12 Months
09/22	Pays Prompt to Slow 30+	-	7,500	750	0	1
09/22	Pays Prompt to Slow 30+	N30	50	50	50	1
09/22	Pays Slow 35+	N30	750	50	0	1
09/22	-	Cash account	0	0	0	Between 6 and 12 Months
08/22	Pays Promptly	-	15,000	0	0	Between 6 and 12 Months
04/22	Pays Promptly	-	50,000	0	0	Between 6 and 12 Months
04/22	Pays Promptly	-	10,000	0	0	Between 6 and 12 Months
04/22	Pays Promptly	-	1,000	0	0	Between 6 and 12 Months
04/22	Pays Promptly	-	750	0	0	Between 6 and 12 Months
04/22	-	Cash account	750	0	0	Between 6 and 12 Months
04/22	-	Cash account	250	0	0	1
04/22	-	Cash account	250	0	0	Between 4 and 5 Months
01/22	Pays Slow 30+	-	1,000	0	0	Between 6 and 12 Months
02/21	Pays Slow 30+	-	250	0	0	Between 2 and 3 Months
01/21	Pays Slow 30+	-	250	250	250	-
12/20	Pays Promptly	N15	500	0	0	Between 6 and 12 Months
11/20	-	Cash account	50	0	0	Between 2 and 3 Months
10/20	-	Cash account	250	0	0	Between 6 and 12 Months

OTHER PAYMENT CATEGORIES		
Other Payment Categories	Experience	Total Amount
Cash experiences	6	US\$ 1,550
Payment record unknown	0	US\$ 0
Unfavorable comments	0	US\$ 0
Placed for collections	0	US\$ 0
Total in D&B's file	32	US\$ 174,700

Accounts are sometimes placed for collection even though the existence or amount of the debt is disputed. Payment experiences reflect how bills are met in relation to the terms granted. In some instances payment beyond terms can be the result of disputes over merchandise, skipped invoices etc. Each experience shown represents a separate account reported by a supplier. Updated trade experiences replace those previously reported.

Legal Events

The following Public Filing data is for information purposes only and is not the official record. Certified copies can only be obtained from the official source.

Bankruptcies	Judgements	Liens	Suits	UCCs
No	0 Latest Filing: -	0 Latest Filing: -	0 Latest Filing: -	5 Latest Filing: 10/10/2019

EVENTS

UCC Filing - Original

Filing Date	10/10/2019
Filing Number	20190083171C
Received Date	10/22/2019
Collateral	All Account(s) - All General intangibles(s) - All Chattel paper
Secured Party	CENTURY BANK, SANTA FE, NM
Debtors	HEI, INC.
Filing Office	SECRETARY OF STATE/OPERATIONS BUREAU/UCC DIVISION, SANTA FE, NM

UCC Filing - Original

Filing Date	10/10/2019
Filing Number	20190083174D
Received Date	10/22/2019
Collateral	All Vehicles - All Equipment
Secured Party	CENTURY BANK, SANTA FE, NM
Debtors	HEI, INC.
Filing Office	SECRETARY OF STATE/OPERATIONS BUREAU/UCC DIVISION, SANTA FE, NM

UCC Filing - Original

Filing Date	07/10/2019
Filing Number	20190079426A
Received Date	07/23/2019
Collateral	General intangibles(s) and proceeds - Equipment and proceeds
Secured Party	BANK OF THE WEST, SAN RAMON, CA
Debtors	HEI, INC.
Filing Office	SECRETARY OF STATE/OPERATIONS BUREAU/UCC DIVISION, SANTA FE, NM

UCC Filing - Original

Filing Date	12/10/2013
Filing Number	20130020286F
Received Date	12/19/2013
Collateral	Equipment and proceeds
Secured Party	WAGNER EQUIPMENT CO., AURORA, CO
Debtors	HEI INC
Filing Office	SECRETARY OF STATE/OPERATIONS BUREAU/UCC DIVISION, SANTA FE, NM

UCC Filing - Original

Filing Date	04/08/2013
Filing Number	20130006074E
Received Date	04/16/2013
Collateral	Equipment and proceeds
Secured Party	DITCH WITCH FINANCIAL SERVICES, SAN FRANCISCO, CA
Debtors	HEI, INC.
Filing Office	SECRETARY OF STATE/OPERATIONS BUREAU/UCC DIVISION, SANTA FE, NM

The public record items contained in this report may have been paid, terminated, vacated or released prior to the date this report was printed. This information may not be reproduced in whole or in part by any means of reproduction.

There may be additional UCC Filings in D&Bs file on this company available by contacting 1-800-234-3867.

Special Events

SPECIAL EVENTS

Date	Event Description
01/31/2022	Business address has changed from 3800 Vasser Drive Ne, Albuquerque, NM, 87107 to 3800 Vassar Dr Ne, Albuquerque, NM, 87107.

Financials - D&B

A detailed financial statement is not available from this company for publication.

A detailed financial statement is not available from this company for publication.

Financial Ratios


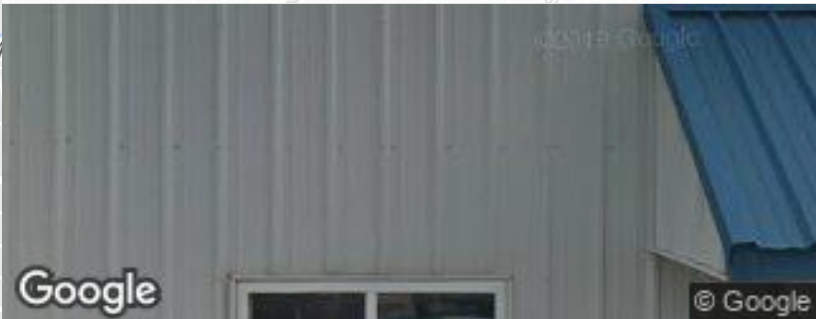
Source: D&B | Currency: All figures shown in USD unless otherwise stated

KEY BUSINESS RATIOS

Statement date	Based on Number of Establishments	Ratio for the business	Industry Median	Industry Quartile
09/30/2010	14			
Profitability				
Return On Assets		9.9	5.6	-

	Ratio for the business	Industry Median	Industry Quartile
Return on Net Worth	28.9	10.3	-
Return on Sales	2.8	5.3	-
Short Term Solvency			
Current Liabilities to Inventory	680.7	392.8	1
Current Liabilities Over Net Worth	31.5	131.1	4
Current Ratio	5.0	1.5	1
Quick Ratio (excl. Short Term Investments)	3.8	1.0	1
Efficiency			
Accounts Payable to Sales	1.9	4.9	4
Assets Over Sale	21.5	49.8	4
Collection Period	21.4	51.5	4
Sales to Inventory	202.0	26.3	1
Sales Over Net Working Capital	7.4	13.5	3
Utilization			
Total Liabilities Over Net Worth	100.7	181.7	1

Company Profile

COMPANY OVERVIEW		
D-U-N-S 19-665-1137	Mailing Address PO Box 31310 ALBUQUERQUE, NM, 87190, UNITED STATES	Employees 48
Legal Form Corporation (US)	Telephone +1 505 880 1819	Age (Year Started) 36 Years (1986)
History Record Clear	Website www.heinm.com	Named Principal Will Humbard, PRESIDENT
Date Incorporated 01/23/1998	Present Control Succeeded 1998	Line of Business Security systems services
Business Commenced On 1986	SIC 73829901	
State of Incorporation NEW MEXICO	NAICS 561621	
Ownership Not publicly traded		
Street Address: 3800 Vassar Dr Ne, Moved From: 3800 Vasser Drive Ne, Albuquerque, Nm, Albuquerque, NM, 87107, United States Of America		
 		

BUSINESS REGISTRATION

Corporate and business registrations reported by the secretary of state or other official source as of: 2022-10-01
 This data is for informational purposes only, certification can only be obtained through the Office of the Secretary of State.

Registered Name	HEI, INC.
Corporation Type	Corporation (US)
State of Incorporation	NEW MEXICO
Date Incorporated	01/23/1998
Registration ID	1913086
Registration Status	ACTIVE
Filing Date	01/23/1998
Where Filed	NEW MEXICO PUBLIC REGULATION COMMISSION

Registered Agent

Name	WILL HUMBARD
Address	3800 VASSAR DRIVE NE, ALBUQUERQUE, NM, 871070000

Registered Principal

Name	HUMBARD, WILL
Title	Director
Address	-

Name	WILL HUMBARD
Title	President
Address	-

Name	C. KELLY ADAMS
Title	Secretary
Address	-

Name	C. KELLY ADAMS
Title	Treasurer
Address	-

Name	WILL HUMBARD
Title	Vice President
Address	-

PRINCIPALS

Officers

WILL HUMBARD, PRES
RALPH EVANS, V PRES

Directors

DIRECTOR(S): THE OFFICER(S)

COMPANY EVENTS

The following information was reported on: 01/31/2022

The New Mexico Secretary of State's business registrations file showed that HEI, Inc., was registered as a Corporation on January 23, 1998.

Business started 1986 by Rick Howe. Present control succeeded 1998. 100% of capital stock is owned by officers.

WILL HUMBARD born 1960. 1991-present active here.

RALPH EVANS born 1958. 1995-present active here.

Business address has changed from 3800 Vasser Drive Ne, Albuquerque, NM, 87107 to 3800 Vassar Dr Ne, Albuquerque, NM, 87107.

BUSINESS ACTIVITIES AND EMPLOYEES

The following information was reported on: 01/31/2022

Business Information

Description	Provides security systems services, specializing in burglar alarm maintenance and monitoring (30%). Contractor of electrical work and fire detection or burglar alarm systems. Has 200 account(s). Terms are Net 30 days. Sells to commercial concerns. Territory : Statewide & Surrounding states.
Employees	48 which includes officer(s) and 2 part-time. Employee total fluctuates with work load.
Financing Status	Secured
Seasonality	Nonseasonal.
Tenure	Owns
Facilities	Owns premises in on 1-2 floor of a two story cinder block building.

Related Concerns

SIC/NAICS Information

Industry Code	Description	Percentage of Business
7382	Security systems services	-
73829901	Burglar alarm maintenance and monitoring	-
17310000	Electrical work	-
17310403	Fire detection and burglar alarm systems specialization	-

NAICS Codes

NAICS Description

561621	Security Systems Services (except Locksmiths)
238210	Electrical Contractors and Other Wiring Installation Contractors
238210	Electrical Contractors and Other Wiring Installation Contractors

GOVERNMENT ACTIVITY

Activity Summary

Borrower(Dir/Guar)	No
Administrative Debt	No
Contractor	No
Grantee	No

Activity Summary

Party excluded from federal program(s) No

Federal Information**FEDERAL EMPLOYER IDENTIFICATION NUMBER**

DUN & Bradstreet, Inc. has compiled the following FEIN numbers for the business name in this report from the sources below. Dun & Bradstreet, Inc. provides this information "AS IS" with no guarantee as to its accuracy.

FEIN	Business Name	Address	Source	Date
85-0449865	HEI, INC.	3800 VASSAR DR NE, ALBUQUERQUE, NM, 87107	DEPARTMENT OF LABOR	12/31/2003
85-0449865	HEI, INC. 401K PROFIT SHARING PLAN & TRUST	PO BOX 31310, ALBUQUERQUE, NM, 87190	DEPARTMENT OF LABOR	01/01/2006
85-0449865	HEI INC	P O BOX 31310, ALBUQUERQUE, NM, 87190	DEPARTMENT OF TREASURY - HEALTH	11/01/2001
85-0449865	HEI, INC.	PO BOX 31310, Albuquerque, NM, 87190	TEXAS BUSINESS REGISTRATIONS	05/01/2015
85-0449865	HEI, INC.	PO BOX 31310, ALBUQUERQUE, NM, 87190	TEXAS BUSINESS REGISTRATIONS	03/06/2009

REPORTED U.S. GOVERNMENT CONTRACT ACTIONS

No government activity has been found in this section.

REPORTED FEDERAL LOANS AND LOAN GUARANTEES

No government activity has been found in this section.

CLAIMS, FEES, FINES, OVERPAYMENTS, PENALTIES AND OTHER MISC. REPORTED DEBTS TO FEDERAL AGENCIES

No government activity has been found in this section.

REPORTED PARTY EXCLUDED FROM FEDERAL PROGRAM(S)

No government activity has been found in this section.

REPORTED U.S. GOVERNMENT GRANT AWARDS

No government activity has been found in this section.

Last Login : 11/02/2022 12:13:45 PM

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Summary of Work-Related Injuries and Illnesses

Year 202 1



U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no work-related injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the Log. If you had no cases, write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR Part 1904.35, in OSHA's recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0 (G)	0 (H)	0 (I)	1 (J)

Number of Days

Total number of days away from work _____ (K)

Total number of days of job transfer or restriction _____ (L)

Injury and Illness Types

Total number of . . . (M)	1	(4) Poisonings	0
(1) Injuries	0	(5) Hearing loss	0
(2) Skin disorders	0	(6) All other illnesses	0
(3) Respiratory conditions	0		

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

Public reporting burden for this collection of information is estimated to average 58 minutes per response, including time to review the instructions, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any other aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3644, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

Establishment information

HEI, Inc.
Main Office
Your establishment name

3800 Yassar
Street

Albuquerque
City

NM
State

87190
ZIP

Industry description (e.g., *Manufacture of motor truck trailers*)
Electrical Contractors and Other Wiring Installation Contr

Standard Industrial Classification (SIC), if known (e.g., 3715)

OR

North American Industrial Classification (NAICS), if known (e.g., 336212)
2 3 8 2 1 0

Employment information (If you don't have these figures, see the Worksheet on the back of this page to estimate.)

Annual average number of employees _____ 48
Total hours worked by all employees last year _____ 98880

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Rachelle Casuga
Company executive
HR Manager
505-880-1819
505-880-1819
02 10 2022
Date

Log of Work-Related Injuries and Illnesses

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

You must record information about every work-related death and about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR Part 1904.8 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an Injury and Illness Incident Report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.



Year 202 1

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

HEI, Inc.
Main Office
Employment name
City Albuquerque State NM

Identify the person			Describe the case			Classify the case CHECK ONLY ONE box for each case based on the most serious outcome for that case:				Enter the number of days the injured or ill worker was:			Check the "injury" column or choose one type of illness:						
(A) Case no.	(B) Employee's name	(C) Job title i.e., Welder	(D) Date of injury or onset of illness	(E) Where the event occurred i.e., Loading dock north end	(F) Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill (e.g., Steam degreaser burns on right forearm from accident torch)	Death (G)	Days away from work (H)	Job transfer or restriction (I)	Other record- able cases (J)	Away from work (K)	On job transfer or restriction (L)	Injury	Skin disorder	Respiratory condition	Chemical burn	Wounding	Hearing loss	All other illnesses	
38877328	Pearce Yazzie	Journeyman	04 / 23 monday	Job Site	Electrical Burn on left hand, right arm above elbow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	0	1	0	0	0	0	0	0	0
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Appendix C – Quality Control Plan and Safety

Document Development and Management

The Project Manger assigned to a specific Job Order is ultimately responsible for the oversight of all document development and management. The primary tool utilized for managing documents is a data log that is continuously updated in real time. The following data is to be tracked for each item:

- Document Title
- Current Version (with date)
- Current Status (under development / submitted / approved / etc.)
- Current Action Items
- Current Action Items Owner
- Current Action Item Due Dates & Times

All document transfers between Owner and Contractor shall be accompanied by a written Transmittal Letter with signed copies delivered to both parties. All signed Transmittal Letters shall be archived in the associated project file by the Project Manager.

Complete and Accurate Documentation and Submittals

During the Joint Scoping process and in combination with the Proposal Development, the Project Manager assigned to the specific project shall review and authenticate the accuracy of proposal and submittal documents prior to delivery. In an effort of expediting the project and submittal approval process, the Job Order Proposal shall include, at minimum, preliminary submittal data for all products requiring such approval. Once a task order is approved for construction, the Project Manager will prepare documents required by the specifications for data submittal. The Project Manager will check for compliance prior to forwarding or identify variances. If data is approved by owner, then remaining submittals for each approved product will be prepared and submitted. If not approved, the Project Manager will either correct the documentation or the product prior to re-submittal. All data will be tracked on a transmittal log to be reviewed at weekly meetings.

Complete and Accurate Proposals and Submittals

The Project Manager and Quality Control Manager will work closely together to cross check all bills of material being proposed to ensure that estimates are complete. Formula checks and balances will be utilized on any spreadsheets used for pricing purposes. Submittals and other documents will be thoroughly checked by the author, Project Manager and Quality Control Manager prior to sending to the customer for review.

Quality Control Organizational Approach

It is the collective responsibility of the Project Manager and Project Superintendent to ensure that all projects are constructed according to the scope of work, standards and specifications. This process begins with the management team having full access to and intimate understanding of not only the project specific scope of work, but all aspects of the contract requirements, Owner specifications, standards, operational requirements, safety standards and project schedule. This information must then be communicated thoroughly and accurately to all field personnel that are responsible for executing the scope of work.

Regularly scheduled site safety, coordination and inspection meetings are vital for continued authentication of safety and quality standards! Such organized meetings, while even in brevity, allow for clear and open lines of communication throughout the entire project team. Periodic site inspections by both the Contractor and Owner also lend aid in ensuring the scope of work is being completed in accordance with all standards and allows for timely correction of any items that are found needing attention or correction.

Employee Health and Safety

We are our sisters and brothers keeper! This reaches far beyond our Management and Field team members to include all Owner team members, customers and general public. Integrated into each project is not only the overall scope of work, required materials, tools and equipment, but also standard & general safety guidelines and practices in conjunction with site and project specific safety considerations. This is why safety is included in the Joint Scoping process, Job Order Proposal and continuously applied to and modified to support the ongoing construction activities in the field.

Each field shift begins with a collaborative review of work activities to be engaged. Jobsite Safety Analysis (JSA) and subsequent mitigation plans are developed and documented agreed upon and signed by all parties associated with that shifts scope of work. When site conditions are such that Owner team members are affected by work activities, they will also be included in this process. As work progresses and site conditions change, the JSA must be reviewed and updated to reflect real time work activities and site conditions. (see attached Jobsite Safety Analysis form for reference)

Job Safety Analysis

Job: _____ Location: _____ Date: ____/____/____

Description of work: _____

A. Safety (Check all that apply. Please describe control measures on back of form for any safety item checked.)

- Barricading and signage are required to protect personnel, facilities, or equipment.
- Work involves live systems or energized equipment.
- Lockout/tagout of energized systems is required.
- Work involves exposure to falls of six feet or greater.
- Ladders, personnel lifts, scaffolds, or work platforms are needed to perform task.
- Task is adjacent to process equipment or piping containing chemicals.
- Task involves the use of chemicals.
- Chemicals have been approved for use.
- Safety data sheets have been provided to crew.
- Containers are properly labeled (contents, hazards).
- Work generates chemical waste.
- Potentially affected parties have been notified of chemical use.
- Chemicals are stored properly.
- Task requires the demolition of installed utilities or equipment.
- Weather conditions affect the safe completion of this task.
- Work involves using sharp tools or materials (for example: saws, knives, sheet metal, etc.).
- Work takes place in an area where environmental cut hazards (sharp objects) exist.
- Work involves employee exposure to high noise levels (>85 dBA); you need to yell to be heard.

B. Required personal protective equipment (PPE) (Check all that are required to perform the task.)

- Fall arrest Hearing protection Head Foot/toe Eye Reflective vest Face shield
- Respirator Other (note on back)

Glove type required: Kevlar Rubber Leather Cotton Latex Other (note on back)

C. MSD (Ergo) risk factors (Please describe any checked items on the back of this form.)

- Material requiring manual handling exceeds 45 lbs. in weight.
- Material handling equipment should be used to move or lift materials (for example, forklift, pallet jack, chain fall).
- Task requires periodic stretching.
- Task involves musculoskeletal risk factors checked below (please note the source of the risk on the back of this form):
 - Forceful exertion Shoulders Vibration Neck Contact stress
 - Back Repetitive motion Knees Static postures Arms

D. Emergency equipment and exit locations (Note the location of the following.)

Nearest exit _____

Nearest phone _____

Fire extinguisher _____

Eye wash and shower _____

First aid kit _____

Job Safety Analysis

E. Review by crew lead

By signing below, I certify the completion of following activities:

1. Crew has walked through the work area to identify safety concerns.
2. Area is safe for working (for example, housekeeping, guarding, congestion, work surfaces, access).
3. Work has been coordinated with others in the area.
4. All tools and equipment are safe and in good condition (includes assured grounding, slings, hand tools, etc.)
5. All necessary training for this task has been completed.
6. All new employees have been familiarized with the work area.
7. Sufficient personnel have been assigned to complete this task safely.
8. Emergency exits and equipment have been identified (phones, fire extinguishers, eyewashes, etc.).
9. Contingency plans have been developed for unexpected events (medical emergency and equipment failure).

Crew lead _____ Crew lead _____
(Signature) (Print name)

Sequence of basic job steps	Risks involved in completing steps	Risk control method

Crew signatures

(By signing below, I certify that I have participated in the creation of this document. I have read and understood it, and I agree with the content.)

If work conditions or activities change, this task plan must be revised and reviewed by crew.



HEI, Inc.

Construction

Quality Manual

**Operating Policies of the
HEI Quality System**

Version: 2018

The documents provided by HEI, Inc. disclose proprietary company information that is copyright registered. Please hold these quality documents in confidence and do not share them with other organizations, even if you do not charge a fee.



QUALITY MANUAL

TABLE OF CONTENTS

1. Quality System Management and Responsibilities 6

1.1. Overview 6

1.2. HEI, Inc. Quality Policy 6

1.3. Quality Duties, Responsibilities, and Authority 6

1.4. Quality System Performance Measures 9

1.5. Customer Satisfaction Performance Measures 9

1.6. Exceptions 9

2. Project Quality Assurance/Quality Control Plan 10

2.1. Overview 10

2.2. HEI Project License and Qualification Requirements 10

2.3. Project Personnel and Qualifications 10

2.4. Project Quality Assurance/Quality Control Plan 11

2.5. Identification of Quality Controlled Work Tasks 12

2.6. Project Quality Inspection and Test Plan 12

2.7. Project Quality Communications Plan 12

2.8. Project Quality Training Plan 12

2.9. Customer Training On Operation and Maintenance 12

2.10. Project Records and Documentation Plan 13

2.11. Project Audit Plan 13

3. Contract Specifications 14

3.1. Overview 14

3.2. Contract Technical Specifications 14

3.3. Contract Drawings 14

3.4. Contract Submittals 14

3.5. Customer Submittal Approval 16

3.6. Contract Warranty 16

3.7. Contract Review and Approval 17

4. Design Review and Control 18

4.1. Overview 18

4.2. Design Input Review 18

4.3. Project Design Quality Assurance/Quality Control Plan 18

4.4. Design Progress Reviews 19

4.5. Design Output Verification and Approval 19

5. Project-Specific Quality Standards 20

5.1. Overview 20

5.2. Regulatory Codes 20



5.3. Industry Quality Standards 20

5.4. Material and Equipment Specifications..... 20

5.5. Work Process Specifications 21

5.6. Controlled Material Identification and Traceability 21

5.7. Measuring Device Control and Calibration..... 21

5.8. HEI Quality Standards 22

5.9. Application of Multiple Sources of Specifications 22

6. Project Purchasing 23

6.1. Overview..... 23

6.2. Qualification of Outside Organizations and Company Departments 23

6.3. Quality Responsibilities of Key Subcontractor and Supplier Personnel..... 24

6.4. Requirements for Subcontractor QC Plan 25

6.5. Subcontractor and Supplier Quality Policy 25

6.6. Project Subcontractor and Supplier List 26

6.7. Purchase Order Requirements 26

6.8. Project Purchase Order Approvals..... 26

7. Process Controls..... 27

7.1. Overview..... 27

7.2. Project Startup and Quality Control Coordination Meeting..... 27

7.3. Preparatory Project Quality Assurance/Quality Control Plan Planning..... 27

7.4. Weekly Quality Planning and Coordination Meetings..... 28

7.5. Process Control Standards..... 28

7.6. Daily Quality Control Report..... 30

7.7. Monthly Quality Control Report..... 30

8. Inspections and Tests 31

8.1. Overview..... 31

8.2. Required Work Task Quality Inspections and Tests..... 31

8.3. Material Inspections and Tests 31

8.4. Work in Process Inspections..... 32

8.5. Work Task Completion Inspections 32

8.6. Inspection of Special Processes 33

8.7. Independent Measurement and Tests 33

8.8. Commissioning Functional Acceptance Tests..... 33

8.9. Hold Points for Customer Inspection..... 33

8.10. Quality Inspection and Test Specifications 33

8.11. Inspection and Test Acceptance Criteria 33

8.12. Inspection and Test Status..... 34

8.13. Independent Quality Assurance Inspections 34

8.14. Inspection and Test Records..... 34

8.15. Project Completion and Closeout Inspection 35

9. Nonconformances and Corrective Actions 37

9.1. Overview..... 37



9.2. Nonconformances 37

9.3. Corrective Actions 38

10. Preventive Actions 39

10.1. Overview 39

10.2. Identify Preventive Actions for Improvement 39

10.3. Train Preventive Actions for Improvement 39

11. Quality System Audits 41

11.1. Overview 41

11.2. Project Quality System Audit 41

11.3. Company-wide Quality System Audit 41

12. Record and Document Controls..... 42

12.1. Overview 42

12.2. Quality System Documents 42

12.3. Document Controls..... 42

12.4. Record Controls 43

13. Appendix..... 44

13.1. Definitions of Terms 44



PROJECT QUALITY MANAGEMENT

The President forms a team consisting of a Quality Manager, Project Manager, and Superintendent.

First, the Quality Manager assembles a set of project specifications that includes customer specifications and requirements, regulations, industry standards, product instructions, and HEI quality standards. HEI operating policies assure compliance to the project specifications.

The Quality Manager evaluates personnel, subcontractors and suppliers, materials, and suppliers, and ensures that only those that are capable and qualified are included on the project. Training is provided to ensure that all personnel involved understand their project work task requirements as well as their quality responsibilities and authorities.

The Quality Manager then details how the quality is controlled throughout the construction process through a listing of all work task inspections and tests that will be performed.

As the project proceeds and prior to starting each construction work task, the Superintendent coordinates detailed quality requirements and resources, working conditions, and communicates them through a meeting with all interested parties. The Superintendent amends work task inspection checklists with items for heightened awareness based on the concerns of all parties.

The subcontractors and suppliers, Superintendent, and Quality Manager use inspection checklists to monitor conformance of each work task to the project specifications before, during, and at completion. Laboratory and functional tests are performed to assure performance results.

Should quality nonconformances occur, they are systematically segregated, controlled and corrected. Improvements are made to prevent recurrences.

Throughout the project, the Quality Manager performs on-site quality audits to ensure that the HEI Quality System is operating effectively.



1. QUALITY SYSTEM MANAGEMENT AND RESPONSIBILITIES

SYSTEM OF PERSONAL QUALITY ACCOUNTABILITY

1.1. OVERVIEW

Responsibilities for quality are specified not only for compliance with policies and procedures but also so that decisions are based on principles that ensure quality.

Documented responsibilities ensure that expected behaviors are communicated throughout the company rather than left to discretionary interpretation.

1.2. HEI, INC. QUALITY POLICY

Quality is everyone's responsibility. The President holds everyone in the organization personally accountable for adhering to the HEI Quality System policies and procedures.

The HEI, Inc. Quality Policy describes the HEI commitment to quality and reinforces compliance with the Quality System.

The President communicates the Quality Policy message throughout the company so that all employees understand their respective quality responsibilities.

The President reviews the HEI Quality Policy with all employees at least annually.

The President ensures that a copy of the HEI Quality Policy is distributed to all employees and is posted in all offices.

1.3. QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

1.3.1. PRESIDENT: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

While everyone is responsible for quality, the President is the one person in the company ultimately responsible for quality. Regardless of other duties, quality responsibilities of the President include:

- Ensuring that each employee understands his or her quality responsibilities as well as HEI quality policies
- Establishing company quality policies and objectives
- Conducting management reviews of the HEI Quality System
- Ensuring the availability of necessary resources and information for effective operation of the Quality System
- Demonstrating commitment to the HEI Quality System and its integrity
- Ensuring achievement of HEI quality objectives
- Continuously improving the Quality System

1.3.2. PRESIDENT: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

The President is responsible for ensuring company-wide effectiveness of the Quality System. Regardless of other duties, the President is responsible for:



- Fully implementing all provisions of the HEI Quality System and related documents.
- Manage the operation of the HEI Quality System
- Implement and manage all phases of quality control
- Ensuring that the Quality System is established and implemented by persons doing work that impacts quality
- Ensuring that the Quality System is maintained
- Acting as HEI liaison with parties outside the company on matters relating to quality
- Review and approval of all Quality System documents

1.3.3. QUALITY MANAGER: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

The Quality Manager is responsible for ensuring the overall effectiveness of the Quality System for a specific project. Regardless of other duties, the Quality Manager is responsible for:

- Planning project quality controls required by the HEI quality systems and contract requirements
- Fully implementing all provisions of the HEI Quality System and related documents on the project.
- Manage the operation of the HEI Quality System on the project.
- Implement and manage all phases of quality control
- Communicating project-specific quality requirements to all affected departments, subcontractors and suppliers, and customers
- Ensuring that the Quality System is established and implemented by persons doing work that impacts quality
- Monitoring progress of activities
- Ensuring that the Quality System is maintained
- Acting as the project quality liaison with parties outside the company on matters relating to quality
- Reporting to senior management on performance of the Quality System, including needed improvements
- Review and approval of all project Quality System records
- Review and approval of project quality-related contract submittals
- Managing all project inspection and quality control activities
- Controlling corrective actions
- Resolving quality nonconformances

The Quality Manager has the authority to:

- Stop work when continuing work may adversely affect quality or cover up a defect
- Prevent the use of equipment or materials that may adversely affect quality or cover up a defect
- To direct the removal and replacement of any non-conforming work, equipment, or material by HEI, any subcontractor, or any supplier.
- Suspend work and/or supply of materials by any staff member, subcontractor personnel, or supplier as deemed necessary to assure quality results.

Alternate Quality Managers acting in the role of the project Quality Manager has the same quality duties, responsibilities and authority as the project Quality Manager.

1.3.4. PROJECT MANAGER: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

The Project Manager is the one person responsible for management of a specific project. Regardless of other duties, the Project Manager is responsible for:

- Demonstrating commitment to the HEI Quality System and its integrity
- Ensuring achievement of project quality objectives



- Providing adequate resources for effective operation of the Quality System on the project
- Ensuring that each design employee understands his or her quality responsibilities as well as HEI quality policies
- Ensuring that each project employee understands his or her quality responsibilities as well as HEI quality policies
- Conducting management reviews of the HEI Quality System
- Ensuring the availability of necessary resources and information for effective operation of the HEI Quality System

The Project Manager has authority to:

- Stop work when continuing work adversely affects quality or covers up a defect
- Prevent the use of equipment or materials that would adversely affect quality or cover up a defect
- Suspend work and/or supply of materials by any staff member, subcontractor personnel, or supplier as deemed necessary to assure quality results.

1.3.5. SUPERINTENDENT: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

A Superintendent verifies that work performed by subcontractors and suppliers and HEI work crews conforms to HEI quality standards. The President appoints one or more Superintendents for each project.

A Superintendent has specific responsibilities for:

- Ensuring that work meets government regulatory and code requirements, customer requirements, contract requirements, contract technical specifications, contract drawings, approved contract submittals, and company quality standards and specifications
- Ensuring that subcontractors and suppliers begin work in accordance with HEI start-work policies
- Ensuring that subcontractors and suppliers receive a notice to work only when conditions will not adversely affect quality results
- Conducting quality inspections, tests, and recording findings
- Accurately assessing subcontractor quality and on-time performance
- Ensuring that quality standards are achieved before approving subcontractor or work crew completion of work

The Superintendent has the authority to:

- Stop work when continuing work may adversely affect quality or cover up a defect
- Prevent the use of equipment or materials that may adversely affect quality
- Direct the removal or replacement of any non-conforming work, equipment, or material
- Suspend work and/or supply of materials as deemed necessary to assure quality results

Alternate Superintendent has the same quality duties, responsibilities and authority as the Superintendent. Multiple Superintendents may be assigned to the project.

1.3.6. ALL EMPLOYEES: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

All employees have quality responsibilities that include:

- Conformance to project quality requirements
- Compliance with the project quality plan
- Meeting or exceeding all applicable regulations, codes, industry standards, and manufacturer specifications as well as meeting or exceeding our customers' contract and individual requirements.
- Fully implementing and complying with all provisions of the HEI Quality Manual.



All employees have the authority to:

- Stop work when continuing work may adversely affect quality or cover up a defect
- Prevent the use of equipment or materials that may adversely affect quality

1.4. QUALITY SYSTEM PERFORMANCE MEASURES

Company-wide quality performance measures evaluate the effectiveness of the Quality System. The following indicators are the primary measures of quality performance:

- Number of customer correction items identified at the project closeout quality inspection
- Customer satisfaction feedback

At least annually, President(s) evaluate HEI quality performance and set improvement goals.

1.5. CUSTOMER SATISFACTION PERFORMANCE MEASURES

HEI obtains feedback after project completion on whether customer quality expectations are being met, and to what extent. The President analyzes customer satisfaction data to determine opportunities for improvement and address any items of customer dissatisfaction.

1.6. EXCEPTIONS

Exceptions to the HEI Quality System and customer contract requirements are tightly controlled:

- Exceptions to compliance to contract specifications are approved only by the customer and the Quality Manager.
- Exceptions to the HEI Quality System not specified by contract requirements are approved only by President or the Quality Manager.

Exceptions are recorded in memoranda, change orders (Section 3.4.6 Change Order), or otherwise clearly documented.



2. PROJECT QUALITY ASSURANCE/QUALITY CONTROL PLAN

2.1. OVERVIEW

After HEI is awarded a contract to carry out a construction project, the President forms a team consisting of a Quality Manager, Project Manager, and Superintendent.

First, the Quality Manager develops a set of project specifications that align project requirements with customer specifications and requirements, regulations, industry standards, product instructions, and HEI quality standards.

The Quality Manager evaluates personnel, subcontractors and suppliers, materials, and suppliers, and ensures that only those that are capable and qualified are included on the project. Training is provided to ensure that all personnel involved in the project understand their quality responsibilities and authorities.

The Quality Manager then details how the quality is controlled throughout the construction process through a quality inspection and test plan that specifies requirements and pass/fail criteria for quality inspections and tests. HEI operating policies assure compliance to the project specifications.

As the project proceeds and prior to starting each construction task, the Superintendent coordinates detailed requirements and resources, site conditions, and communicates them through a meeting with all interested parties. The Superintendent amends inspection specific checklists with items for heightened awareness based on the concerns of all parties.

The subcontractors and suppliers and Superintendent use the quality inspection forms to monitor execution of the construction process through a series of quality inspections before, during, and at the completion of each construction task. Laboratory and functional tests are performed to assure performance results.

Should nonconformances occur, they are systematically controlled and corrected. Improvements are made to prevent recurrences.

Throughout the project there are standard operating procedures and forms for creating, maintaining, and controlling quality documents and records.

Throughout the project, the Quality Manager performs on-site quality audits to ensure that the HEI Quality System is operating effectively.

2.2. HEI PROJECT LICENSE AND QUALIFICATION REQUIREMENTS

The Quality Manager identifies company license and qualification credentials required by contract specifications and government regulators. The Quality Manager obtains records, certificates, and license records that provide verification of HEI credentials.

2.2.1.1. REQUIRED COMPANY LICENSES AND CERTIFICATIONS

The Quality Manager defines quality-related company credentials for each project work task that affects quality.

2.3. PROJECT PERSONNEL AND QUALIFICATIONS



2.3.1. PROJECT ORGANIZATION CHART

The President defines the organization chart for the project. The organizational chart includes job titles, names of assigned personnel, and organizational and administrative interfaces with the customer. The organization chart defines lines of authority as indicated by solid connection; dotted lines indicate lines of communication. The lines of authority preserve independence of quality control personnel from the pressures of production.

The President assesses the qualification requirements for each position on the project organization chart, qualifications of each person, and then appoints only qualified persons to the project organization.

2.3.2. APPOINTMENT OF KEY PROJECT PERSONNEL

The President forms a project management team consisting of:

- A Quality Manager
- A Project Manager
- A Superintendent
- A Quality Manager (if required)

The President appoints qualified persons to each project management job position with specific quality responsibilities and authorities. The President assesses the qualifications of each person before the appointment is made.

The President keeps a record of the appointment and signs the document. The person accepts the appointment by signing a declaration as a competent person.

Work steps for maintaining appointment of key project personnel are specified in Standard Operating Procedure 2.3.2 Appointment of Key Project Personnel.

2.3.3. PERSONNEL QUALIFICATIONS

The Quality Manager qualifies employee capabilities to ensure that they are capable of completely carrying out their assigned quality responsibilities including the following capabilities:

- Knowledge of Company quality standards
- Knowledge of job responsibilities and authority
- Demonstrated skills and knowledge
- Demonstrated ability
- Demonstrated results
- Required training
- Required experience

The Quality Manager also evaluates independent contractor personnel on the same standards that apply to employees.

2.3.3.1. REQUIRED LICENSES AND CERTIFICATIONS

The Quality Manager defines quality-related credentials for each project job position that affects quality.

2.4. PROJECT QUALITY ASSURANCE/QUALITY CONTROL PLAN

Before project work begins, the Project Manager prepares a construction process plan that defines the sequence of each work task and related quality inspections. The construction process plan is documented through an integrated and coordinated set of documents that includes:



- A schedule consisting of a sequence of each work task and activities required to complete a project
- The customer contract (Section 3 Contract Specifications) including contract technical specifications and contract drawings
- Required quality inspections and tests (Section 8.2 Required Work Task Quality Inspections and Tests) and the project Quality Inspection and Test Plan when required
- The Contract Submittal Schedule (Section 3.4.1 Contract Submittal Schedule)

2.5. IDENTIFICATION OF QUALITY CONTROLLED WORK TASKS

The Quality Manager identifies each phase of construction work task that requires separate quality controls. Each work task triggers a set of requirements for quality control inspections before, during and after work tasks.

2.6. PROJECT QUALITY INSPECTION AND TEST PLAN

The Quality Manager prepares quality inspection and test plans for a project that identifies:

- Each required quality inspection and/or test
- Inspection and test specifications for each required quality inspection or test
- Hold points for customer quality inspection
- Specification requirements for each quality inspection and test

2.7. PROJECT QUALITY COMMUNICATIONS PLAN

After HEI is awarded a contract, the Project Manager plans the methods of communications among the customer, subcontractors and suppliers and HEI.

2.8. PROJECT QUALITY TRAINING PLAN

The Quality Manager ensures that all employees receive training relevant to their quality responsibilities.

The Quality Manager ensures that all subcontractors and suppliers receive training on relevant elements of the HEI Quality System, Project Quality Assurance/Quality Control Plan, and quality standards.

The Quality Manger identifies the training needs of all personnel performing activities that affect quality. Training topics may include:

- The HEI Quality System
- The HEI Quality Policy
- Operating policies identified in the Quality Manual
- Quality standards cited in the Quality Manual, or project documents, or records
- Relevant quality standard operating procedures

2.9. CUSTOMER TRAINING ON OPERATION AND MAINTENANCE

During the project closeout phase, the Quality Manager trains customers on the operation and maintenance of the completed project, including as applicable:

- A review of as-built drawings
- Installed product identification and warranty requirements
- A review of documentation regarding start-up, operation, and shutdown
- Normal adjustments and maintenance requirements
- Limitations on use



2.10. PROJECT RECORDS AND DOCUMENTATION PLAN

The Quality Manager identifies the quality records that will be maintained during the planning and execution of the project. Considerations include:

- Contract requirements for maintaining records
- The size of the project
- Types of activities
- The complexity of processes and their interactions
- The competence of personnel
- The duration of the project
- The need to demonstrate completion of work
- The need to demonstrate due diligence for quality system related activities
- Balancing the cost and benefits of maintaining the record

2.11. PROJECT AUDIT PLAN

The Quality Manager identifies the frequency of project quality audit that will be conducted during the project and the job position that will conduct the audits. Considerations include:

- The size of the project
- The complexity of processes and their interactions
- The duration of the project



3. CONTRACT SPECIFICATIONS

DEFINE CUSTOMER QUALITY EXPECTATIONS

3.1. OVERVIEW

Fulfilling customer contract expectations is a primary objective of the HEI Quality System. To ensure that customer expectations will be fulfilled, HEI clearly defines the requirements for each contract before it is approved.

The Project Manager ensures that the information in customer contracts clearly defines customer expectations and that the necessary details are provided to set requirements for construction.

3.2. CONTRACT TECHNICAL SPECIFICATIONS

The Project Manager obtains contract technical specifications from the customer.

For each specific contract, The President identifies supplemental technical specifications on the Project Quality Assurance/Quality Control Plan when they are not otherwise specified by the contract or the approved drawings. Superintendents have jobsite access to contract technical specifications for the construction activities they supervise.

All HEI activities comply with the contract technical specifications.

3.3. CONTRACT DRAWINGS

The Project Manager obtains customer supplied drawings that have been approved by local government regulators. Superintendents have jobsite access to approved architectural drawings for the construction they supervise.

All HEI activities comply with the drawing details and specifications cited in the drawings.

3.3.1.1. AS-BUILT RED-LINE DRAWINGS

As the project progresses, the Superintendent will mark the original design drawings to indicate as-built conditions including changes to specified materials, dimensions, locations, or other features.

3.4. CONTRACT SUBMITTALS

The Quality Manager prepares submittals that provide additional details of how HEI plans to carry out quality-related aspects of the customer contract, contract technical specifications, and contract drawings and reporting of quality records to the customer.

The Quality Manager lists, schedules, and approves all quality-related submittals that are required by the project including submittals prepared by subcontractors and suppliers. The Quality Manager must review all submittals for compliance with the requirements of the HEI Quality System. The Quality Manager must sign approval of each contract submittal.

HEI extends compliance to contract specifications to all customer approved submittals. All HEI activities comply with customer approved submittals.



3.4.1. CONTRACT SUBMITTAL SCHEDULE

The Project Manager identifies submittals that apply to a specific contract and when they should be submitted, including:

- Contract requirement reference (if applicable)
- Submittal type: Shop drawing, product data, quality inspection and test plan, request for information, or allowances and unit prices
- Description
- Due date for submission to customer by HEI
- Due date for approval by the customer. Due dates may be a number of days after a project plan milestone.
- Approval date

3.4.2. SHOP DRAWING SUBMITTALS

The Project Manager or Purchasing and Estimating Manager prepare shop drawing submittals that supplement contract drawings. Shop drawings are required when additional details are necessary for fabrication or installation. The following information is included, as applicable:

- Dimensions established by field measurement
- Relationships to adjoining construction
- Identification of products and materials
- Fabrication and installation drawings
- Diagrams showing locations of field-installations
- Shop fabricated manufacturing instructions
- Templates and patterns
- Design calculations
- Compliance with specified standards
- Seal and signature of professional engineer if required
- Additional requirements as specified in the contract, contract technical requirements, or contract drawings.

HEI extends contract specifications to include customer approved shop drawings.

3.4.3. PRODUCT DATA SUBMITTALS

The Project Manager prepares product data submittals that consist of the manufacturer's product information. The information included in this submittal is:

- Manufacturer, trade name, model or type number
- Description
- Intended use
- Size and physical characteristics including drawings when applicable
- Finish and color characteristics
- Product manufacturer's installation instructions, when applicable
- Additional requirements as specified in the contract, contract technical requirements, or contract drawings.

3.4.4. ALLOWANCES AND UNIT PRICES SUBMITTALS

When customer contracts specify allowances and unit prices that the customer will select after the contract is awarded, the Project Manager prepares an allowance and unit price submittal for customer approval.



When a customer selects or approves an allowances and unit prices, the customer indicates the allowance and unit price selection on the signed submission return.

HEI extends compliance to contract specifications to customer approved allowances and unit prices.

3.4.5. REQUEST FOR INFORMATION (RFI) SUBMITTALS

The Project Manager submits a request for additional information to the customer when errors are found or when required information is not contained in the contract, contract technical specifications, or contract drawings.

Should any number of contract technical specifications or contract drawings result in conflicting requirements, the Quality Manager submits a request for information to the customer to select the standard that applies.

HEI extends compliance to contract specifications to customer requests for information.

3.4.6. CHANGE ORDER SUBMITTALS

Contract requirements or contract technical specifications may require a change after the contract is awarded. The Project Manager submits the change order to the customer for approval, including any contract price adjustments.

When a customer approves a change order, the customer signs the submission return.

HEI extends contract specifications to include customer approved change orders.

3.4.7. MOCK-UP SUBMITTALS

The Superintendent prepares mock-up submittals as required by contract. Additionally, the Quality Manager specifies mock-up requirements when they are necessary to ensure customer expectations are clearly identified.

The Quality Manager ensures that each mock-up demonstrates specific elements of form and/or function, and that they are specified in the submittal documents.

HEI extends contract specifications to include customer approved mock-up submittals.

3.5. CUSTOMER SUBMITTAL APPROVAL

The Project Manager obtains the signature of an authorized customer representative on the submittal form.

HEI extends compliance to contract specifications to customer approved submittals.

Work in the affected area of a pending submittal requirement does not start until the customer approves the submittal.

3.6. CONTRACT WARRANTY

The Project Manager ensures that customer contracts clearly specify warranty coverage including:

- Scope
- Starting date
- Duration



The Project Manager ensures that customer contracts also clearly specify owner responsibility for:

- Restrictions of use
- Maintenance requirements
- Exclusions for customer supplied materials or equipment
- Timely notification of problems

3.7. CONTRACT REVIEW AND APPROVAL

The President conducts customer contract reviews to ensure that:

- Customer requirements and specifications are complete
- Customer requirements and specifications are compatible with the relevant regulations, HEI quality standards, and Quality System requirements
- HEI has the capability to deliver the completed project in the time allotted

Before construction begins, the President makes sure that all contract requirements are clearly understood, all discrepancies are resolved, and all requirements are agreed upon. Once these requirements are met, the President signs the contract.



4. DESIGN REVIEW AND CONTROL

4.1. OVERVIEW

HEI ensures that the designs have well defined specifications, stakeholders have input as the designs progress, qualified personnel carry out the design work, and final designs are verified to meet all contract and regulatory requirements. Design control applies to architectural and engineering design. Process controls apply to approved designs that have additional detail provided by shop drawings, product selections, or requests for information.

4.2. DESIGN INPUT REVIEW

The Quality Manager ensures that the information in design inputs clearly defines customer expectations and that the necessary details are provided to set requirements for design.

The Quality Manager obtains design specifications from the customer and conducts a customer design input review to ensure that:

- Customer design input requirements and specifications are complete
- Design process review milestones are specified when necessary
- Customer design output requirements and specifications are complete for review milestones as well as the completed design
- Customer design requirements and specifications are compatible with the relevant regulations, HEI quality standards, and Quality System requirements
- HEI has the capability to deliver the completed design in the time allotted

The Quality Manager identifies supplemental design specifications that supplement customer specifications when they are needed to ensure a quality design.

Before design work begins, the Quality Manager makes sure that all design requirements are clearly understood, all discrepancies are resolved, and all requirements are agreed upon. Once these requirements are met, the Quality Manager approves the design input.

The Quality Manager ensures that design input documents are verified by qualified personnel. The person responsible must verify:

- Design input specification are approved by a customer authority
- Design input specifications are complete
- Design input requirements and specifications are compatible with the relevant regulations, HEI quality standards, and Quality System requirements
- HEI has the capability to deliver the completed project in the time allotted

4.3. PROJECT DESIGN QUALITY ASSURANCE/QUALITY CONTROL PLAN

The Quality Manager prepares a project-specific design review plan that includes:

- A listing of company and customer stakeholders, reviews they will participate in, and how their input will be used to amended design requirements. The project organization chart Includes interfaces between various groups and personnel for producing and reviewing the design.
- Design output deliverables, including required drawings, and engineering calculations
- Identification of who will perform design output verification activities and the criteria they will use.



- The Quality Manager reviews the design process project plan with the customer and other interested parties. The customer approves the plan after any discrepancies are resolved and the plan is agreed upon. Design work may begin only after the customer approves the plan.

4.4. DESIGN PROGRESS REVIEWS

The Quality Manager holds review meetings with interested parties at key design milestones. The Quality Manager identifies the key design milestones, the design output required for the review, and a list of reviewers.

Two design reviews are required: one is an input design review and the other is the final design review. The Quality Manager identifies other design reviews necessary to ensure a quality result. Design reviews may be specified at the completion of design work tasks, site assessments, preliminary engineering, preliminary design, percentage completion stages, and on a calendar schedule.

The Quality Manager identifies customer and company reviewers appropriate for each design milestone. Reviewers may include persons that have a stake in any of the following: quality, safety, constructability, scheduling, maintenance, purchasing, estimating, or cost control.

At each review, the Quality Manager reviews reviewer recommendations for amendments to the design specifications. The Quality Manager submits selected design amendments for customer approval. Customer approved design amendments are design requirements.

4.5. DESIGN OUTPUT VERIFICATION AND APPROVAL

The Quality Manager ensures that design output documents are verified by qualified personnel independent of the person performing the work. The person responsible must verify:

- The completed design meets requirements specified by the design input
- The completed design meets approved design amendments
- Engineering calculations are correct
- Completeness of records per the Design Project Quality Assurance/Quality Control Plan including inputs, reviews, communications, and verification activities.



5. PROJECT-SPECIFIC QUALITY STANDARDS

APPLICABLE REGULATIONS, INDUSTRY, and COMPANY STANDARDS

5.1. OVERVIEW

HEI personnel and subcontractors and suppliers are accountable for compliance to standards-based written specifications.

To achieve expectations reliably and consistently, specifications are clearly spelled out, not only for results but also for processes. Specifications apply to materials, work steps, qualified personnel and subcontractors and suppliers, safe work rules, and environmental work conditions.

Standards ensure that results are specified rather than left to discretionary practices.

5.2. REGULATORY CODES

All HEI construction activities comply with the relevant regulations. The Quality Manager identifies regulatory requirements applicable to the jurisdictions served, including:

- Applicable Federal regulations
- Applicable State regulations
- Applicable building codes and local addenda to building codes
- Applicable Fire Code
- Applicable Fuel and Gas Code
- Applicable Mechanical Code
- Applicable Plumbing Code
- Additional regulations specified by the customer contract

The Quality Manager identifies regulatory requirements that apply to a specific project on the Project Quality Assurance/Quality Control Plan.

The Superintendent had jobsite access to relevant codes and government regulations.

5.3. INDUSTRY QUALITY STANDARDS

All HEI construction activities comply with generally accepted good workmanship practices and industry standards.

The Quality Manager identifies supplemental requirements for industry standards that apply to a specific project on the Project Quality Assurance/Quality Control Plan when it is not otherwise specified by the contract, contract technical specifications, or approved drawings.

5.4. MATERIAL AND EQUIPMENT SPECIFICATIONS

The Quality Manager ensures that all types of materials and equipment that affect quality are identified and controlled.

The Quality Manager evaluates the expected use of materials and equipment and identifies types of materials and equipment that may affect project quality. For each item, the Quality Manager sets specifications for their intended use, including:



- Compliance to contract requirements
- Compliance to code and industry standards and listing requirements
- Structural integrity
- Performance
- Durability
- Appearance
- Product identification for traceability.

The Quality Manager identifies controlled material and equipment that apply to the project.

The Quality Manager ensures that purchase orders for listed materials and equipment include the relevant specifications as specified in section 6.7 Purchase Order Requirements.

Only approved materials are used in the construction process.

5.5. WORK PROCESS SPECIFICATIONS

The Quality Manager ensures that work processes are controlled to ensure that the specified requirements are met. When appropriate, the Quality Manager will specify project quality standards for work processes that may include:

- References to documented procedures such as manufacturer's installation instructions
- Procedures for carrying out process steps
- Methods to monitor and control processes and characteristics
- Acceptability criteria for workmanship
- Tools, techniques and methods to be used to achieve the specified requirements.

5.6. CONTROLLED MATERIAL IDENTIFICATION AND TRACEABILITY

The Quality Manager determines types of project materials that require quality controls.

For each type of quality controlled material, the Quality Manager determines lot control traceability requirements, if any, and specifies the means of lot identification. Identification methods may include physical labels, tags, markings and/or attached certification documents.

When lot controlled materials are received, the Superintendent verifies that materials have the specified lot identifications.

The Superintendent maintains lot identification at all production phases from receipt, through production, installation, or assembly, to final completion. Acceptable methods for preserving lot identification include physically preserving observable lot identifications, recording the lot identification on a work task quality inspection form or other work record, or collecting the physical lot identifier as a record along with supplemented with location.

If lot controlled materials are without lot identification, the Superintendent deems the materials as nonconforming and segregates them and/or clearly marks them to prevent inadvertent use. The Superintendent treats the material according to the company policy for nonconformances. Only the Quality Manager can re-identify or re-certify the materials.

5.7. MEASURING DEVICE CONTROL AND CALIBRATION

The Quality Manager evaluates the project requirements and determines if there are measuring devices that require controls to assure quality results.



For each type of device the Quality Manager identifies:

- Restrictions for selection
- Limitations on use.
- Calibration requirements including the frequency of calibration. All calibrations must be traceable to national measurement standards.

When a measurement device is found not to conform to operating tolerances, the Quality Manager validates the accuracy of previous measurements.

5.8. HEI QUALITY STANDARDS

HEI quality standards supplement contract requirements when they are necessary to ensure quality.

The Quality Manager identifies supplemental requirements for HEI Quality standards that apply to a specific project on the Project Quality Assurance/Quality Control Plan.

When HEI quality standards differ from industry standards or product manufacturer instructions, the Quality Manager justifies that the standard reliably achieves quality results and then documents the justification.

All HEI construction activities conform to the company quality standards.

5.9. APPLICATION OF MULTIPLE SOURCES OF SPECIFICATIONS

Should multiple sources of specifications apply to a work task, the higher level of specification applies.

When there are equal levels of specifications that conflict, the specifications are applied in this order:

- Submittals approved by the customer
- Contract technical specifications
- Contract drawings
- Government regulations that exceed requirements of items below
- HEI quality specifications, including subcontract specifications
- HEI Quality Manual
- Product installation instructions
- Industry standards
- Generally accepted practices

Should multiple sources of conflicting specifications apply to a project, the Quality Manager defines the standards that apply to the specific project on the Project Quality Assurance/Quality Control Plan.



6. PROJECT PURCHASING

SPECIFY and VERIFY Subcontractor and Supplier QUALITY CAPABILITIES

6.1. OVERVIEW

HEI verifies the qualifications of subcontractors and suppliers to ensure that they are capable of completely carrying out their assigned responsibilities. Quality requirements are defined, verified, and documented before they are approved for a project.

6.2. QUALIFICATION OF OUTSIDE ORGANIZATIONS AND COMPANY DEPARTMENTS

The Quality Manager qualifies outside organization and company work department capabilities to ensure that they are capable of completely carrying out their assigned quality responsibilities before approving and signing the contract, purchase order, or work order.

Subcontractors and suppliers must meet all Quality System requirements by either 1) working under the HEI Quality System or 2) operating their own quality program as long as it meets HEI Quality System requirements.

6.2.1.1. REQUIRED CREDENTIALS

The Quality Manager defines quality-related credentials for each project work task that affects quality including required:

- Organization and personnel licenses
- Personnel training
- Organization and personnel certifications
- Organization and personnel experience

6.2.1.1.1. INDEPENDENT LABORATORY CREDENTIAL REQUIREMENTS

Independent laboratories performing tests or quality inspections have additional requirements for certification by a nationally recognized testing accreditation organization as appropriate for the scope of the inspection or test:

- NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
- NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- The American Association of State Highway and Transportation Officials (AASHTO)
- International Accreditation Services, Inc. (IAS)
- U. S. Army Corps of Engineers Materials Testing Center (MTC)
- American Association for Laboratory Accreditation (A2LA) program

6.2.1.1.2. REQUIRED CAPABILITIES

- Senior person designated as Quality Manager
- Knowledge of Company quality standards
- Demonstrated capability to complete work to Company quality standards
- Demonstrated skills, knowledge, and experience
- Effective self-inspection process
- Access to codes, standards and product instructions
- Equipment availability



- Production capacity
- Demonstrated results

For critical components, the Quality Manager determines if a source quality inspection is necessary to validate supplier quality and delivery capabilities.

6.2.1.3. SUBCONTRACTORS AND SUPPLIERS AND COMPANY DEPARTMENT QUALIFICATION ASSESSMENTS

When the qualification assessment identifies minor nonconformances to the subcontract requirements, the Quality Manager may approve a provisional subcontract. The provisional subcontract supplements the subcontract with requirements for actions that address correction of the nonconformances. All nonconformances must be corrected before work in the affected area begins.

6.3. QUALITY RESPONSIBILITIES OF KEY SUBCONTRACTOR AND SUPPLIER PERSONNEL

A subcontractor senior officer is required to appoint a Subcontractor QC Manager and Superintendent to the project with specific quality responsibilities and authorities.

6.3.1. SUBCONTRACTOR QC MANAGER: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

The Subcontractor QC Manager is responsible for ensuring effectiveness of the Subcontractor QC Plan for the project. Regardless of other duties, the Subcontractor QC Manager is responsible for:

- Planning and fully implementing project quality controls required by the HEI quality systems and contract requirements
- Manage the operation of the Subcontractor QC Plan on the project.
- Implement and manage all phases of quality control
- Communicating project-specific quality requirements to all affected departments, subcontractors and suppliers and HEI
- Ensuring that the Subcontractor QC Plan is established and implemented by persons doing work that impacts quality
- Monitoring progress of activities
- Acting as the project quality liaison HEI on matters relating to quality
- Review and approval of all project Quality System records
- Review and approval of project quality-related contract submittals
- Managing all project inspection and quality control activities
- Controlling corrective actions
- Resolving quality nonconformances

The Subcontractor QC Manager has the authority to:

- Stop work when continuing work may adversely affect quality or cover up a defect
- Prevent the use of equipment or materials that may adversely affect quality or cover up a defect
- To direct the removal and replacement of any non-conforming work.
- Suspend work and/or supply of materials by any staff member, subcontractor personnel, or supplier as deemed necessary to assure quality results.

Alternate Subcontractor QC Managers acting in the role of the project Subcontractor QC Manager has the same quality duties, responsibilities and authority as the project Subcontractor QC Manager.

6.3.2. SUPERINTENDENT: QUALITY DUTIES, RESPONSIBILITIES, AND AUTHORITY

A Superintendent verifies that work conforms to HEI quality standards. President appoints one or more Superintendents for each project.



A Superintendent has specific responsibilities for:

- Ensuring that work meets government regulatory and code requirements, customer requirements, contract requirements, contract technical specifications, contract drawings, approved contract submittals, and company quality standards and specifications
- Ensuring that subcontractors and suppliers begin work in accordance with HEI start-work policies
- Ensuring that subcontractors and suppliers receive a notice to work only when conditions will not adversely affect quality results
- Conducting quality inspections, tests, and recording findings
- Accurately assessing subcontractor quality and on-time performance
- Ensuring that quality standards are achieved before approving subcontractor or work crew completion of work

The Superintendent has the authority to:

- Stop work when continuing work may adversely affect quality or cover up a defect
- Prevent the use of equipment or materials that may adversely affect quality
- Direct the removal or replacement of any non-conforming work, equipment, or material
- Suspend work and/or supply of materials as deemed necessary to assure quality results

Alternate Superintendent has the same quality duties, responsibilities and authority as the Superintendent.

Multiple Superintendents may be assigned to the project.

6.4. REQUIREMENTS FOR SUBCONTRACTOR QC PLAN

The Subcontractor QC Plan extends the HEI Quality Assurance/Quality Control Plan into the subcontractor operations. The Quality Manager identifies key subcontractors and suppliers that require a Subcontractor QC Plan.

The Quality Manager must approve the Subcontractor QC Plan before the subcontractor can begin work.

Subcontractors and suppliers that do not require a Subcontractor QC Plan work under the HEI Subcontractor QC Plan.

6.5. SUBCONTRACTOR AND SUPPLIER QUALITY POLICY

The Quality Manager ensures that key subcontractors and suppliers adopt a quality policy that includes the following items:

Our objective is to safely deliver 100 percent complete construction work that meet all contract and HEI Quality Assurance/Quality Control Plan requirements the first time, every time. Our commitment to quality means:

- Compliance with HEI Quality Assurance/Quality Control Plan requirements.
- Compliance for fully implementing and complying with all provisions of this Subcontractor QC Plan.
- Our quality standards meet or exceed all applicable regulations, codes, industry standards, and manufacturer specifications as well as with our customers' contract and individual requirements.
- We ensure that only knowledgeable, capable, and qualified employees carry out the planning, execution, and control of our work.
- We stand behind our work. We conduct a series of quality inspections for each work task: before work begins, at first article completion, while work is in process, and at completion.
- We inspect all materials before use.



- Should problems be found, we prevent them from cover-up, inadvertent use, and then quickly correct them.
- We are always improving. We make systematic improvements to remove quality risks and enhance quality performance.

We conduct our work with dignity and respect for the customer, our subcontractor partners, and ourselves.

6.6. PROJECT SUBCONTRACTOR AND SUPPLIER LIST

The Quality Manager identifies key subcontractors and suppliers for each project work task on the Project subcontractor and supplier List form.

Each selected supplier must be previously qualified as specified in section 6.2 Qualification of Outside Organizations and Company Departments.

The selected suppliers are listed on the Project subcontractor and supplier List form.

6.7. PURCHASE ORDER REQUIREMENTS

The Project Manager ensures that materials, equipment and services are purchased only from the supplier listed on the Project Subcontractor and Supplier List form (see section 6.6 Project Subcontractor and Supplier List.)

The Project Manager holds outside organizations to the same quality requirements that must be met by HEI. The Project Manager ensures that subcontracts and purchase orders clearly specify quality requirement expectations including:

- Conformance to the HEI Quality System or the subcontractor's own quality program as long as it meets HEI Quality System requirements.
- Conformance to contract specifications (Section 3 Contract Specifications)
- Conformance to project quality standards (Section 5 Project-Specific Quality Standards)
- Quality Management practices including
 - Performance of self-inspections.
 - Control of quality non-conformances and responsive corrections
 - Prevention of non-conformances
 - Controls that ensure completion of post-construction service work
 - Participation in quality training
- Preparation of submittals
- Participation in project planning meetings
- Participation in work task planning meetings
- Handling, storage, packaging, and delivery, as applicable
- Product or material identification for traceability

6.8. PROJECT PURCHASE ORDER APPROVALS

The Project Manager ensures that contracts and purchase orders are issued only to qualified outside organizations. The Project Manager must review, approve, and sign each purchase order.

The outside organization must agree to the purchase order terms and specifications, and then sign the contract or purchase order.



7. PROCESS CONTROLS

HOW WORK IS CARRIED OUT

7.1. OVERVIEW

The construction process plan defines how project work is to be done and approved for the overall project. The construction process plan is communicated to all key personnel, subcontractors and suppliers in a startup meeting. As the project proceeds, work task plans provide additional details of how each individual work task is carried out. Work tasks planning meetings are used to communicate expectations of the work task plan to key personnel responsible for carrying out the work task.

7.2. PROJECT STARTUP AND QUALITY CONTROL COORDINATION MEETING

Prior to the commencement of work, the Project Manager holds a meeting to discuss and coordinate how project work will be performed and controlled. Key personnel from HEI, subcontractors and suppliers meet to review expectations for project quality results as well as quality assurance and quality control policies and procedures including:

- Key requirements of the project
- The Project Quality Assurance/Quality Control Plan
- Required quality inspections and tests
- The project submittal schedule
- Quality policies and heightened awareness of critical quality requirements
- Project organization chart and job responsibilities
- Methods of communication and contact information
- Location of project documents and records

7.3. PREPARATORY PROJECT QUALITY ASSURANCE/QUALITY CONTROL PLAN PLANNING

7.3.1. WORK TASK REQUIREMENTS REVIEW

In preparation for the start of an upcoming work task, the Superintendent reviews an integrated and coordinated set of documents that collectively define quality requirements for the work task including:

- Objectives and acceptance criteria of the work task
- Quality standards that apply to the work task
- Work instructions, process steps, and product installation instructions that apply to the work task
- Shop drawings
- Submittals
- Tools and equipment necessary to perform the work
- License, certification, or other qualification requirements of personnel assigned to work
- Required records of the process and resulting product
- The subcontractor contracted to perform the work, if applicable
- Customer contract requirements
- Required quality inspections and tests
- Method for clearly marking nonconformances to prevent inadvertent use
- Location of quality system records and documents
- Personnel training



7.3.2. PREPARATORY SITE INSPECTION

The Superintendent also performs a quality inspection of the work area and:

- Assesses completion of required prior work
- Verifies field measurements
- Assures availability and receiving quality inspection status of required materials
- Identifies any nonconformances to the requirements for the work task to begin
- Identifies potential problems

7.3.3. WORK TASK PREPARATORY QUALITY PLANNING MEETINGS

Prior to the start of a work task, the Superintendent conducts a meeting with key company, subcontractor personnel responsible for carrying out, supervising, or inspecting the work, and interested customer representatives.

During the meeting, the Superintendent communicates the work task quality requirements and reinforces heightened awareness for critical requirements. Topics for a work task quality plan meeting include:

- Conflicts that need resolution
- Required quality documents and a verification of availability to personnel carrying out, supervising, or inspecting the work task
- Record keeping requirements and the availability of necessary forms
- Review methods and sequences of installation
- Special details and conditions
- Standards of workmanship
- Heightened awareness of critical quality requirements
- Quality risks
- Work tasks quality inspection form

7.4. WEEKLY QUALITY PLANNING AND COORDINATION MEETINGS

The Superintendent conducts a meeting with key company, subcontractor and supplier personnel responsible for carrying out, supervising, or inspecting the work, and interested customer representatives.

The meeting is held on a nominal weekly schedule. During the meeting, the Superintendent facilitates coordination among the participants, communication among the participants, and reinforces heightened awareness for critical requirements.

The Superintendent maintains a record of the meeting event on the Daily Quality Control Report.

7.5. PROCESS CONTROL STANDARDS

7.5.1. JOB-READY START WORK STANDARDS

Work on a work task starts only when conditions do not adversely impact quality, comply with government regulations, contract technical specifications, industry standards, or product installation instructions.

The Quality Manager identifies supplemental start-work requirements that apply to a specific project when they are necessary to assure quality results.

7.5.2. WORK IN PROCESS STANDARDS



Work is conducted only when conditions do not adversely impact quality, comply with government regulations, contract technical specifications, industry standards, or product installation instructions.

The Quality Manager identifies supplemental work in process requirements that apply to a specific project when they are necessary to assure quality results.

7.5.3. PROTECTION OF COMPLETED WORK STANDARDS

Completed work is protected from damage as specified by government regulations, contract technical specifications, industry standards, or product installation instructions.

The Quality Manager identifies supplemental protection requirements that apply to a specific project when they are necessary to assure quality results.

7.5.4. MATERIAL STORAGE

The Superintendent ensures all materials will be delivered, stored and handled in a manner that protects them from damage, moisture, dirt and intrusion of foreign materials.

Delivery of materials will be planned according to the work progress to minimize storage on site, where there are higher possibilities of damages and deterioration of materials.

Stored materials will be segregated to prevent cross contamination and limit losses should a delivery be rejected.

The Superintendent surveys stored materials during daily jobsite reviews and identifies any material that have incurred damage or otherwise become defective and therefore unfit for use.

7.5.5. CONTROLLED USE OF MATERIALS

The Project Manager ensures that contracts and purchase orders are awarded only to outside organizations qualified to perform the work task and/or supply materials as required for the specific project.

Only approved materials are used in the construction process. Only approved materials are specified in purchase and/or subcontracts.

Materials that are defective, deteriorated, damaged, or not approved are not used. The Superintendent clearly marks such materials for non-use or otherwise holds them aside.

When customer-supplied materials are lost, damaged, or otherwise found unsuitable for use, the Superintendent reports such findings to the customer.

When subcontractor-supplied materials are damaged or otherwise found unsuitable for use, the Superintendent reports such findings to the subcontractor.

The Superintendent ensures that construction uses only materials specified in the contract technical specifications, contract drawings, and approved submittals. Substitutions are made only by agreement of the customer and documented by a change order (see section 2.1.3.6).

7.5.5.1. CONTROLLED PRODUCT USE AND INSTALLATION

HEI construction activities conform to manufacturers' product use and installation instructions that apply to the construction process.



When installing a product, the Superintendent has access to all applicable product installation instructions.

7.6. DAILY QUALITY CONTROL REPORT

The Superintendent records a summary of daily work activities. The report will include:

- Schedule Activities Completed
- General description of work activities in progress.
- Problems encountered, actions taken, problems, and delays
- Meetings held, participants, and decisions made
- Subcontractor and Supplier and Company Crews on site
- Visitors and purpose
- General Remarks
- Improvement Ideas
- Weather conditions

7.7. MONTHLY QUALITY CONTROL REPORT

When a monthly quality control report is required by the Project Quality Plan, the Superintendent records a monthly status report. The report includes:

- A summary of work completed and work in progress
- Outstanding issues
- Issues resolved during the reporting period
- Outstanding potential change orders
- Project status with current project costs and estimated completion date
- A cost analysis summarizing actual costs to date and estimated future costs
- Project pictures as appropriate



8. INSPECTIONS AND TESTS

ASSURE COMPLIANCE

8.1. OVERVIEW

Inspections are necessary to verify that work processes and results conform to both contract requirements and HEI quality standards.

Qualified personnel inspect every project throughout the construction process. Additional reviews validate the accuracy of the field quality inspections and ensure that the quality standards apply uniformly.

An inspection and test plan defines the quality inspections and tests required for a specific project.

Personnel may only inspect work activities for which they have been qualified by the Quality Manager.

8.2. REQUIRED WORK TASK QUALITY INSPECTIONS AND TESTS

The Quality Manager identifies each Task that is a phase of construction that requires separate quality controls to assure and control quality results. Each Task triggers a set of requirements for quality control inspections before, during and after work tasks.

Tasks are divided into two categories:

- Discrete Tasks are standard type of work where a completion inspection is performed one time at the completion of a phase of work.
- Process Tasks are tasks where completion inspections are performed continuously. Continuous inspections are required when there is a limited window of time to perform a completion inspection before the next task begins. Process tasks may also be characterized by independent monitoring of a work process, such as welding, where the observer verifies conformance to work procedures.

Process tasks undergo additional quality controls that continuously monitor compliance to specifications.

Independent quality audits are conducted to verify that the task quality controls are operating effectively.

Construction projects may execute a work task multiple times in a project, in which case a series of quality inspections are required for each work task.

8.3. MATERIAL INSPECTIONS AND TESTS

Material quality inspections and tests ensure that purchased materials meet purchase contract quantity and quality requirements. The Superintendent inspects or ensures that a qualified inspector inspects materials prior to use for conformance to project quality requirements.

The Superintendent ensures that each work task that uses the source inspected materials proceed only after the material has been accepted by the material quality inspection or test.

8.3.1.1. SOURCE INSPECTIONS



Source quality inspections are required when quality characteristics cannot or will not be verified during subsequent processing. The Quality Manager determines if a source inspection is necessary to validate supplier quality before materials are delivered to the project jobsite.

The Superintendent ensures that each work task that uses the source inspected materials proceed only the material has been accepted by the source inspection.

8.4. WORK IN PROCESS INSPECTIONS

Work in process quality inspections continuously verify compliance project quality standards beginning at the start of a work task, as work is conducted, and continues until the work task is complete.

8.4.1.1. INITIAL JOB-READY INSPECTIONS

For each work task, the Superintendent or a qualified inspector performs job-ready quality inspections to ensure that work activities begin only when they should begin. Job-ready quality inspections verify that conditions conform to the project quality requirements.

8.4.1.2. INITIAL WORK IN PROCESS INSPECTION

For each work task, the Superintendent or a qualified inspector performs an initial work in process inspection when the first representative portion of a work activity is completed.

8.4.1.3. FOLLOW-UP WORK IN PROCESS INSPECTIONS

The Superintendent or a qualified inspector performs ongoing work in process quality inspections to ensure that work activities continue to conform to project quality requirements. Punch Items

If the Superintendent or inspector observes an item for correction prior to a work task completion inspection, the item is identified for correction. During the work task completion inspection each punch item correction is verified.

Any outstanding punch items remaining after the work task completion inspection is deemed a nonconformance.

8.4.2. ADDITIONAL INSPECTION REQUIREMENTS FOR PROCESS TASKS

For each process task, a qualified person inspects the ongoing completion work for conformance to project quality requirements. This is in addition to discrete task completion inspections that are performed one time at the end of a phase of work.

The continuous monitoring inspections are conducted before starting other work activities that may interfere with an inspection.

8.5. WORK TASK COMPLETION INSPECTIONS

For each work task, the Quality Manager or a qualified inspector inspects the completion of each work task to verify that work conforms to project quality requirements.

Completion quality inspections are performed for each work task. Completion quality inspections are conducted before starting other work activities that may interfere with an inspection.

Any outstanding punch items remaining after the work task completion inspection is deemed a nonconformance.



8.6. INSPECTION OF SPECIAL PROCESSES

The Quality Manager identifies special processes where the results cannot be verified by subsequent inspection or testing and determines if continuous work in process inspections are required. For these special processes, a qualified inspector continuously inspects the work process.

8.7. INDEPENDENT MEASUREMENT AND TESTS

The Quality Manager ensures that quality tests that apply to a specific project are clearly identified. Tests for a project include:

- Customer required quality tests as specified by the contract, contract technical specifications, contract drawings, and approved submittals.
- Additional quality tests necessary to assure quality results.

8.8. COMMISSIONING FUNCTIONAL ACCEPTANCE TESTS

A functional test is performed on each functional system. A qualified inspector performs functional acceptance tests to verify that a system meets predetermined acceptance criteria including:

- The equipment and systems operate as intended
- The equipment and systems perform as intended
- Documentation for operation and maintenance is complete

Each functional test has a documented testing procedure that includes:

- Step-by-step work instructions for conducting the test
- Data recording requirements
- Acceptance criteria
- A determination of pass or fail

8.9. HOLD POINTS FOR CUSTOMER INSPECTION

The Superintendent stops work when reaching a hold point specified on the inspection and test plan. The Superintendent ensures that work proceeds only with customer approval.

8.10. QUALITY INSPECTION AND TEST SPECIFICATIONS

Specifications for each inspection or test are clearly understood before the inspection or test is performed including:

- Items to be inspected/tested
- Inspections/tests to be performed
- Testing schedule frequency
- Specification references including contract drawing identification number and version, if applicable, and/or contract technical specification number and version, if applicable
- Performing party
- Witness parties
- Certificates required
- Checklists/procedures
- Reference standards

8.11. INSPECTION AND TEST ACCEPTANCE CRITERIA



Inspections assess conformance of materials or work for each work task to project quality requirements, including applicable:

- Contract technical specification
- Contract drawings
- Approved shop drawings
- Approved product submittals
- Approved allowances and unit prices
- Product identification requirements
- Approved submittals
- HEI quality standards

The material or completed work task is accepted only when it meets all project quality requirements.

8.12. INSPECTION AND TEST STATUS

The status of each quality control inspection or test is clearly marked by tape, tag, or other easily observable signal to ensure that only items that pass quality inspections is accepted.

For each quality controlled work task, the Quality Manager determines the appropriate method of identification to show inspection and test status.

For each quality controlled material, the Quality Manager determines the appropriate method for identifying quality inspection and test status.

8.13. INDEPENDENT QUALITY ASSURANCE INSPECTIONS

The Quality Manager and/or qualified inspectors perform independent quality assurance inspections that verify that task quality controls are operating effectively.

The Quality Manager selects a representative portion of task completion inspections performed by the Superintendent. Those tasks are independently inspected by the Quality Manager and/or qualified inspectors. The findings are compared to the findings of the inspections performed by the Superintendent. Any deviations are addressed by corrective actions and preventive actions as necessary.

8.14. INSPECTION AND TEST RECORDS

8.14.1. INSPECTION RECORDS

The Quality Manager prepares an inspection form for each work task. The Quality Manager lists on the form checkpoints for heightened awareness including:

- Initial job-ready inspection requirements
- Inspection and tests
- Work in process inspection requirements
- Completion quality inspections
- Other quality requirements as necessary to reduce quality risks

The person responsible for the inspection, records work task inspection results on the work task inspection form.

8.14.2. TEST RECORDS

Test result data include as appropriate:



- Reference to the inspection and test plan item
- Description or title of the inspection activity
- Drawing identification number and version, if applicable
- Technical specification number and version, if applicable
- Location of the inspection activity
- Acceptance criteria
- Nonconformances
- Validation that nonconformances are corrected, reinspected or retested, and confirmed to meet Quality System requirements.
- Any open items to be completed at a later date.
- Inspector's name and signature indicating compliance with all requirements of the Quality System
- Quality rating scores as appropriate
- Date of inspection or test
- Certificate, if applicable
- Conspicuous statement of final result as either "CONFORMS" or "DOES NOT CONFORM"

8.15. PROJECT COMPLETION AND CLOSEOUT INSPECTION

8.15.1. PRE-FINAL HEI INSPECTION

Near the end of the project, or a milestone established in the Project Quality Inspection and Test Plan, the Quality Manager will inspect the completed project and verify conformance to contract specifications.

The Quality Manager records nonconforming items.

The Superintendent assigns a planned date by which the deficiencies will be corrected. The date may be assigned for all items or individual items as necessary. After corrections have been made, the Superintendent verifies the completion of each item.

Then the Quality Manager conducts a follow-up inspection and verifies that all nonconforming items have been corrected to meet contract specifications. Any remaining deficiencies are recorded and managed as nonconformances.

When the pre-final HEI inspection process is complete, the Quality Manager then notifies the customer that the project is ready for the customer's final inspection. The customer is also notified of any remaining nonconformances and their planned resolution.

8.15.2. PRE-FINAL CUSTOMER INSPECTION

If the customer performs a pre-final inspection, the Quality Manager records nonconforming items and assigns a planned date by which the deficiencies will be corrected.

The Superintendent assigns a planned date by which the deficiencies will be corrected. The date may be assigned for all items or individual items as necessary. After corrections have been made, the Superintendent verifies the completion of each item.

After corrections have been made, the Quality Manager will conduct a follow-up inspection and verify that all nonconforming items have been corrected to meet contract specifications. Any remaining deficiencies are recorded and then managed as nonconformances.



When the pre-final customer inspection process is complete, the Quality Manager then notifies the customer that the project is ready for the customer's Final inspection. The customer is also notified of any remaining nonconformances and their planned resolution.

8.15.3. FINAL ACCEPTANCE CUSTOMER INSPECTION

If the customer performs a final inspection, the Quality Control Manager, Superintendent, and Project Manager will participate in the inspection. The Quality Manager records nonconforming items and assigns a planned date by which the deficiencies will be corrected. The date may be assigned for all items or individual items as necessary. After corrections have been made, the Superintendent verifies the completion of each item.

After corrections have been made, the Quality Manager will conduct a follow-up inspection and verify that all nonconforming items have been corrected to meet contract specifications. Any remaining deficiencies are recorded managed as nonconformances.

When the final customer inspection process is complete, the Quality Manager then notifies the customer that the project is ready for the customer's follow-up verification. The customer is also notified of any remaining nonconformances and their planned resolution.



9. NONCONFORMANCES AND CORRECTIVE ACTIONS

9.1. OVERVIEW

Should a nonconformance be identified by an inspection there is a systematic method to control the item, correct it, and ensure that project quality is not adversely impacted by the event.

A nonconformance is any item that does not meet project specifications or HEI Quality System requirements.

9.2. NONCONFORMANCES

9.2.1. MARKING OF NONCONFORMANCES AND OBSERVATIONS

When the Quality Manager, Superintendent, inspector, or customer identifies a nonconformance or an observation, the item is quickly and clearly marked by tape, tag, or other easily observable signal to prevent inadvertent cover-up.

9.2.2. CONTROL THE CONTINUATION OF WORK

After the item is marked, the Superintendent determines if work can continue in the affected area:

CONTINUE WORK: When continuing work does not adversely affect quality or hide the defect, work may continue in the affected area while the disposition of the item is resolved. The Superintendent may place limitations on the continuation of work.

STOP WORK ORDER: When continuing work can adversely affect quality or hide the defect, work must stop in the affected area until the disposition of the item resolved. The Superintendent identifies the limits of the affected area. The Superintendent quickly and clearly identifies the boundaries of the stop work area.

9.2.3. NONCONFORMANCE REPORT

9.2.3.1. RECORDING OF NONCONFORMANCES

If nonconformances or observed items exist by the work task completion inspection, the Superintendent or inspector records the nonconformances on a nonconformance report.

The Superintendent sends the nonconformance report to the Quality Manager.

9.2.3.2. QUALITY MANAGER DISPOSITION OF NONCONFORMANCE REPORTS

When the Quality Manager receives a Nonconformance Report, he or she makes an assessment of the affect the reported nonconformance has on form, fit, and function. The Quality Manager may assign a disposition of either:

REPLACE: The nonconformance can be brought into conformance with the original specification requirements by replacing the nonconforming item with a conforming item.

REPAIR: The nonconformance can be brought into conformance with the original requirements through completion of required repair operations.

REWORK: The nonconformance can be made acceptable for its intended use, even though it is not restored to a condition that meets all specification requirements. The Quality Manager may specify



standards that apply to the completion of rework. Rework nonconformances must be approved by the customer.

USE AS-IS: When the nonconforming item is satisfactory for its intended use. Any use as-is items that do not meet all specification requirements must be approved by the customer.

9.2.4. CORRECTION OF NONCONFORMANCES

The Superintendent verifies that corrective actions eliminate the nonconformance to the requirements of the original specifications or as instructed by the disposition of the nonconformance report, and then removes, obliterates, or covers the nonconformance marker.

Furthermore, the Superintendent ensures that previously completed work is reinspected for similar nonconformances and corrective actions are taken to avert future occurrences (see section 9.3 Corrective Actions).

9.3. CORRECTIVE ACTIONS

9.3.1. CONTROL OF CORRECTIVE ACTIONS

When a nonconformance is found, the Superintendent ensures that:

- Previously completed work is reinspected for similar nonconformances
- Corrective actions are taken to avert future occurrences

The Quality Manager identifies requirements for corrective actions with respect to frequency, severity, and detectability of quality nonconformances items found during and after completion of work activities.

When a solution requires changes to HEI quality standards, the Quality Manager makes modifications as necessary by making changes to:

- Material specifications
- Personnel qualifications
- Subcontractor and Supplier qualifications
- Company standards
- Inspection processes

9.3.2. CORRECTIVE ACTION TRAINING

The Superintendent initiates corrective action training to address quality nonconformances. Personnel and subcontractors and suppliers performing or inspecting work participate in the training.

Heightened awareness during quality inspections verifies and documents compliance with the corrective action improvement items. A qualified Superintendent inspects corrective actions during regular quality inspections and records observations on the quality inspection form.

The Superintendent notifies affected subcontractors and suppliers of selected preventive action training requirements.

The Superintendent evaluates the effectiveness of the improvements. The Quality Manager reviews improvement results recorded on quality inspection records and monthly field reviews. When the Quality Manager determines that the improvement actions are effective, the item is no longer treated as a preventive action.



10. PREVENTIVE ACTIONS

PREVENT NONCONFORMANCES

10.1. OVERVIEW

Fixing problems found during quality inspections is not sufficient. Systematic prevention of recurrences is essential for improving quality.

HEI makes changes to solve the problem. Solutions may involve a combination of enhanced process controls, training, upgrade personnel qualifications, improved processes, or use of higher-grade materials.

Follow-up ensures that a problem is completely resolved. If problems remain, the process is repeated.

10.2. IDENTIFY PREVENTIVE ACTIONS FOR IMPROVEMENT

The Quality Manager identifies preventive action improvement priorities with respect to frequency, severity, and detectability of quality correction items found during and after completion of work activities. The Quality Manager also reviews company quality performance and customer feedback.

More specifically, the Quality Manager assesses:

- Customer corrective items
- Superintendent quality inspection results
- Code official inspection results
- Post-construction service
- Management field reviews
- Annual system review
- Customer satisfaction surveys

The Quality Manager documents quality items requiring preventive action improvement.

The Quality Manager leads the company in finding solutions to address the causes of problems.

When a solution requires changes to HEI quality standards, the Quality Manager makes modifications as necessary by making changes to:

- Material specifications
- Personnel qualifications
- Subcontractor and Supplier qualifications
- Company standards
- Inspection processes

10.3. TRAIN PREVENTIVE ACTIONS FOR IMPROVEMENT

The Quality Manager initiates preventive action training to address quality improvement items. Personnel and subcontractors and suppliers performing or inspecting work participate in the training.

Heightened awareness during quality inspections verifies and documents compliance with the preventive action improvement items. A qualified Superintendent inspects hotspots during regular quality inspections and records observations on the quality inspection form.



The Quality Manager notifies affected subcontractors and suppliers of selected preventive action training requirements.

The Quality Manager evaluates the effectiveness of the improvements. The Quality Manager reviews improvement results recorded on quality inspection records and monthly field reviews. When the Quality Manager determines that the improvement actions are effective, the item is no longer treated as a preventive action.



11. QUALITY SYSTEM AUDITS

AUDITS and IMPROVEMENT

11.1. OVERVIEW

Audits ensure that the elements of the HEI Quality System are functioning as intended.

11.2. PROJECT QUALITY SYSTEM AUDIT

The Quality Manager conducts monthly Project Quality System audits that verify proper operation of the Quality System on a project. At least monthly, the Quality Manager audits:

- Quality system framework
- Quality system management and responsibilities
- Customer contract specifications
- Design control
- Project-specific quality standards
- Project purchasing
- Process control plans
- Inspections and tests
- Nonconformances and corrective actions
- Preventive actions
- Quality records and documents

The Quality Manager takes corrective actions to ensure compliance with Quality System requirements. The effectiveness of changes is then evaluated and documented.

Requirements for managing audit nonconformances are addressed in section 9.2 Nonconformances.

11.3. COMPANY-WIDE QUALITY SYSTEM AUDIT

At least annually, the Quality Manager audits the suitability and effectiveness of the HEI Quality System.

The audit assesses:

- HEI quality improvement activities
- Customer performance evaluations and satisfaction measurement results
- Quality performance measures
- Monthly field reviews
- Internal and external Quality Audit results
- Process performance and product conformance results
- Preventive and corrective action status
- Follow up on actions from previous Management Reviews
- Other changes (i.e. business climate, scope of work changes, etc.) that could affect the Quality System

Changes are initiated to improve Quality System performance. The Quality Manager documents Quality System changes in the HEI Quality Assurance Manual, initiates needed improvements, and assesses their effectiveness.



12. RECORD AND DOCUMENT CONTROLS

12.1. OVERVIEW

HEI ensures that quality related documents and records are created, current versions are in use, complete, identifiable, and stored properly.

12.2. QUALITY SYSTEM DOCUMENTS

12.2.1. QUALITY MANUAL

The Quality Manager maintains the HEI Quality Manual that documents HEI quality policies. Each policy identifies the titles of personnel responsible.

The Quality Manager ensures that the Quality Manual and documents related to a work task are accessible to personnel performing the work.

The Quality Manager maintains, improves, and updates the manual as necessary. At least annually, the Quality Manager determines if updated versions of standards and product installation instructions are available. If so, the Quality Manager updates the Quality System documentation accordingly.

12.3. DOCUMENT CONTROLS

The President controls all company-wide quality system documents including:

- Approval of all quality system documents and for adequacy prior to issue or reissue.
- Ensures that applicable documents are available and usable at points of use
- Prevents unintended use of obsolete documents

The Quality Manager controls project-specific quality system documents including:

- Approval of all project quality documents and for adequacy prior to issue or reissue.
- Ensures that applicable documents are available and usable at points of use
- Prevents unintended use of obsolete documents

12.3.1. CONTROL OF SYSTEM DOCUMENTS

The Quality Manager controls documents related to the HEI Quality System including:

- Quality System Manual
- Quality System Procedures
- Project Management Procedures (including interface and coordination with customers and regulatory agencies with jurisdiction over jobsites)
- Government regulations
- Industry standards
- Procurement specifications

The Quality Manager ensures that records of the distribution of Quality System documents are kept. When new versions are distributed, obsolete versions are destroyed or controlled to prevent inadvertent use.

12.3.2. CONTROL OF PROJECT DOCUMENTS

The Project Manager controls documents related to specific customer contracts including:



- Customer contracts
- Contract technical specifications
- Contract drawings
- Shop drawing submittals and approvals
- Product data submittals and approvals
- Allowances and unit price submittals and approvals
- Requests for information and customer responses
- Subcontracts
- Inspection and test plans

12.4. RECORD CONTROLS

The Quality Manager verifies records for conformance to the Quality System Requirements and approves all Quality System records.

Records demonstrating conformance with and operation of the Quality System are retrievable for at least five years. The Quality Manager verifies records for conformance to the Quality System Requirements.

12.4.1. QUALITY SYSTEM RECORDS CONTROL

The Quality Manager verifies the completeness, accuracy, and retention of project-specific Quality System records including:

- Annual reviews
- Quality improvement records

12.4.2. PROJECT RECORDS CONTROL

The Quality Manager verifies the completeness, accuracy, and retention of project-specific Quality System records including:

- Inspection and test records
- Quality submittals to the customer
- Project quality system audits
- Field reviews
- Calibration certificates
- Daily log reports
- Incident reports
- Redline drawings
- Qualified personnel approvals
- Qualified subcontractor approvals
- Quality improvement records
- Project Quality records specified by customer contract, or contract technical specifications

The Quality Manager assigns record control responsibilities and document location that apply to a specific project.



13. APPENDIX

13.1. DEFINITIONS OF TERMS

Acceptance - The process of deciding, through inspection, whether to accept or reject a product.

Audit – An audit determines if the quality system is performing as documented and whether the quality system is implemented. An audit consists of a systematic and objective examination to determine whether quality management activities and associated results comply with planned arrangements, and whether these arrangements are implemented effectively and suitably to achieve set objectives.

Certification - Statements by inspectors, officials, engineers, or product manufacturers attesting that product, system or material meets stated specification requirements.

Conformance – An item meets the requirements of relevant specifications, contracts or regulations; also the state of meeting the requirements.

Contract Project Quality Assurance/Quality Control Plan – See Project Quality Assurance/Quality Control Plan.

Corrective Action – a specific action to resolve a known condition or conditions, which adversely affect quality. Corrective Action must address remedial action to correct the known discrepancy whereas preventive action prevents recurrence based on the identified root cause.

Definable feature of work – See Task.

Design Data - Calculations, mix designs, analyses or other data pertaining to a part of work.

Disposition – A statement describing the manner in which a nonconformance is to be resolved.

Experienced - When used with an entity or individual, "experienced" means having successfully completed work similar in nature, size, and extent.

Feature of Work – See Task.

FOW – Feature of Work

Inspection and Test Plan – A record of requirements, frequency and responsibilities for activities such as measuring, examining, testing and gauging one or more characteristics of a product or service, and comparing the results with specified requirements to determine conformity to the Contract Specification. Inspections and tests are detailed in the applicable procedures and results recorded on forms appended to these procedures.

Inspection - The act of examining, measuring, or testing to determine the degree of compliance with requirements.

ISO 10005 – an international standard titled *“Quality Management – Guidelines for Quality Plans”* that specifies required elements of a project-specific quality plan.

ISO 9001 – an international standard titled *“Quality Management System – Requirements”* that specifies required elements of a quality management system.

Mock-up Sample – an assembly or portions of an assembly constructed on the project site that establishes standards by which the ensuing work can be judged. Mockups are constructed to verify selections made under sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials



and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples.

Nonconformance – Non-fulfillment of a specification which affects form, fit or function and renders the quality of an item or service unacceptable or indeterminate in regard to meeting all relevant specifications. Examples of nonconformance include: physical defects, test failures, incorrect or inadequate documentation or deviation from prescribed processing, inspection or test procedures.

Non-conformance Report – A record of the identification, and resolution of a nonconformance.

Product Data - Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance and other characteristics of materials, systems or equipment for some portion of the work.

Observation – Feedback provided to work crews for the purposes of heightened awareness of an item that if not addressed by a completion inspection may result in a nonconformance.

Procedure -- Specified way to perform an activity.

Product Samples - Physical examples of materials, equipment or workmanship that illustrate functional and aesthetic characteristics of a material or product and establish standards by which the work can be judged. Color samples from the manufacturer's standard line (or custom color samples if specified) to be used in selecting or approving colors for the project

Project – Unique process consisting of a set of coordinated and controlled activities with start and finish dates, undertaken to achieve an objective conforming to specific requirements, including the constraints of time, cost and resources.

Project Quality Assurance/Quality Control Plan - A document setting out the specific quality objectives, practices, resources and sequence of activities relevant to a particular Contract or project.

Quality Assurance - Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed work will comply with requirements.

Quality Audit - A formal review/investigation to determine whether the quality characteristics of a product or service meet the defined quality criteria.

Quality Control – the performance of tasks which ensure that work is performed according to plans and specifications

Quality Manual – Documents consisting of HEI policies for quality management methods instituted as a company. Standard operating procedures supplement the quality manual policies with work steps. This manual is copyright 2011 Caldrea Quality. Forms are also part of this manual with step by step instructions.

Records - Documentary evidence of the specification of individual items, standards of work, and compliance with the Quality Management System requirements.

Reject – A disposition of a nonconformance for an item unsuitable for its intended purpose and economically or physically incapable of being reworked or repaired.



Repair – A disposition of a nonconformance for an item acceptable for its intended use even though it is not restored to a condition which meets all specification requirements.

Rework – A disposition of a nonconformance for an item that can be brought into conformance with the original requirements through re-machining, reassembling, reprocessing, reinstallation, or completion of the required operations.

Shop Drawings - Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work. Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to integrate the product or system into the project. Shop drawings show how multiple systems and interdisciplinary work will be coordinated

Standard Operating Procedure - A document that details the purpose and scope of an activity, and specifies how it is to be carried out. The output from a procedure provides objective evidence (in the form of records) of the compliance to the quality system requirements.

Subcontractor - A company, organization or individual providing a service or product, which may include labor, plant, materials or other facilities or resources

Task – A definable features of work. A task which is separate and distinct from other tasks and has separate control requirements. A task could be identified by different trades or disciplines, or it could be separate phases of work by the same trade. At minimum each section of the specifications is a task; however, there are frequently more than one definable feature under a particular section.

Test Reports - Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accord with specified requirements.

Use-As-Is – A disposition of a nonconformance for an item that will satisfy its intended use, even though it does not meet all design/functional requirements.

Verify - The process of confirming the soundness or effectiveness.



HEI

Environmental Health & Safety Plan

Table of Contents

Accident/Incident Reporting and Investigation Plan	Section 1
Behavior Based Safety Program	Section 2
Confined Space (Permit Required)	Section 3
Excavation Procedures	Section 4
Fall Protection for Construction	Section 5
Fire Prevention Plan	Section 6
First Aid Program	Section 7
Forklift Operation Plan	Section 8
Hazard Communication Program	Section 9
Heavy Equipment Operation Procedures	Section 10
Housekeeping	Section 11
Integrated Contingency Plan	Section 12
Lockout / Tagout (Control of Hazardous Energies)	Section 13
Machine and Equipment Guarding Program	Section 14
Means of Egress Compliance Program	Section 15
Personal Protective Equipment	Section 16
Recording and Reporting Injuries and Illnesses	Section 17
Safety and Health Plan for Construction	Section 18
Safety and Health Plan for General Industry	Section 19
Scaffold Safety	Section 20
Signs and Tags Compliance Program	Section 21
Site Safety Plan	Section 22
Stairways and Ladders	Section 23
Substance Abuse Program	Section 24
Temperature Extremes Management	Section 25
Welding and Cutting Safety	Section 26

Safety Policy Statement

This manual is intended to be used as a working guide in the implementation and maintenance of HEI's Environmental Health and Safety Program.

The program requirements are based on the potential safety hazards, and operating losses to which the company had a foreseeable exposure on the date of the publication of this manual. The manual will be revised as necessary to add requirements and procedures involving newly identified exposures.

Periodically, material in this manual will be updated, revised or supplemented in order to keep the manual current and relevant. All revisions will bear a revision date and will be accompanied by a list of affected pages.

It is impossible to effectively deal with all safety concerns or procedures in a single manual. Many safety related matters involve situation-specific factors that are difficult to anticipate. Accordingly, this manual is not the definitive statement, or the only statement, on company safety concerns or procedures. This manual is a starting point and a good-faith attempt to create a viable, company-wide, safety program and philosophy.

Our employees are our most valuable assets. It is our policy that every person is entitled to a safe and healthful place in which to work.

Establishment and maintenance of a safe environment is the shared responsibility between the employer and employees at all levels of the organization. To this end, every reasonable effort will be made in achieving the goal of accident prevention and health preservation.

Our philosophy is oriented toward affirmative control and minimization of risk to the greatest extent possible. We have a basic responsibility to make the safety of employees a part of our concern. We will be counting on you to do your part in making our program an effective one.

The success of the company will depend not only on production, but also how safely each job is performed. There is no job so important-nor any service or urgent-that we cannot take time to work safely.

The company will aggressively pursue a plan to minimize pain and suffering of injured worker, and return him/her to active work duties as soon as possible.

I consider the safety of our personnel to be of prime importance, and I expect your full cooperation in making our program effective.

President

Section I

Incident/Event Reporting

And

Investigation Plan

Incident/Event Reporting and Investigation Plan (reference 29 CFR 1904.0 – 1904.46)

Purpose

This Accident Reporting and Investigation Plan prescribes methods and practices for reporting and investigating accidents. No matter how conscientious the safety effort at a company, accidents happen occasionally due to human or system error. Therefore, this written plan is intended to provide a means to deal with all workplace accidents in a standardized way and demonstrate our company's compliance with the reporting requirements of 29 CFR 1904. In addition, it is the policy of the company to comply with all workers' compensation laws and regulations.

Administrative Duties

Our Corporate Safety Officer (CSO) is responsible for developing and maintaining this written Accident Reporting and Investigation Plan. This person is solely responsible for all facets of the plan and has full authority to make necessary decisions to ensure the success of this plan. Appropriate training and experience that is commensurate with the complexity of the plan, to administer or oversee our Accident Reporting and Investigation Plan and conduct investigations, also qualify our Corporate Safety Officer.

This written Accident Reporting and Investigation Plan is kept at the corporate office and is available upon request from our CSO or Human Resources Personnel. Our CSO is also available to assist each division of our corporation in the interpretation and commencement of this plan.

In addition to the policies and procedures described in this plan, it is necessary to understand and follow the procedures of each client site or facility as specified in the contract documents pertaining to that site. Therefore, it is the responsibility of the PM to ensure each employee under their supervision receives proper training and information to comply with the above referenced standards pertaining to their jobsite.

Accident Reporting Procedures

Our incident and event reporting procedures include the following:

Incidents (Injuries and Illnesses)

Serious injury or illness posing a life-threatening situation shall be reported immediately to the local emergency response medical services (Call 911) or the client site emergency number.

Injuries and illnesses shall be reported by the injured employee to his or her supervisor in person or by phone as soon after any life-threatening situation has been addressed. If the injured employee is unable to report immediately, then the incident should be reported as soon as possible.

Upon notification of an occupational injury or illness, the PM should notify our Corporate Safety Officer, who will then prepare the necessary record keeping forms and forward to Human Resources.

Events

Incidents not involving injury or illness, but resulting in property damage, must also be reported to the PM, Corporate Safety Officer and forwarded to Human Resources within 48 hours of the incident.

In cases of a fire or explosion that cannot be controlled by one person, vehicular accident resulting in injury or more than \$500 worth of damage, or a chemical release requiring a building evacuation, the involved party must immediately report the incident to the emergency response services in the area (911 – police, fire, etc.)

All near miss incidences are also required to be reported on the Incident Report Form within 48 hours of occurrence. In place of indicating the result of the incident (i.e., actual personal or property damage), the reporting person shall indicate the avoided injury or damage.

Events, hazardous working conditions or situations, and incidents involving contractor personnel must be reported to Corporate Safety Officer immediately.

Incident Investigation Procedures

Thorough accident investigations will help the company determine why accidents occur, where they happen, and any trends that might be developing. Such identification is critical to preventing and controlling hazards and potential accidents. For all incident or event investigations, the designated PM and Corporate Safety Officer will perform the following duties:

Incident Investigations

Our Corporate Safety Officer will review each reported incident and event to:

- Determine if further investigation is required and then perform the investigation
- If further investigation is required, the affected employee will be interviewed. The interview will be documented and if necessary photographs will be taken to assist in the abatement of the hazards or events that led up to the incident.
- Responsibility for abatement and corrective actions will be issued and documented on the report.
- Make recommendations for corrective and/or preventative actions necessary to reduce or eliminate hazardous conditions and monitor the status of the abatement actions.

- Upon satisfactory completion of the abatement actions, the PM and Corporate Safety Officer will conduct a follow up investigation to complete the process.
- All information will be reported to the Human Resources Department and necessary reports will be posted in compliance with the above referenced standards.

Injury, Illness, and Medical Issues

Incident and event reports including information regarding injury, illness, medical issues; including alcohol and drug screening reports and records shall be received by designated management or the Human Resources Department. Reports and records on the individuals, or the program shall be kept in a separate and locked file whose access is limited to those with a need to know. Confidentiality of these records, reports or results shall not be breached. HEI shall not reveal these records to any person, or institution, or agency unless specifically required by regulation or court order.

Recordkeeping

Our Human Resources Director is responsible for maintaining records and documentation regarding any medical information.

Our Corporate Safety Officer is responsible for maintaining any records relevant to this program other than those mentioned previously in this program that are directly related to personal medical information.

Annual Summary Posting

Human Resources will maintain the required OSHA Form Log 300 300A Summary of (recordable) Occupational Injuries and Illnesses and the OSHA 301 Supplementary Record of Occupational Injuries and Illnesses for each calendar year.

The required portion of the OSHA Form Log and Summary of Occupational Injuries and Illnesses will be posted annually from February 1 through to April 30 in the Corporate Office for the previous calendar year.

Note: Each individual site must also maintain their own OSHA Form Log 300, 300A, and/or 301 as outlined above.

Employee Involvement and Training

This plan is an internal document guiding the action and behaviors of employees, so they need to know about it. Our Corporate Safety Officer thoroughly explains to all employees why the Accident Reporting and Investigation Plan was prepared and how employees may be affected by it. Employees are informed in how to report an injury or illness.

Employees, and their representatives, are also provided limited access to our injury and illness records. Copies of relevant reports are provided by the next business day to all employees, former employees, and representatives that request them. Employees, former employees, and personal representatives who request these documents will also receive them by the end of the next business day. However, authorized employee representatives will only receive requested reports within seven calendar days, and all sections of the report file will be removed except the section of the reports specifically requested. All initial copies are provided to requestors free of charge. Additional copies involve a reasonable charge.

Our company does not discriminate against employees for:

- Reporting a work-related fatality, injury, or illness;
- Filing a safety and health complaint;
- Asking for access to occupational injury and illness records; or
- Exercising any rights afforded by the Occupational Safety and Health Act.

Program Evaluation

The Accident Reporting and Investigation Plan is evaluated and updated by our CSO annually to determine whether the plan is being followed and if further training may be necessary.

Appendices

We have attached the following appendices to ensure better understanding of this plan:

First Notice of Accident Form

Incident/Event Investigation Form

Incident/Event Investigation Form

Date: _____

Claimant's Name: _____ Age: _____ Phone: _____

Address: _____

Description of Occurrence:

Injuries: _____ Medical Care? YES NO

Ambulance? YES NO Hospital or Doctor: _____

Property Damage? YES NO Description of Area and Damage: _____

Is a Product Involved? YES NO Name and Qty: _____

Name and Address of Manufacturer: _____

Did Claimant Slip, Fall, or Trip? _____ Was Area Inspected? YES NO

Foreign Matter or Debris Found on Floor? YES NO Describe: _____

Have Corrective Actions Been Issued to Abate Hazards? YES NO

Description of Corrective Actions:

Name of Person Responsible for Completion of Corrective Action Items: _____

Anticipated Completion Date: _____

Safety Committee Representative Assigned for Follow up: _____

Witnesses: Name: _____ Phone: _____

Address: _____

Name: _____ Phone: _____

Address: _____

Photos Taken? YES NO Additional Remarks: _____

Report Prepared By: _____

Section 2

Behavior Based Safety Program

Behavior-Based Safety Program

We at HEI intend to take a proactive approach to injury prevention that focuses on at-risk behaviors that can lead to an injury and on safe behaviors that can contribute to injury prevention. This is the meaning of behavior-based safety. Instead of being responsible for accidents, our company encourages project managers to be responsible for creating an accident prevention process. This Behavior-Based Safety Program provides both a guiding vision and flexible procedures by which we prevent at-risk behaviors and promote safe ones.

Administrative Duties

Our Corporate Safety Officer is responsible for developing and maintaining the written Behavior-Based Safety Program. This program is kept at the corporate office and is available upon request from each worksite designated PM for foreman. Our Corporate Safety Officer is also responsible for leading our company and its projects in matters of policy, procedures and basic functioning program elements regarding the safety and health of all employees regardless of the worksite locations.

Corporate Performance Goals

In our proactive approach to injury prevention, we have developed corporate-level, safety-related goals and objectives. These goals are intended to continuously change to achieve excellence in safety. Each year at the first safety meeting of the year the annual goals will be distributed in writing to each appropriate person and will be passed on to the worksite employees so as to communicate to every level our corporate commitment to safety and excellence.

These goals are meant to be communicated to all levels of the company. However, each division of the company is able to attain its own specific safety goals. We encourage individual participation by all members of the organization. We empower employees to set and achieve their own safety goals. Our company will maintain its leadership by demonstrating a vast commitment to safety. Our company demands each and every employee participates in our safety program and commits to improving it by making recommendations, following safety procedures and reporting unsafe conditions immediately. It is a condition of employment and affects the success of HEI.

Moving Motivations Toward Safety

HEI supports an employee incentive program that allows for recognition of outstanding safety performance above and beyond our written program requirements.

INTENTIONALLY BLANK

COMPANY INCENTIVE PROGRAM UNDER NEGOTIATION

We encourage employees to set their own goals for:

HEI supports an employee incentive program that allows for recognition of outstanding safety performance above and beyond our written program requirements.

We encourage employees to set their own goals for the safety incentives and provide these opportunities for personal learning and peer monitoring.

Secure Working Environment

Our company tries to provide a secure working environment by encouraging two-way communication between management and employees and by facilitating an atmosphere of trust. Of course, a secure working environment can mean a safe working environment. HEI recognizes that employee behavior alone cannot guarantee a safe environment. We also provide a workplace free from recognized hazards (both physical and behavioral). All employees have the right to work in areas that are free from recognized hazards that are either causing, or likely to cause, death or serious harm.

Defining Behaviors

It is important to list hazardous tasks that may cause injury or illness in each work area. From these we have developed a list of correlating safe behaviors. That way it is clear what is a safe behavior. For instance, lifting has a sequence of safe behaviors:

1. Test the weight of the load,
2. Check for a clear path to destination,
3. Bend the knees and use the legs,
4. Change foot positions to turn and don't twist the body.

Each listed safe behavior will be observable so that we can determine whether improvement has been made.

Observation and Feedback

Our Corporate Safety Officer will conduct random audits of each worksite including all administrative areas. All observations are recorded and taken back to our office for review where they will assist in defining and addressing at risk behaviors throughout the year. In the event a behavior has been defined and addressed and an employee chooses to take actions other than those directed by the CSO a ticket will be issued. These tickets will impact the incentive program as it applies to the employee or crew.

The CSO and other strategically selected personnel will meet regularly but not less than once every two months. CSO and selected personnel are responsible for:

- Reviewing statistical data, records, and reports of safety matters to determine the effectiveness of overall accident and loss prevention efforts and to develop recommendations for improvement.
- Reviewing and analyzing accident and property loss investigation reports for:
 - Accuracy and completeness (recommending follow-up investigation if necessary).
 - Provide recommendations for corrective action and provide consistency throughout corporate and worksite operations.
 - Identification of accident problem or trend and determination of what order they should be given attention.
- Reviewing safety and property inspection reports, job safety analyses, supervisor's safety observation reports, and employees' suggestions for:
 - Possible changes in work practices or procedures.
 - Need for safety procedures.
 - Need for protective device or equipment.
 - Need for training.
- Developing practical safety and property inspection procedures, and assisting in making inspections when requested by our Corporate Safety Officer.
- Keeping PM's informed of the progress of the Safety Program and informed as to the safety records of employees or other segments of the company.
- Assisting in developing the records and statistical data necessary to provide an accurate picture of HEI's safety infractions.
- Identify unsafe work practices and conditions and suggest appropriate remedies. Ensure that employees and others (visitors, contractors, etc.) are informed about safety policies, training programs, injury risks and causation, and other health and safety-related matters.
- Maintain an open channel of communication between employees and management concerning occupational and environmental health and safety matters.
- Provide a means by which employees can utilize their knowledge of workplace operations to advise management in the improvement of policies, condition, and practices.

Evaluate and Record

The group of strategically selected personnel is made up of representatives from each worksite/division. Our Corporate Safety Officer and each group member will review a summary for each site on an annual basis. If any one site experiences questionable observations they may be reviewed as often as necessary.

At the same time, our Corporate Safety Officer has the responsibility of determining, on a monthly basis, if our Behavior-Based Safety Program is actually reducing injury frequencies. These determinations are also shared with all employees and then filed in our safety department.

Team Building

Teams are an important part of the success of our Behavior-Based Safety Program. With teams no one person has to carry the program. We have organized the following teams, each with its own mission and goal, yet operating to benefit the program as a whole:

HEI

Sandia National Laboratories

Intel

Training

Successful behavior-based safety depends on a proper mind-set. This takes training. Our group members and Corporate Safety Officer will identify all new employees in the employee orientation program and make arrangements with department management to schedule training. The following person(s) will conduct initial training:

Corporate Safety Officer

Site PM, Foreman or Superintendent (regarding site specific information)

Section 3

Confined Space Entry Program

Permit-Required

Confined Space Entry Program (Permit Required)

Reference: 29 CFR 1910-146

The following confined space program is provided only as a guide to assist employers and employees in complying with the requirements of OSHA's Confined Space Standard, 29 CFR 1910.146, as well as to provide other helpful information. It is not intended to supersede the requirements of the standard. An employer should review the standard for particular requirements that are applicable to their individual situation, and make adjustments to this program that are specific to their company. An employer will need to add information relevant to their particular facility in order to develop an effective, comprehensive program.

1910.146
Confined Space Program
Table of Contents

- I. Objective
- II. Background
- III. Assignment of Responsibility
 - A. Employer
 - B. Program Manager
 - C. Entry Supervisors
 - D. Attendants
 - E. Rescue Team
 - F. Entrants/Affected Employees
- IV. Training
 - A. Training Frequency
 - B. General Training
 - C. Specific Training
 - D. Verification of Training
- V. Identification of Hazards and Evaluation of Confined Spaces
 - A. Survey
 - B. Hazard Reevaluation
 - C. Pre-Entry Hazard Assessment
 - D. Hazard Controls
- VI. Entry Permits
 - A. Key Elements of Entry Permits
 - B. Permit Scope and Duration
- VII. Entry Procedures
 - A. Prior to Entry
 - B. Opening a Confined Space
 - C. Atmospheric Testing
 - D. Isolation and Lockout/Tagout Safeguards
 - E. Ingress/Egress Safeguards
 - F. Warning Signs and Symbols
- VIII. Emergency Response
 - A. Emergency Response Plan
 - B. Retrieval Systems and Methods of Non-Entry Rescue
- IX. Attachment, Sample Process Duty Roster

Confined Space Program

For

HEI, Inc.

I. OBJECTIVE

The purpose of HEI, Inc. Confined Space Program is to set procedures that will ensure workers safe entry into confined spaces and permit-required confined spaces to perform routine tasks associated with their employment. This procedure is designed to provide the minimum safety requirements in accordance with the Occupational Safety and Health Administration's (OSHA) Confined Space Standard, 1910.146.

II. BACKGROUND

A confined space is defined as any location that has limited openings for entry and egress, is not intended for continuous employee occupancy, and is so enclosed that natural ventilation may not reduce air contaminants to levels below the threshold limit value (TLV). Examples of confined spaces include: manholes, stacks, pipes, storage tanks, trailers, tank cars, pits, sumps, hoppers, and bins. Entry into confined spaces without proper precautions could result in injury, impairment, or death due to:

- A. an atmosphere that is flammable or explosive;
- B. lack of sufficient oxygen to support life;
- C. contact with or inhalation of toxic materials; or
- D. general safety or work area hazards such as steam or high pressure materials.

III. ASSIGNMENT OF RESPONSIBILITY

A. Employer

In administering this Confined Space Program, HEI, Inc. will:

1. Monitor the effectiveness of the program.
2. Provide atmospheric testing and equipment as needed.
3. Provide personal protective equipment as needed.
4. Provide training to affected employees and supervisors.
5. Provide technical assistance as needed.
6. Preview and update the program on at least an annual basis or as needed.

B. Program Manager

Responsible Person is responsible for managing the Confined Space Program, and shall:

1. Ensure that a list of confined spaces at all HEI, Inc. worksites is maintained.
2. Ensure that canceled permits are reviewed for lessons learned.
3. Ensure training of personnel is conducted and documented.
4. Coordinate with outside responders.
5. Ensure that equipment is in compliance with standards.
6. Ensure that the **Responsible Person** in charge of confined space work shall:
 - a. Ensure requirements for entry have been completed before entry is authorized.
 - b. Ensure confined space monitoring is performed by personnel qualified and trained in confined space entry procedures.
 - c. Ensure a list of monitoring equipment and personnel qualified to operate the equipment is maintained by the Safety and Occupational Health Office.
 - d. Ensure that the rescue team has simulated a rescue in a confined space within the past twelve (12) months.
 - e. Know the hazards that may be faced during entry, including the mode (how the contaminant gets into the body), signs or symptoms, and consequences of exposure.
 - f. Fill out a permit.
 - g. Determine the entry requirements.
 - h. Require a permit review and signature from the authorized Entry Supervisor.
 - i. Notify all involved employees of the permit requirements.
 - j. Post the permit in a conspicuous location near the job.
 - k. Renew the permit or have it reissued as needed (a new permit is required every shift).
 - l. Determine the number of Attendants required to perform the work.
 - m. Ensure all Attendant(s) know how to communicate with the entrants and how to obtain assistance.
 - n. Post any required barriers and signs.
 - o. Remain alert to changing conditions that might affect the conditions of the permits (i.e., require additional atmospheric monitoring or changes in personal protective equipment).
 - p. Change and reissue the permit, or issue a new permit as necessary.
 - q. Ensure periodic atmospheric monitoring is done according to permit requirements.
 - r. Ensure that personnel doing the work and all support personnel adhere to permit requirements.
 - s. Ensure the permit is canceled with the work is done.
 - t. Ensure the confined space is safely closed and all workers are cleared from the area.

C. Entry Supervisors

Responsible Person(s) shall serve as the Entry Supervisor(s), and shall be qualified and authorized to approved confined space entry permits. The Entry Supervisor(s) shall be responsible for:

1. Determining if conditions are acceptable for entry.
2. Authorizing entry and overseeing entry operations.
3. Terminating entry procedures as required.
4. Serving as an Attendant, as long as the person is trained and equipped appropriately for that role.
5. Ensuring measures are in place to keep unauthorized personnel clear of the area.
6. Checking the work at least twice a shift to verify and document permit requirements are being observed (more frequent checks shall be made if operations or conditions are anticipated that could affect permit requirements).
7. Ensuring that necessary information on chemical hazards is kept at the worksite for the employees or rescue team.
8. Ensuring a rescue team is available and instructed in their rescue duties (i.e., an onsite team or a prearranged outside rescue service).
9. Ensuring the rescue team members have current certification in first aid and cardiopulmonary resuscitation (CPR).

D. Attendants

Responsible Person(s) shall function as an Attendant(s) and shall be stationed outside of the confined workspace. The Attendant(s) shall:

1. Be knowledgeable of, and be able to recognize potential confined space hazards.
2. Maintain a sign-in/sign-out log with a count of all persons in the confined space, and ensure all entrants sign in and out.
3. Monitor surrounding activities to ensure the safety of personnel.
4. Maintain effective and continuous communication with personnel during confined space entry, work, and exit.
5. Order personnel to evacuate the confined space if he/she:
 - a. observes a condition which is not allowed on the entry permit;
 - b. notices the entrants acting strangely, possibly as a result of exposure to hazardous substances;
 - c. notices a situation outside the confined space which could endanger personnel;
 - d. notices a hazard within the confined space that has not been previously recognized or taken into consideration;

- e. must leave his/her work station; or
 - f. must focus attention on the rescue of personnel in some other confined space that he/she is monitoring.
6. Immediately summon the Rescue Team if crew rescue becomes necessary.
 7. Keep unauthorized persons out of the confined space, order them out, or notify authorized personnel of an unauthorized entry.

E. Rescue Team

The Rescue Team members shall:

1. Complete a training drill using mannequins or personnel in a simulation of the confined space prior to the issuance of an entry permit for any confined space and at least annually thereafter.
2. Respond immediately to rescue calls from the Attendant or any other person recognizing a need for rescue from the confined space.
3. In addition to emergency response training, receive the same training as that required of the authorized entrants.
4. Have current certification in first aid and CPR.

F. Entrants/Affected Employees

Employees who are granted permission to enter a confined space shall:

1. Read and observe the entry permit requirements.
2. Remain alert to the hazards that could be encountered while in the confined space.
3. Properly use the personal protective equipment that is required by the permit.
4. Immediately exit the confined space when:
 - a. they are ordered to do so by an authorized person;
 - b. they notice or recognize signs or symptoms of exposure;
 - c. a prohibited condition exists; or
 - d. the automatic alarm system sounds.
5. Alert Attendant(s) when a prohibited condition exists and/or when warning signs or symptoms of exposure exist.

IV. TRAINING

HEI, Inc. shall provide training so that all employees whose work is regulated by this Confined Space Program acquire the understanding, knowledge, and skills necessary for the safe performance of their duties in confined spaces.

A. Training Frequency

Responsible Person shall provide training to each affected employee:

1. before the employee is first assigned duties within a confined space;
2. before there is a change in assigned duties;
3. when there is a change in permit space operations that presents a hazard for which an employee has not been trained; and
4. when HEI, Inc. has reason to believe that there are deviations from the confined space entry procedures required in this program, or that there are inadequacies in the employee's knowledge or use of these procedures.

The training shall establish employee proficiency in the duties required in this program, and shall introduce new or revised procedures, as necessary, for compliance with this program.

B. General Training

All employees who will enter confined spaces shall be trained in entry procedures. Personnel responsible for supervising, planning, entering, or participating in confined space entry and rescue shall be adequately trained in their functional duties prior to any confined space entry. Training shall include:

1. Explanation of the general hazards associated with confined spaces.
2. Discussion of specific confined space hazards associated with the facility, location, or operation.
3. Reason for, proper use, and limitations of personal protective equipment and other safety equipment required for entry into confined spaces.
4. Explanation of permits and other procedural requirements for conducting a confined space entry.
5. A clear understanding of what conditions would prohibit entry.
6. Procedures for responding to emergencies.
7. Duties and responsibilities of the confined space entry team.
8. Description of how to recognize symptoms of overexposure to probable air contaminants in themselves and co-workers, and method(s) for alerting the Attendant(s).

Refresher training shall be conducted as needed to maintain employee competence in entry procedures and precautions.

C. Specific Training

1. Training for atmospheric monitoring personnel shall include proper use of monitoring instruments, including instruction on the following:
 - a. proper use of the equipment;
 - b. calibration of equipment;
 - c. sampling strategies and techniques; and
 - d. exposure limits (PELs, TLVs, LELs, UELs, etc.).

2. Training for Attendants shall include the following:
 - a. procedures for summoning rescue or other emergency services; and
 - b. proper utilization of equipment used for communicating with entry and emergency/rescue personnel.

3. Training for Emergency Response Personnel shall include:
 - a. rescue plan and procedures developed for each type of confined space that is anticipated to be encountered;
 - b. use of emergency rescue equipment;
 - c. first aid and CPR techniques; and
 - d. work location and confined space configuration to minimize response time.

D. Verification of Training

Periodic assessment of the effectiveness of employee training shall be conducted by ***Responsible Person***. Training sessions shall be repeated as often as necessary to maintain an acceptable level of personnel competence.

V. IDENTIFICATION OF HAZARDS AND EVALUATION OF CONFINED SPACES

A. Survey

Responsible Person shall ensure a survey of the worksite is conducted to identify confined spaces. This survey can be partially completed from initial and continuing site characterizations, as well as other available data (i.e., blueprints and job safety analyses). The purpose of the survey is to develop an inventory of those locations and/or equipment at HEI, Inc. that meet the definition of a confined space. This information shall be communicated to personnel, and appropriate confined space procedures shall be followed prior to entry. The initial surveys shall include air monitoring to determine the air quality in the confined spaces. The potential for the following situations shall be evaluated by ***Responsible Person***:

1. flammable or explosive potential;
2. oxygen deficiency; and
3. presence of toxic and corrosive material.

B. Hazard Reevaluation

The **Responsible Person** shall identify and reevaluate hazards based on possible changes in activities or other physical or environmental conditions that could adversely affect work. A master inventory of confined spaces shall be maintained. Any change in designation of a confined space will be routed to all affected personnel by **Responsible Person**.

C. Pre-Entry Hazard Assessment

A hazard assessment shall be completed by **Responsible Person(s)** prior to any entry into a confined space. The hazard assessment should identify:

1. the sequence of work to be performed in the confined space;
2. the specific hazards known or anticipated; and
3. the control measures to be implemented to eliminate or reduce each of the hazards to an acceptable level.

No entry shall be permitted until the hazard assessment has been reviewed and discussed by all persons engaged in the activity. Personnel who are to enter confined spaces shall be informed of known or potential hazards associated with said confined spaces.

D. Hazard Controls

Hazard controls shall be instituted to address changes in the work processes and/or working environment. Hazard controls must be able to either control the health hazards by eliminating the responsible agents, reduce health hazards below harmful levels, or prevent the contaminants from coming into contact with the workers.

The following order of precedence shall be followed in reducing confined space risks.

1. Engineering Controls

Engineering controls are those controls that eliminate or reduce the hazard through implementation of sound engineering practices.

Ventilation is one of the most common engineering controls used in confined spaces. When ventilation is used to remove atmospheric

contaminants from a confined space, the space shall be ventilated until the atmosphere is within the acceptable ranges. Ventilation shall be maintained during the occupancy if there is a potential for the atmospheric conditions to move out of the acceptable range. When ventilation is not possible or feasible, alternate protective measures or methods to remove air contaminants and protect occupants shall be determined by **Responsible Person** prior to authorizing entry.

When conditions necessitate and can accommodate continuous forced air ventilation, the following precautions shall be followed:

- a. Employees shall not enter the space until the forced air ventilation has eliminated any hazardous atmosphere.
- b. Forced air ventilation shall be directed so as to ventilate the immediate areas where an employee is or will be present within the space.
- c. Continuous ventilation shall be maintained until all employees have left the space.
- d. Air supply or forced air ventilation shall originate from a clean source.

2. Work Practice (Administrative) Controls

Work practice (administrative) controls are those controls which eliminate or reduce the hazard through changes in the work practices (i.e., rotating workers, reducing the amount of worker exposure, and housekeeping).

3. Personal Protective Equipment (PPE)

If the hazard cannot be eliminated or reduced to a safe level through engineering and/or work practice controls, PPE should be used.

Responsible Person(s) shall determine the appropriate PPE needed by all personnel entering the confined space, including rescue teams. PPE that meets the specifications of applicable standards shall be selected in accordance with the requirements of the job to be performed.

VI. ENTRY PERMITS

The Confined Space Entry Permit is the most essential tool for assuring safety during entry in confined spaces with known hazards, or with unknown or potentially hazardous atmospheres. The entry permit process guides the supervisor and workers through a systematic evaluation of the space to be entered. The permit should be used to establish appropriate conditions. Before each entry into a confined space, an entry permit will be completed by **Responsible Person**. The **Responsible Person** will then communicate the contents of the permit to all employees involved in the operation, and post the permit

conspicuously near the work location. A standard entry permit shall be used for all entries.

A. Key Elements of Entry Permits

A standard entry permit shall contain the following items:

1. Space to be entered.
2. Purpose of entry.
3. Date and authorized duration of the entry permit.
4. Name of authorized entrants within the permit space.
5. Means of identifying authorized entrants inside the permit space (i.e., rosters or tracking systems).
6. Name(s) of personnel serving as Attendant(s) for the permit duration.
7. Name of individual serving as Entry Supervisor, with a space for the signature or initials of the Entry Supervisor who originally authorized the entry.
8. Hazards of the permit space to be entered.
9. Measures used to isolate the permit space and to eliminate or control permit space hazards before entry (i.e., lockout/tagout of equipment and procedures for purging, ventilating, and flushing permit spaces).
10. Acceptable entry conditions.
11. Results of initial and periodic tests performed, accompanied by the names or initials of the testers and the date(s) when the tests were performed.
12. Rescue and emergency services that can be summoned, and the means of contacting those services (i.e., equipment to use, phone numbers to call).
13. Communication procedures used by authorized entrants and Attendant(s) to maintain contact during the entry.
14. Equipment to be provided for compliance with this Confined Space Program (i.e., PPE, testing, communications, alarm systems, and rescue).
15. Other information necessary for the circumstances of the particular confined space that will help ensure employee safety.
16. Additional permits, such as for hot work, that have been issued to authorize work on the permit space.

B. Permit Scope and Duration

A permit is only valid for one shift. For a permit to be renewed, the following conditions shall be met before each reentry into the confined space:

1. Atmospheric testing shall be conducted and the results should be within acceptable limits. If atmospheric test results are not within

- acceptable limits, precautions to protect entrants against the hazards should be addressed on the permit and should be in place.
2. **Responsible Person** shall verify that all precautions and other measures called for on the permit are still in effect.
 3. Only operations or work originally approved on the permit shall be conducted in the confined space.

A new permit shall be issued, or the original permit will be reissued if possible, whenever changing work conditions or work activities introduce new hazards into the confined space. **Responsible Person** shall retain each canceled entry permit for at least one (1) year to facilitate the review of the Confined Space Entry Program. Any problems encountered during an entry operation shall be noted on the respective permit(s) so that appropriate revisions to the confined space permit program can be made.

VII. ENTRY PROCEDURES

When entry into a confined space is necessary, either the Entry Supervisor or **Responsible Person** may initiate entry procedures, including the completion of a confined space entry permit. Entry into a confined space shall follow the standard entry procedure below.

A. Prior to Entry

The entire confined space entry permit shall be completed before a standard entry. Entry shall be allowed only when all requirements of the permit are met and it is reviewed and signed by an Entry Supervisor. The following conditions must be met prior to standard entry:

1. Affected personnel shall be trained to establish proficiency in the duties that will be performed within the confined space.
2. The internal atmosphere within the confined space shall be tested by **Responsible Person** with a calibrated, direct-reading instrument.
3. Personnel shall be provided with necessary PPE as determined by the Entry Supervisor.
4. Atmospheric monitoring shall take place during the entry. If a hazardous atmosphere is detected during entry:
 - a. personnel within the confined space shall be evacuated by the Attendant(s) or Entry Supervisor until the space can be evaluated by **Responsible Person** to determine how the hazardous atmosphere developed; and
 - b. controls shall be put in place to protect employees before reentry.

B. Opening a Confined Space

Any conditions making it unsafe to remove an entrance cover shall be eliminated before the cover is removed. When entrance covers are removed, the opening shall be promptly guarded by a railing, temporary cover, or other temporary barrier that will prevent anyone from falling through the opening. This barrier or cover shall protect each employee working in the space from foreign objects entering the space. If it is in a traffic area, adequate barriers shall be erected.

C. Atmospheric Testing

Atmospheric test data is required prior to entry into a confined space. Atmospheric testing is required for two distinct purposes: (1) evaluation of the hazards of the permit space, and (2) verification that acceptable conditions exist for entry into that space. If a person must go into the space to obtain the needed data, then Standard Confined Space Entry Procedures shall be followed. Before entry into a confined space, **Responsible Person** shall conduct testing for hazardous atmospheres. The internal atmosphere shall be tested with a calibrated, direct-reading instrument for oxygen, flammable gases and vapors, and potential toxic air contaminants, in that order.

Testing equipment used in specialty areas shall be listed or approved for use in such areas by **Responsible Person**. All testing equipment shall be approved by a nationally recognized laboratory, such as Underwriters Laboratories or Factory Mutual Systems.

1. Evaluation Testing

The atmosphere of a confined space should be analyzed using equipment of sufficient sensitivity and specificity. The analysis shall identify and evaluate any hazardous atmospheres that may exist or arise, so that appropriate permit entry procedures can be developed and acceptable entry conditions stipulated for that space. Evaluation and interpretation of these data and development of the entry procedure should involve a technically qualified professional (i.e., consultant, certified industrial hygienist, registered safety engineer, or certified safety professional).

2. Verification Testing

A confined space that may contain a hazardous atmosphere shall be tested for residues of all identified or suspected contaminants. The evaluation testing should be conducted with specified equipment to determine that residual concentrations at the time of testing and entry are within acceptable limits. Results of testing shall be recorded by the person performing the tests on the permit. The atmosphere shall be periodically retested (frequency to be determined by **Responsible**

Person) to verify that atmospheric conditions remain within acceptable entry parameters.

3. Acceptable Limits

The atmosphere of the confined spaces shall be considered to be within acceptable limits when the following conditions are maintained:

- a. oxygen: 19.5 percent to 23.5 percent;
- b. flammability: less than 10 percent of the Lower Flammable Limit (LFL); and
- c. toxicity: less than recognized American Conference of Governmental Industrial Hygienists (ACGIH) exposure limits or other published exposure levels [i.e., OSHA Permissible Exposure Limits (PELs) or National Institute of Occupational Safety and Health (NIOSH) Recommended Exposure Limits (RELs)].

D. Isolation and Lockout/Tagout Safeguards

All energy sources that are potentially hazardous to confined space entrants shall be secured, relieved, disconnected, and/or restrained before personnel are permitted to enter the confined space. Equipment systems or processes shall be locked out and/or tagged out as required by the HEI, Inc. Lockout/Tagout Program [which complies with OSHA's 29 CFR 1910-147 and American National Standards Institute (ANSI) Z244.1-1982, Lockout/Tagout of Energy Sources] prior to permitting entry into the confined space. In confined spaces where complete isolation is not possible, **Responsible Person** shall evaluate the situation and make provisions for as rigorous an isolation as practical. Special precautions shall be taken when entering double-walled, jacketed, or internally insulated confined spaces that may discharge hazardous material through the vessel's internal wall.

Where there is a need to test, position, or activate equipment by temporarily removing the lock or tag or both, a procedure shall be developed and implemented to control hazards to the occupants. Any removal of locks, tags, or other protective measures shall be done in accordance with the HEI, Inc. Lockout/Tagout Program.

E. Ingress/Egress Safeguards

Means for safe entry and exit shall be provided for confined spaces. Each entry and exit points shall be evaluated by **Responsible Person** to determine the most effective methods and equipment that will enable employees to safely enter and exit the confined space.

Appropriate retrieval equipment or methods shall be used whenever a person enters a confined space. Use of retrieval equipment may be waived by the **Responsible Person(s)** if use of the equipment increases the overall risks of entry or does not contribute to the rescue. A mechanical device shall be available to retrieve personnel from vertical confined spaces greater than five (5) feet in depth.

F. Warning Signs and Symbols

All confined spaces that could be inadvertently entered shall have signs identifying them as confined spaces. Signs shall be maintained in a legible condition. The signs shall contain a warning that a permit is required before entry. Accesses to all confined spaces shall be prominently marked.

VIII. EMERGENCY RESPONSE

A. Emergency Response Plan

Responsible Person shall maintain a written plan of action that has provisions for conducting a timely rescue of individuals within a confined space, should an emergency arise. The written plan shall be kept onsite where the confined space work is being conducted. All affected personnel shall be trained on the Emergency Response Plan.

B. Retrieval Systems and Methods of Non-Entry Rescue

Retrieval systems shall be available and ready when an authorized person enters a permit space, unless such equipment increases the overall risk of entry, or the equipment would not contribute to the rescue of the entrant. Retrieval systems shall have a chest or full-body harness and a retrieval line attached at the center of the back near shoulder level or above the head. If harnesses are not feasible, or would create a greater hazard, wristlets may be used in lieu of the harness. The retrieval line shall be firmly fastened outside the space so that rescue can begin as soon as anyone is aware that retrieval is necessary. A mechanical device shall be available to retrieve personnel from vertical confined spaces more than five (5) feet deep.

ATTACHMENT

Sample Process Duty Roster

Process: Tank Steam/Wash Rack	
Entry Supervisor	Entrants
<ol style="list-style-type: none">1. Upon receipt of a tank for cleaning, do a visible check for product. If product is visible in the tank, then the tank will be refused.2. Complete and attach certification and danger tag to tank.3. Provide confined space entry permit for the tank.4. Verify that entrants have proper training and knowledge of known hazards, including the mode of exposure (how it gets into the body), signs or symptoms, and results of exposure.	<ol style="list-style-type: none">1. Purge tanks with cold water prior to steam cleaning.2. Obtain the confined space entry permit and authorized signature.3. Complete a safe entry checklist prior to entering the confined space.4. Fill out and attach the caution tag after tank is purged and cleaned.5. Know space hazards, including information on the mode of exposure (how it gets into the body), signs or symptoms, and results of exposure.6. Use the correct personal protective equipment (PPE) properly.7. Maintain communication with standby person to enable them to monitor entrant's actions and alert the entrant to evacuate if necessary.8. Exit from permit space as soon as possible: when ordered to by authorized persons; when entrant notices or recognizes the signs or symptoms of exposure; when a prohibited condition exists; and/or when the automatic alarm system sounds.9. Alert the standby person when a prohibited condition exists and/or when warning signs or symptoms of exposure exist.

Process: Tank Maintenance

Entry Supervisor	Entrants
<ol style="list-style-type: none">1. Upon receipt of a tank for maintenance, do a visible check for product. If product is visible in the tank, then the tank will be refused.2. Complete and attach certification and danger tag to tank.3. Provide confined space entry permit for the tank.4. Verify that entrants have proper training and knowledge of known hazards, including the mode of exposure (how it gets into the body), signs or symptoms, and the results of exposure.	<ol style="list-style-type: none">1. Prior to moving any tank into the maintenance bay, ensure tank has been cleaned and/or purged per attached caution tag, test atmosphere, and record results on hot tag. (Tank will not be moved into bay until the atmosphere has been tested and is determined to be within acceptable limits.)2. In bay, if work will require confined space entry, obtain confined space entry permit from the Service Writer.3. Obtain the confined space entry permit and the authorized signatures.4. Complete the safe entry checklist prior to confined space entry.5. Know space hazards, including information on the mode of exposure (how it gets into the body), signs or symptoms, and results of exposure.6. Use the correct personal protective equipment (PPE) properly.7. Maintain communication with standby person to enable them to monitor the entrant's actions and alert the entrant to evacuate if necessary.8. Exit from permit space as soon as possible: when ordered to by authorized persons; when entrant notices or recognizes signs or symptoms of exposure; when a prohibited condition exists; and/or when the automatic alarm system sounds.9. Alert the standby person when a prohibited condition exists and/or when warning signs or symptoms of exposure exist.

Section 4

Excavation Procedures

Excavation Procedures

Reference: 29 CFR 1926.650-652 Subpart P

One of the preventable hazards of construction work is the danger of trench cave-ins. Other hazards associated with trenches include contact with numerous underground utilities, hazardous atmospheres, water accumulation, and collapse of adjacent structures. For these reasons, we have written Excavation Procedures for both our daily and occasional excavation workers. It is the policy at HEI to permit only trained and authorized personnel to create or work in excavations.

Administrative Duties

Our Excavation Procedures are administered under the direction of our competent person(s), someone 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.

General Requirements for Excavations

The following rules are to be followed at all times by all employees working on, in, or near excavations, as applicable:

Our exposure and construction of excavations shall not exceed the dimensions necessary to install duct banks on specific projects. (4' wide by 8' deep)

The designated Competent Person will be required to review the JSE of the proposed work. An additional evaluation will be done of the trench or excavation job before work begins and employee are exposed to hazards. The JSE/evaluation will include the following minimum elements:

Soil Types and Conditions

Maximum Depth of Trench/Excavation

Use of the Correct Protective Systems

Buried Utilities

Water Accumulation

Weather Conditions

Previous Soil Contaminations

Adjacent Structures for Potential Undermining

PPE Requirements

Barricades and Warning Devices

Access and Egress

Training

Soil Types and Conditions

Classification of soil and rock deposits shall be made by a competent person. Soil shall be classified as stable rock, Type A, type B or Type C. The basis of determining classification.....One visible test and one manual test

Visual Test Includes

Soils excavated for granularity

Soils that remain in clumps

Surface area around excavation

Evidence of previous digging/disturbance

Water accumulation

Vibrations, cracks and fissures

Manual Tests Include

Plasticity tests

Dry strength tests

Thumb/Penetrometer

Maximum Depth of Trench/Excavation

Our maximum depth of excavations shall not exceed 8' in depth.

Protective Support Systems

The company protects each employee in an excavation from cave-ins during an excavation by an adequate protective system designed in accordance with OSHA

standards. Protective system options include proper sloping or benching of the sides of the excavation; supporting the sides of the excavation with timber shoring or aluminum hydraulic shoring; or placing a shield between the side of the excavation and the work area. HEI has the following standard operating procedures regarding protective support systems for excavations, in accordance with safe practices and procedures and OSHA excavation regulations:

Sloping and Benching

When sloping is used to protect against cave-ins, these options can be chosen for designing sloping systems, maximum allowable slopes for excavation of 20 feet or less:

Stable Rock	Vertical (90 degrees)
Type A	¾: 1 (53 degrees)
Type B	1:1 (45 degrees)
Type C	1½:1 (34 degrees)

The competent person chooses the best option for sloping and benching for the job at hand.

Support Systems, Shield Systems, and Other Protective Systems

Timber Shoring

When trenches do not exceed 20 feet, timber shoring according to OSHA design specifications may be used. Designs for timber shoring in trenches for company work sites are determined by the competent person using the following method(s):

- The Competent Person should inspect all timber prior to its use as well as daily, as prescribed by the standard.
- The must be full dimension mixed oak (850 psi bending strength) or equal or nominal dimesion Douglas Fir (1500 psi bending strength) or equal. Ins submerged or saturate soil, tongue and groove boards three inches this will be used as uprights.
- A careful determination of the spacing requirements will be made prior to selection if timber sizes.
- Wales will be oriented with the greatest horizontal dimension possible.
- The bracing of uprights will be pushed directly into the bank with no open spaces allowed to create a preload.

Aluminum Hydraulic Shoring

Aluminum hydraulic shores are extendable aluminum cylinders that are applied by fluid pressure. In the event our competent person determines this is the best shoring method he/she will:

- Install the system as quickly as possible during excavation from the top of the excavation eliminating risk to workers.
- The top cylinder of vertical shores will not be greater than 18 inches below the top of the excavation and no more than four feet above the bottom of the excavation.
- Surcharge and gravity load restrictions will be considered.
- The appropriate tools will be used to install and remove the systems according to the manufacturer's specification.
- Oversleeves on two-inch cylinders will be used on excavations in excess of eight feet widths.

Designs for our support systems are determined by the competent person following an evaluation of the work environment and adjacent structures will be considered

Shielding

- Shield systems will not be subject to loads greater than what they are designed for.
- Shields will be installed in a manner to restrict lateral or other hazardous movement.
- Employees will not be allowed in the shields when they are being installed
- Employees will be protected from the hazard of cave-ins when entering or exiting the areas protected by shields.
- Shields will ride two feet above the bottom of an excavation.

Buried Utilities

Prior to opening an excavation, underground utilities will be located to prevent damage.

Water Accumulation

Diversion channels will be used to redirect water when there is a possibility of accumulation and as a means for drainage. Employees will not work in excavations that that have an accumulation of water at any time.

Weather Conditions

A registered engineer will be consulted when conditions change that requires additional control measures due to bad weather. (i.e. Freezing)

Previous Soil Contaminations

Adequate precautions will be taken to prevent exposure to employees due contamination. Air monitoring and ventilation will be utilized as necessary and directed by the competent person.

Adjacent Structures for Potential Undermining

Excavations below the level of the base or footing of a foundation or retaining wall will not be permitted unless a support system that ensures the stability of the structure is provided, the excavation is in stable rock and a professional engineer determines the work is safe.

PPE Requirements

Walkways will be provided where employees and equipment will crossover an excavation. Proper guardrails will be installed where walkways are 6 feet or greater above the excavation floor. Adequate barricades and covers will be provided to prevent accidental tripping for falling into an excavation. Fall Protection will be used when working between the warning barricades and the excavation to prevent accidental falls.

Training

Under no circumstances shall an employee create or work in an excavation until he/she has successfully completed an excavation training program. This includes all new excavation workers regardless of claimed previous experience.

Inspection Procedures

Our competent person inspects excavations daily and during poor weather. An inspection checklist will be completed at least daily and kept at the jobsite by the competent person. The competent person is required to remain on site during all trenching and excavation procedures.

Recordkeeping

We keep a copy of the following documents at the job site during construction of a particular excavation protective system and then store them in the jobsite trailer and at the main office where they will be readily available to OSHA upon request:

- Tabulated data for designing any of our sloping or benching systems
- Designs of any sloping or benching systems approved by a registered professional engineer

- Manufacturer's specifications, recommendations, and limitations for designs of support systems, shield systems, and other protective systems drawn from manufacturer's tabulated data
- Manufacturer's approval to deviate from the specifications, recommendations, and limitations for designs of support systems, shield systems, and other protective systems drawn from manufacturer's tabulated data
- Tabulated data for designing any of our support systems, shield systems, and other protective systems
- Designs of all support systems, shield systems, and other protective systems approved by a registered professional engineer

Section 5

Fall Protection for Construction

Fall Protection Plan for Construction

Reference: 29 CFR 1926 Subpart M, .14

The standards for regulating fall protection systems and procedures are intended to prevent employees from falling off, onto or through working levels and to protect employees from falling objects. Fall protection requirements under the OSHA Construction regulations require considerable planning and preparation.

Purpose

HEI is dedicated to the protection of its employees from on-the-job injuries. All employees of HEI have the responsibility to work safely on the job. The purpose of this plan is to:

- Supplement our standard safety policy by providing safety standards specifically designed to cover fall protection in general.
- Ensure that each employee is trained and made aware of the safety provisions which are to be implemented by this plan or each site specific fall protection plan.

This program informs interested persons, including employees, that HEI is complying with OSHA's Fall Protection requirements, (29 CFR 1926.500 to.503).

This program applies to all employees who might be exposed to fall hazards, except when designated employees are inspecting, investigating, or assessing workplace conditions before the actual start of construction work or after all construction work has been completed.

- All fall protection systems selected for each application will be installed before an employee is allowed to go to work in an area that necessitates the protection. Certain employees are authorized to inspect, investigate, or assess workplace conditions before construction work begins or after all construction work has been completed. These employees are exempt from the fall protection rule during the performance of these duties and are identified at each site.

These authorized employees determine if all walking/working surfaces on which our employees work have the strength and structural integrity to support the employees. Our employees will not be allowed to work on these surfaces until they have the requisite strength and structural integrity.

Our Duty to Provide Fall Protection

To prevent falls HEI has a duty to anticipate the need to work at heights and to plan our work activities accordingly. Careful planning and preparation lay the necessary groundwork for an accident-free jobsite.

Worksite Assessment and Fall Protection System Selection

This fall protection plan is intended to anticipate the particular fall hazards to which our employees may be exposed. Specifically, we:

- Inspect the area to determine what hazards exist or may arise during the work.
- Identify the hazards and select the appropriate measures and equipment.
- Give specific and appropriate instructions to workers to prevent exposure to unsafe conditions.
- Ensure employees follow procedures given and understand training provided.
- Apprise ourselves of the steps our specialty subcontractors have taken to meet their fall protection requirements.

Providing fall protection requires an assessment of each fall situation at a given jobsite. Our criteria for selecting a given fall protection system follow those established at 29 CFR 1926.502, fall protection systems criteria and practices. Each employee exposed to these situations must be trained as outlined later in this plan.

Unprotected Sides and Edges

Our employees must be protected when they are exposed to falls from unprotected sides and edges of walking/working surfaces (horizontal and vertical surfaces) which are 6 feet or more above lower levels.

We know that OSHA has determined that there is no "safe" distance from an unprotected side or edge that would render fall protection unnecessary.

A determination of the type of fall protection to use when working around unprotected sides and leading edges will be based on an evaluation of the jobsite and the tasks to be performed.

We maintain the system(s) chosen until all work has been completed or until the permanent elements of the structure which will eliminate the exposure to falling hazards are in place.

Leading Edge Work

Leading edges are defined as the edge of a floor, roof, or formwork that changes location as additional floor, roof, or formwork sections are placed, formed, or constructed. If work

stops on a leading edge it will be considered to be an "unprotected side or edge" and will be covered by the section of this plan on unprotected sides and edges.

We presume that it is feasible and will not create a greater hazard to implement at least one of the conventional fall protection systems for our leading edge work.

Hoist Areas

In all situations where equipment and material hoisting operations (i.e. material delivery areas on a second level) take place, we protect our employees from fall hazards. When we are involved in hoisting operations we will primarily use personal fall arrest systems unless otherwise determined.

When operations require the materials to be lifted by crane to a landing zone (and do not require an employee to lean through the access opening or out over the edge to receive or guide materials), we can select either personal fall arrest equipment or a guardrail system.

When guardrails (or chains or gates) are removed to facilitate hoisting operations, and one of our employees must lean through the access opening or out over the edge to receive or guide materials they will be protected by a personal fall arrest system.

Holes

HEI protects employees from:

- Tripping in or stepping into or through holes
- Objects falling through holes
- Falling off of ladders

We use personal fall arrest systems as fall protection to protect our employees working on walking/working surfaces with holes where they can fall 6 feet or more to a lower surface.

At any worksite where employees can trip or step into or through a hole or an object could fall through a hole and strike a worker covers are put in place to prevent accidents.

We understand that OSHA does not intend that a guardrail be erected around holes while employees are working at the hole, passing materials, and so on. Therefore, if the cover is removed while work is in progress, guardrails are not required because they would interfere with the performance of work. When the work has been completed, we will be required to either replace the cover or erect guardrails around the hole.

Excavations

At some jobsites we may have excavation edges that will not be readily seen. When it is necessary, and when the excavation is 6 feet or more deep we protect these excavations by installing either:

- Class I perimeter protection guarding against personnel falling into an excavation including
 1. the strength, height, and maximum deflection requirements for guardrails;
 2. provide fall protection equivalent to that provided by toprail, midrail, and toeboard; and
 3. have post spacing equivalent to a standard guardrail.
- Class II perimeter protection consists of warning barricades or flagging placed 6 ft from the edge of the excavation serving only as a visual warning

Walking/Working Surfaces Not Otherwise Addressed

We realize there will be situations that are not covered by our written safety plan, for which we have the duty to provide fall protection. All employees exposed to falls of 6 feet or more to lower levels must be protected by a guardrail system or personal fall arrest system except where specified otherwise in Part 1926.

We will audit our jobsites and identify fall protection hazards that are not covered elsewhere in this plan. We will address these hazards prior to the start of any work and ensure adequate fall protection systems are put in place.

Protection From Falling Objects

When employees are exposed to falling objects, we ensure they wear hard hats and also pay close attention when our clients implement one or any of the following measures:

- Erect toeboards, screens, or guardrail systems to prevent objects from falling from higher levels.
- Erect a canopy structure and keep potential fall objects far enough from the edge of the higher level so that those objects would not go over the edge if they were accidentally moved.
- 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 those objects would not go over the edge if they were accidentally moved.
- Cover or guard holes 6 feet or more above a lower level.

General Worksite Policy

1. If any one of the conditions described in the Workplace Assessment is not met for the area or piece of equipment posing a potential fall hazard, then do not perform that work

until the condition is met. If you cannot remedy the condition immediately, notify a supervisor or foreman of the problem and utilize a different piece of equipment or work in a different area, according to the situation.

2. If the situation calls for use of fall protection devices such as harnesses or lanyards because the fall hazard cannot be reduced to a safe level, then the employee must don such protective equipment before beginning the work and use it as intended throughout the duration of the work.

3. Only employees trained in such work are expected to perform it.

4. All places of employment, job sites shall be kept clean and orderly and in a sanitary condition.

5. All walking/working surfaces must be kept in a clean and, so far as possible, dry condition. Where wet processes are used, drainage shall be maintained, and false floors, platforms, mats, or other dry standing places should be provided where practicable.

Training Program

Under no circumstances shall employees work in areas where they might be exposed to fall hazards, do work requiring fall protection devices, or use fall protection devices until they have successfully completed this company's fall protection training program.

The training program includes classroom instruction and operational training on recognition and avoidance of unsafe conditions and the regulations applicable to their work environment for each specific fall hazard the employee may encounter. Our CSO gives fall Protection Training, a "competent person" qualified in each aspect of the program, and will cover the following areas:

- The nature of fall hazards in the work area.
- Selection and use of personal fall arrest systems, including application limits, proper anchoring and tie-off techniques, estimation of free fall distance (including determination of deceleration distance and total fall distance to prevent striking a lower level), methods of use, and inspection and storage of the system.
- The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used.
- The use and operation of guardrail systems, personal fall arrest systems, safety net systems, warning line systems, safety monitoring systems, controlled access zones, and other protection to be used.
- The role of each employee in the safety monitoring system when this is used.
- The limitations on the use of mechanical equipment during the performance of roofing work on low-sloped roofs.
- The correct procedures for the handling and storage of equipment and materials and the erection of overhead protection.
- The role of employees in fall protection plans.

- The standards contained in Subpart M of the construction regulations.

Retraining is required when an employee cannot demonstrate the ability to recognize the hazards of falling and the procedures to be followed to minimize fall hazards.

Enforcement

Constant awareness of and respect for fall hazards, and compliance with all safety rules are considered conditions of employment. The jobsite superintendent or foreman, as well as the designated CSO, reserve the right to issue disciplinary warnings to employees, up to and including termination, for failure to follow the guidelines of this program.

Incident Investigation

All accidents that result in injury to workers, regardless of their nature, are investigated and reported. It is an integral part of any safety program that documentation take place as soon as possible so that the cause and means of prevention can be identified to prevent a reoccurrence.

In the event that an employee falls or there is some other related, serious incident (e.g., a near miss) occurs, this plan will be reviewed to determine if additional practices, procedures, or training need to be implemented to prevent similar types of falls or incidents from occurring.

Section 6

Fire Prevention Plan

Fire Prevention Plan

Reference: 29 CFR 1910.38, 1926.24

Purpose

OSHA's Fire Prevention Plan regulation, found at 29 CFR 1910.38(b), requires HEI, to have a written fire prevention plan (FPP). This plan applies to all operations in our company where employees may encounter a fire.

This Fire Prevention Plan (FPP) is in place at this company to control and reduce the possibility of fire and to specify the type of equipment to use in case of fire. This plan addresses the following issues:

- Major workplace fire hazards and their proper handling and storage procedures.
- Potential ignition sources for fires and their control procedures.
- The type of fire protection equipment or systems which can control a fire involving them.
- Personnel responsible for maintenance of equipment and systems installed to prevent or control ignition of fires and for control of fuel source hazards.

Under this plan, our employees will be informed of the plan's purpose, preferred means of reporting fires and other emergencies, types of evacuations to be used in various emergency situations, and the alarm system. The plan is closely tied to our Emergency Action Plan where procedures are described for emergency escape procedures and route assignments, procedures to account for all employees after emergency evacuation has been completed, and rescue and medical duties for those employees who perform them. Note: Please see the Emergency Action Plan for this information.

Our CSO is the Plan Coordinator, acting as the representative of the company, who has overall responsibility for the plan. The written plan is kept in the main office. He will review and update the plan as necessary.

The FPP communicates to employees, policies and procedures to follow when fires erupt. This written plan is available, upon request, to employees, their designated representatives, and any OSHA officials who ask to see it.

If after reading this plan, you find that improvements can be made, please contact our CSO. We encourage all suggestions because we are committed to the success of our Fire Prevention Plan. We strive for clear understanding, safe behavior, and involvement in the plan from every level of the company.

Plan Coordinator Responsibilities

Here at HEI our CSO is responsible for the following activities. He has:

1. Developed a written Fire Prevention Plan for regular and after-hours work conditions.
2. Immediately notify the local fire or police departments, and the building owner in the event of a fire affecting the facility.
3. Integrate the FPP with the existing general emergency plan covering the building occupied.
4. Distribute procedures for reporting a fire, the location of fire exits, and evacuation routes to each employee.
5. Conduct drills to acquaint the employees with fire procedures, and to judge their effectiveness.
6. Satisfy all local fire codes and regulations as specified.
7. Train designated employees in the use of fire extinguishers and the application of medical first-aid techniques.
8. Keep key management personnel home telephone numbers in a safe place in the facility for immediate use in the event of a fire. Distribute a copy of the list to key persons to be retained in their homes for use in communicating a fire occurring during non-work hours.
9. Decide to have employees and non-employees remain in or evacuate the facility in the event of a fire.
10. If evacuation is deemed necessary, our CSO ensures that:
 - All employees are notified and evacuated and a head count is taken to confirm total evacuation of all employees.
 - When practical, equipment is placed and locked in storage rooms or desks for protection.
 - The building owner is contacted, informed of the action taken, and asked to assist in coordinating security protection.
 - In locations where the building owner is not available, security measures to protect employee records and property are arranged as necessary.

In addition, our CSO is responsible for duties unique to this facility.

Fire Hazards

Fire can be represented by a simple equation: Fire = Ignition Source + Fuel + Oxygen. Without any one of these three elements, a fire cannot start. Likewise, during a fire, if you take away any one of these three elements, you can successfully put out a fire. It is our company's intent to prevent these three elements from reacting to produce a fire.

Fire prevention measures have been developed for all fire hazards found. These include:

- All ignition sources (i.e., open flames, cutting torches, spark producing equipment, electric motors, heating equipment, etc.) will be controlled. All contact of ignition sources with combustible and flammable materials will be avoided. All employees will keep all combustible materials at least five feet from such ignition sources and all flammable liquids at least twenty feet away.
- Extensive use of electrical extension cords should be avoided. Any damaged or frayed electrical wiring, equipment cords, extension cords, etc. will be removed from service immediately and replaced or repaired.
- Any use of flammable liquids will be done in a manner that prevents spills, and prevents the flammable liquid or its vapor or spray from coming into contact with any ignition source. All flammable liquids will be stored in proper flammable liquid storage containers and kept in the proper storage cabinets.
- Housekeeping and storage practices are critical to preventing fires. Any combustible materials will be stored in neat stacks with adequate aisle space provided to prevent the easy spread of fire and to allow for access to extinguish any fire that may start. Trash, scrap, and other unnecessary combustibles must be cleaned up immediately and placed in proper disposal containers.
- Smoking is restricted to designated areas.

Fire Protection Equipment

Fire protection equipment, selected and purchased by our Corporate Safety Officer (CSO), in use at this company includes the following extinguishers:

- Each area will have the proper type of fire extinguisher for the fire hazards present. All fire extinguishers will be inspected annually by a fire protection equipment company and tagged with the date of inspection. If a fire extinguisher is used or discharged for any reason, it will be removed from service and replaced with another properly charged fire extinguisher while it is being recharged.
- Employees who are expected or anticipated to use fire extinguishers will be instructed on the hazards of fighting fires, how to properly operate the fire extinguishers available, and what procedures to follow in alerting others to the fire emergency. These employees will only attempt to extinguish small incipient fires. If a fire cannot be immediately and easily extinguished with a fire extinguisher, the employees will evacuate the building. They will not try to fight the fire! All employees who are not trained and designated to fight fires are to immediately evacuate the premises at the first sign of a fire or initiation of the fire alarm and are prohibited from using an extinguisher and re-entering the premises.

Maintenance of Fire Protection Equipment

Once hazards are evaluated and equipment is installed to control them that equipment must be inspected on a regular basis to make sure it continues to function properly. Our CSO is responsible for coordinating the inspection.

Our guidelines for maintaining the equipment is as follows:

All portable fire extinguishers will be inspected monthly. The inspection will include verification on proper charging and arrow is within the green area of the gauge. The hose is free and clear of obstructions. The pin is in place. The body of the extinguisher is in good condition and labels are readable. The proper class of extinguisher is in place. Once all this information is verified, the person performing the monthly inspection should then sign and date the tag affixed to the extinguisher.

Training

Fire Prevention Plan

At the time of a fire, employees should know what type of evacuation is necessary and what their role is in carrying out the plan. In cases where the fire is large, total and immediate evacuation of all employees is necessary. In smaller fires, a partial evacuation of nonessential employees with a delayed evacuation of others may be necessary for continued operation. We must be sure that employees know what is expected of them during a fire to assure their safety.

HEI has chosen to train employees through presentation followed by a drill. We cover related FPP information at that time.

Training, conducted on initial assignment, includes:

- What to do if employee discovers a fire
- Demonstration of alarm, if more than one type exists
- How to recognize fire exits
- Evacuation routes
- Assisting employees with disabilities
- Measures to contain fire (e.g., closing office doors, windows, etc. in immediate vicinity)
- Head count procedures (see EAP for details)
- Return to building after the "all-clear" signal

If our CSO has reason to believe an employee does not have the understanding required, the employee must be retrained. Our CSO certifies in writing that the employee has received and understands the Fire Prevention Plan training.

Any employee who does not comply with this plan will be disciplined.

Fire Protection Equipment

The Plan Coordinator provides training for each employee who is required to use fire protection equipment. Employees shall not use fire protection equipment without appropriate training. Training, before an individual is assigned responsibility to fight a fire, includes:

- Types of fires
- Types of fire prevention equipment
- Location of fire prevention equipment
- How to use fire prevention equipment
- Limitations of fire prevention equipment
- Proper care and maintenance of assigned fire prevention equipment and

Employees must demonstrate an understanding of the training and the ability to use the equipment properly before they are allowed to perform work requiring the use of the equipment.

If the CSO has reason to believe an employee does not have the understanding or skill required, the employee must be retrained. Our Corporate Safety Officer certifies in writing that the employee has received and understands the fire protection equipment training.

Section 7

First Aid Program

First Aid Program

Reference: 29 CFR 1926.23 &50, 1910.151

Purpose

HEI is dedicated to the protection of its employees from on-the-job injuries and illnesses. However, when injuries or illnesses do occur, we are prepared to immediately respond to the needs of the injured or ill.

This written First Aid Program is intended to ensure that HEI meets the requirements of 29 CFR 1910.151, Medical Services and First Aid.

Administrative Duties

Our CSO is our First Aid Program Administrator and is responsible for establishing and implementing the written First Aid Program. He has full authority to make necessary decisions to ensure the success of this program. Copies of this written program may be obtained from our corporate office. If after reading this program, you find that improvements can be made, please contact our CSO. We encourage all suggestions because we are committed to the success of this written program.

First Aid Personnel

Our CSO is readily available for advice and consultation on matters of safety and health.

The *National EMS Education and Practice Blueprint* lists the following first aid designations:

- **First aid provider:** Occupationally required to be trained in first aid even though they may not be specifically obligated by law to perform first aid. Responds as a "Good Samaritan." Uses a limited amount of equipment to perform initial assessment and provide immediate life support and care while awaiting arrival of emergency medical services (EMS).
- **First responder:** Uses a limited amount of equipment to perform initial assessment and intervention and is trained to assist other EMS.
- **Emergency Medical Technician (EMT)-Basic:** The 2nd level of professional emergency medical care provider. Qualified to function as the minimum staff for an ambulance.
- **EMT-Intermediate:** The 3rd level of professional emergency medical care provider. Can perform essential advanced techniques and administer a limited number of medications.
- **Paramedic:** The 4th level of professional emergency medical care provider. Can administer additional interventions and medications.

A list of currently trained and certified personnel is **available from the Human Resources Department upon request.**

Hazard and Medical Services Assessment

Our CSO assess' HEI for hazards to determine whether any pose the risk of a life-threatening or permanently disabling injury or illness.

Each office and client site is required to maintain a list of hazards and what measures are taken to mitigate these hazards.

The nearest hospital, clinic, or infirmary, varies to each jobsite. Every employee of HEI has a responsibility to review the site specific medical treatment and location information for that site. They must also know medical emergency procedures and phones numbers to appropriately respond to an accident to incident.

When hazards or locations change, our CSO and PM's re-assesses our risk and determines whether or not we are required to train an on-site employee in first aid.

First Aid Supplies and Equipment

HEI provides a First Aid Kit on the premises. It is there for your use in the treatment of minor scratches, burns, headaches, nausea, etc. Ask your supervisor to show you its location. Let your supervisor know if you need to use the First Aid Kit.

If you have a work related injury or illnesses which requires professional medical assistance notify your supervisor and let him/her know before you receive this assistance. If you fail to notify your supervisor, you may be ineligible for Worker's Compensation, benefits to pay for doctor's bills, and/or lost wages.

Training

Training is the heart of our First Aid Program. Employees should NOT attempt to rescue or treat an injured or ill employee unless they are qualified to do so. Instead, they should contact someone who is qualified.

Employees who are qualified to render first aid have completed HEI's first aid training program. Our CSO is responsible for coordinating training.

Training Certification

After an employee has completed our training program, the trainer will determine whether the employee can safely perform first aid. Our Human Resources Director is responsible for keeping records verifying certification of each employee who has

successfully completed training. Each certificate is a valid certificate in first-aid training, and includes the name of the employee, the date(s) of the training, and the signature of the person who performed the training and evaluation.

Retraining

Trained employees are retrained at least every two years to keep their knowledge and skills current.

First Aid Procedures

Minor First Aid Treatment

First aid kits are stored in the office and at each site. If you sustain an injury or are involved in an accident requiring minor first aid treatment:

- Inform your supervisor.
- Administer first aid treatment to the injury or wound.
- If a first aid kit is used, indicate usage on the accident investigation report.
- Access to a first aid kit is not intended to be a substitute for medical attention.
- Provide details for the completion of the accident investigation report.

Non-Emergency Medical Treatment

For non-emergency work-related injuries requiring professional medical assistance, management must first authorize treatment. If you sustain an injury requiring treatment other than first aid:

- Inform your supervisor.
- Proceed to Concentra Medical. Your supervisor will assist with transportation to Concentra Medical.
- Provide details for the completion of the accident investigation report.

Emergency Medical Treatment

If you sustain a severe injury requiring emergency treatment:

- Call for help and seek assistance from a co-worker.
- Use the emergency telephone numbers and instructions posted next to the telephone in your work area to request assistance and transportation to the local hospital emergency room.
- Provide details for the completion of the accident investigation report.

Wounds:

Minor: Cuts, lacerations, abrasions, or punctures-

- Wash the wound using soap and water; rinse it well.
- Cover the wound using clean dressing.

Major: Large, deep and bleeding

- Stop the bleeding by pressing directly on the wound, using a bandage or cloth.
- Keep pressure on the wound until medical help arrives.

Broken Bones:

- Do not move the victim unless it is absolutely necessary.
- If the victim must be moved, "splint" the injured area. Use a board, cardboard, or rolled newspaper as a splint.

Burns:

Thermal (Heat)

- Rinse the burned area, without scrubbing it, and immerse it in cold water; do not use ice water,
- Blot dry the area and cover it using sterile gauze or a clean cloth.

Chemical

- Flush the exposed area with cool water immediately for 15 to 20 minutes.

Eye Injury:

Small particles

- Do not rub your eyes.
- Use the corner of a soft clean cloth to draw particles out, or hold the eyelids open and flush the eyes continuously with water.

Large or stuck particles

- If a particle is stuck in the eye, do not attempt to remove it.
- Cover both eyes with bandage.

Chemical

- Immediately irrigate the eyes and under the eyelids, with water, for 30 minutes.

Neck and Spine Injury:

- If the victim appears to have injured his or her neck or spine, or is unable to move his or her arm or leg, do not attempt to move the victim unless it is absolutely necessary.

Heat Exhaustion:

- Loosen the victim's tight clothing.
- Give the victim "sips" of cool water.
- Make the victim lie down in a cooler place with the feet raised.

Accident Reporting

After the immediate needs of an injury or illness emergency have been met, we require our employees to report the event to their supervisor. Extremely minor injuries, like a small bruise, do not need to be reported. However, those injuries and illnesses involving professional treatment, time away from work, or a near miss of a more serious accident, must be reported to an employee's supervisor. Even injuries that do not become apparent until after the cause must be reported. For example, back pain that develops over a period of time must be reported.

Recordkeeping

Our Human Resources Director is responsible for maintaining records and documentation relating to first aid, injuries, illnesses, and accidents.

Program Evaluation

By having our CSO thoroughly evaluate and, as necessary, revise our program, we ensure our program's effectiveness and prevent or eliminate any problems. Program evaluation is performed at least annually or when one of our procedures proves not to be the most effective response.

Section 8

Forklift Operation Plan

Forklift Operation Plan

Reference: 29 CFR 1926.600, 1926.602(c), & 1926.441

This written Forklift Operation Program establishes guidelines to be followed whenever any of our employees work with powered industrial trucks at this company. The rules established are to be followed to:

- Provide a safe working environment,
- Govern operator use of powered industrial trucks, and
- Ensure proper care and maintenance of powered industrial trucks.

The procedures here establish uniform requirements designed to ensure that powered industrial truck safety training, operation, and maintenance practices are communicated to and understood by the affected employees. These requirements also are designed to ensure that procedures are in place to safeguard the health and safety of all employees.

It is our intent to comply with the requirements of OSHA's 29 CFR 1926.600, 1926.602(c), and 1926.441 for construction activities. These regulations have requirements for powered industrial truck operations, including that for battery care and charging. We also comply with applicable requirements of design, construction, stability, inspection, testing, maintenance, and operation of ASME/ANSI B56.1-1969, Safety Standard for Low Lift and High Lift Trucks.

Training

Our CSO will identify all new employees in the employee orientation program and make arrangements to schedule training.

Prior to training a determination is made if the potential powered industrial truck operator is capable of performing the duties necessary to be a competent and safe driver. This is based upon his/her physical and mental abilities to perform job functions that are essential to the operation of the vehicle.

These capabilities include the level at which the operator must:

- See and hear within reasonably acceptable limits, (this includes the ability to see at a distance and peripherally, and in certain instances, it is also necessary for the driver to discern different colors, primarily red, yellow, and green);
- Endure the physical demands of the job; and
- Endure the environmental extremes of the job, such as the ability of the person to work in areas of excessive cold or heat. An operator must be able to climb onto and off of a truck, to sit in the vehicle for extended periods of time, and to turn his/her body to look in the direction of travel when driving in reverse.

Initial Training

During an operator's initial training, the instructor(s) combine(s) both classroom instruction and practical training.

Each type of powered industrial truck has a different "feel" to it, and that makes operating it slightly different from operating other industrial trucks. The work areas where these trucks are being used also present particular hazards. For these reasons, it is impractical to develop a single "generic" training program that fits all of our powered industrial trucks. During training the operational hazards of our powered industrial trucks are covered, including:

- General hazards that apply to the operation of all or most powered industrial trucks;
- Hazards associated with the particular make and model of the truck;
- Hazards of the workplace in general; and
- Hazards of the particular workplace where the vehicle is operated.

If each potential operator has received training in any of the elements of our training program, and is evaluated to be competent, they need not be retrained in those elements before initial assignment in our workplace. The training must be specific for the types of trucks that employee will be authorized to operate and for the type of workplace in which the trucks will be operated.

Training Certification

After an employee has completed the training program, the instructor will determine whether the potential driver can safely perform the job. At this point, the trainee will take a performance test or practical exercise through which the instructor(s) will decide if the training has been adequate. All powered industrial truck trainees are tested on the equipment they will be driving.

An outside vendor who is qualified in the certification of forklift operation conducts training.

Performance Evaluation

Each certified powered industrial truck operator is evaluated at least once every 3 years to verify that the operator has retained and uses the knowledge and skills needed to drive safely.

Refresher Training

Refresher training is triggered by any of the following situations:

- If the operator is involved in an accident or a near-miss incident;
- If the operator has been observed driving the vehicle in an unsafe manner;
- When the operator is assigned to a different type of truck;
- If it has been determined during an evaluation that the operator needs additional training; or
- When there are changes in the workplace that could affect safe operation of the truck. This could include a different type of paving, reconfiguration of the storage racks, new construction leading to narrower aisles, or restricted visibility.

Current Certified Truck Operators

A list of currently certified forklift operators is available upon request.

Inspections

Pre-Operational Inspection Procedures

The company requires operators to perform pre-operational equipment checks on powered industrial trucks prior to the beginning of each shift in which those trucks will be utilized to ensure the safe operating condition of the vehicle. The pre-operational check is performed by completing a daily truck inspection checklist.

No blank spaces are allowed on the form. If an item does not apply, we use the code N/A. We also require that operators fill out the comment section thoroughly and accurately if there are any operational or visual defects. That way our mechanic can pinpoint and repair the problem before the truck becomes unsafe to operate.

Periodic Inspection Procedures

Periodic inspections are in conjunction with the particular powered industrial truck's maintenance or service schedule. Maintenance schedules are normally expressed in days and operating or running hours. Inspections and maintenance or repair beyond the recommended service schedules are done by authorized workshops and/or service technicians.

Operating Procedures

Powered industrial trucks can create certain hazards that only safe operation can prevent. That's why we have created sets of operating procedures. Our operating procedures follow.

Driving

Driving a powered industrial truck is fundamentally different than driving a car or other trucks. In fact, powered industrial trucks:

- Are usually steered by the rear wheels,
- Steer more easily loaded than empty,
- Are driven in reverse as often as forward,
- Are often steered with one hand, and
- Have a center of gravity toward the rear, shifting to the front as forks are raised.

Because of the design of powered industrial trucks, they have a very short rear wheel swing. This means that, at high speeds, sudden turns can tip them and could result in serious injury and damage. Speed can cause the center of gravity to shift dramatically. Similarly, speeding over rough surfaces can cause tipping.

Load Lifting and Carrying

Powered industrial trucks can lift only so much. Each truck has its own load capacity, which is indicated on the rating plate. Powered industrial trucks also have three-point suspension that forms an imaginary triangle from the left front wheel to the right front wheel to the point between the two back wheels. The center of gravity for a powered industrial truck must lie somewhere within this triangle or else the truck will tip over. The load and its position on the forks, as well as traveling speed and slopes, all affect the center of gravity. Loads, themselves, have gravity with which to contend. Loads need special care so that they do not fall.

Fuel Handling and Storage

Some of our powered industrial trucks operate with highly flammable and combustible fuels.

The storage and handling of liquid fuels, including gasoline and diesel fuel are done in accordance with NFPA Flammable and Combustible Liquids Code (NFPA 30-1969).

The storage and handling of liquefied petroleum gas fuel is done in accordance with NFPA Storage and Handling of Liquefied Petroleum Gases (NFPA 58-1969).

All employees who handle or use flammable liquids are instructed in their safe handling and use and made aware of the specific OSHA requirements for what they are doing with the liquids.

Battery Charging and Changing

Batteries present a hazard because they contain corrosive chemical solutions, either acid or alkali. During recharging, a worker may be exposed not only to the acid solution but also to hydrogen gas that is produced during the recharging process. Because of the hazards involved in battery charging and changing, only personnel who have been trained in the appropriate procedures, understand the dangers involved, and know the appropriate precautions to take may be allowed to perform this work.

Good housekeeping procedures are essential. We keep the area clean and free of any combustible materials. We also maintain a moderate temperature range suitable for battery maintenance.

Smoking is prohibited in charging areas. Battery charging generates hydrogen gas that may present an explosion hazard. This precaution also applies to open flames, sparks, or electric arcs. An effective means of fire protection must be provided in the area.

Carbon Monoxide Awareness

Powered industrial trucks with internal combustion engines produce carbon monoxide (CO), an odorless, colorless, and deadly gas produced by the incomplete burning of any material that contains carbon. These materials include gasoline, natural gas, propane, coal, and wood. The most common source of CO is the internal combustion engine. Trucks, cars, forklifts, floor polishers, pressure washers, or any other machine powered by fossil fuels generates CO.

If inhaled, CO restricts the ability of your blood system to carry oxygen to the body tissues that need it. Overexposure combined with less oxygen results in carbon monoxide poisoning. Mild poisoning can result in headaches, tightness in the chest, dizziness, drowsiness, inattention, fatigue, flushed face, or nausea. If you continue exposure lack of coordination, confusion, weakness, or loss of consciousness may result. A heart condition, smoking, taking drugs or alcohol, and pregnancy can aggravate CO poisoning. Physical activity, too, can make a situation worse. That's because your body needs more oxygen to exert itself. Severe poisoning can kill you within minutes, sometimes without warning symptoms. The more CO there is in the air and the longer the exposure, the greater the danger.

Personal Protective Equipment (PPE)

All operators required to utilize PPE are trained:

- When PPE is necessary;
- What PPE is necessary;
- How to properly put on, take off, adjust, and wear PPE;
- Limitations of the PPE; and
- Proper care, maintenance, useful life, and disposal of PPE.

Pedestrians

Because powered industrial trucks are typically used near pedestrians, we require both pedestrians and powered industrial truck operators to watch out for each other.

Maintenance

Investing time and effort into the proper upkeep of our equipment results in day-to-day reliability. Keeping up with the manufacturer's recommended maintenance and lubrication schedules, and completing the proper records, will also increase our trucks' longevity and enhance its resale value.

Periodic maintenance (those completed monthly, every 6 months, or annually) is done by a factory-trained expert or a dealer. All maintenance records are retained in the main office.

Section 9

Hazard Communication Program

Hazard Communication Program

Reference: 29 CFR 1910.200, 1926.59

The purpose of this program is to inform interested persons, including employees, that HEI is complying with the OSHA Hazard Communication Standard, Title 29 Code of Federal Regulations 1910.1200, by compiling a hazardous chemicals list, by using material safety data sheets (MSDSs), by ensuring that containers are labeled, and by providing our employees with training and information availability.

This program applies to all work operations in our company where employees may be exposed to hazardous substances under normal working conditions or during an emergency situation.

Our CSO is the program coordinator, acting as the representative of the corporation, who has overall responsibility for the program. He will review and update the program, as necessary. Copies of the written program may be obtained from our administrative assistant at the corporate office.

All employees, or their designated representatives, can obtain further information on this written program, the hazard communication standard, applicable MSDSs, and chemical information lists from our CSO at the corporate office. Under this program, our employees will be informed of the contents of the Hazard Communication Standard, the hazardous properties of chemicals with which they work, safe handling procedures, and measures to take to protect themselves from these chemicals. Our employees will also be informed of the hazards associated with non-routine tasks, such as the cleaning of reactor vessels, and the hazards associated with chemicals in unlabeled pipes.

If after reading this program, you find that improvements can be made, please contact the CSO. We encourage all suggestions because we are committed to the success of our written hazard communication program. We strive for clear understanding, safe behavior, and involvement in the program from every level of the company.

Hazard Evaluation Procedures

Our chemical inventory is a list of hazardous chemicals known to be present in our workplace. Anyone who comes into contact with the hazardous chemicals on the list needs to know what those chemicals are and how to protect themselves. That is why it is so important that hazardous chemicals are identified, whether they are found in a container or generated in work operations (for example, welding fumes, dusts, and exhaust fumes). The hazardous chemicals on the list can cover a variety of physical forms including liquids, solids, gases, vapors, fumes, and mists. Sometimes hazardous chemicals can be identified using purchase orders. Identification of others requires an actual inventory of the facility.

Each group must consult with our CSO regularly to insure a complete inventory list and that updates are completed as necessary.

Our CSO, keeps the chemical inventory list, along with related work practices used in our facility located in his office where it is accessible during work hours.

HEI does not, under and circumstances manufacture hazardous chemicals.

After the chemical inventory is compiled, it serves as a list of every chemical for which an MSDS must be maintained.

Material Safety Data Sheets (MSDSs)

The MSDSs we use are fact sheets for chemicals which pose a physical or health hazard in the workplace. MSDSs provide our employees with specific information on the chemicals they use.

Each person who purchases chemicals is responsible for obtaining MSDSs at for our facility. He will contact the chemical manufacturer or vendor if additional research is necessary. Our CSO must clear all new procurements for the company. He will then maintain the main inventory lists.

The material safety data sheets are kept in our CSO's office and are available upon request from his office.

To request a MSDS sheet for products that are not received at the time of shipment, provide the following information and turn it into the CSO to obtain a copy.

- **Company product was purchased from**
- **Date of Request**
- **Phone and fax number person requesting information**
- **Street Address, City/ State / Zip**
- **Requestor's Name**

Product Description:

- **Full Label Name**
- **Manufacturer**
- **Vendor (if known)**
- **Vendor Address**
- **Vendor Telephone Number**
- **Container Size**
- **Any other information that may be helpful in making the request for information**

We do not generate MSDSs for any chemicals.

Labels and Other Forms of Warning

Labels list at least the chemical identity, appropriate hazard warnings, and the name and address of the manufacturer, importer or other responsible party. The chemical identity is found on the label, the MSDS, and the chemical inventory. Therefore, the chemical identity links these three sources of information. The chemical identity used by the supplier may be a common or trade name, or a chemical name. The hazard warning is a brief statement of the hazardous effects of the chemical (i.e., "flammable," or "causes lung damage"). Labels frequently contain other information, such as precautionary measures (i.e., "do not use near open flame"), but this information is provided voluntarily by our company and is not required by the rule. Our labels are legible and prominently displayed, though their sizes and colors can vary.

Our CSO is responsible for ensuring that all hazardous chemicals containers at each site are properly labeled and updated, as necessary. Our CSO also ensures that newly purchased materials are checked for labels prior to use.

Properly trained and designated personnel at each client site are responsible for ensuring the proper labeling of any shipped containers. He will refer to the corresponding MSDS to assist other employees in verifying label information.

If employees transfer chemicals from a labeled container to a portable container that is intended only for their IMMEDIATE use, no labels are required on the portable container.

The following procedures are used to review and update label information when necessary and to ensure that labels that fall off or become unreadable are immediately replaced:

- Random walk-thrus
- Annual audits by the safety officer
- Inventory and evaluations

Training

Everyone who works with or is potentially "exposed" to hazardous chemicals will receive initial training and any necessary retraining on the Hazard Communication Standard and the safe use of those hazardous chemicals by our CSO or his/her designated representative. "Exposure" means that "an employee is subjected to a hazardous chemical in the course of employment through any route of entry (inhalation, ingestion, skin contact or absorption, etc.) and includes potential (e.g., accidental or possible) exposure." Whenever a new hazard is introduced or an old hazard changes, additional training is provided.

Information and training is a critical part of the hazard communication program. We train our employees to read and understand the information on labels and MSDSs, determine

how the information can be obtained and used in their own work areas, and understand the risks of exposure to the chemicals in their work areas as well as the ways to protect themselves.

Our goal is to ensure employee comprehension and understanding including being aware that they are exposed to hazardous chemicals, knowing how to read and use labels and MSDSs, and appropriately following the protective measures we have established. We ask our employees to consult with our CSO if explanation is necessary. As part of the assessment of the training program, Human Resources Director and CSO ask for input from employees regarding the training they have received, and their suggestions for improving it. In this way, we hope to reduce any incidence of chemical source illnesses and injuries.

All employees receive training for hazard communication.

Training Content

Training content is organized according to the standards and current products and processes employees are exposed to at any of the HEI sites.

The training plan emphasizes these elements:

- Summary of the standard and this written program, including what hazardous chemicals are present, the labeling system used, and access to MSDS information and what it means.
- Chemical and physical properties of hazardous materials (e.g., flash point, reactivity) and methods that can be used to detect the presence or release of chemicals (including chemicals in unlabeled pipes).
- Physical hazards of chemicals (e.g., potential for fire, explosion, etc.).
- Health hazards, including signs and symptoms of exposure, associated with exposure to chemicals and any medical condition known to be aggravated by exposure to the chemical.
- Procedures to protect against hazards (e.g., engineering controls; work practices or methods to assure proper use and handling of chemicals; personal protective equipment required, and its proper use, and maintenance; and procedures for reporting chemical emergencies).

The procedure to train new employees at the time of their initial assignment is included the HazCom Program as part of their employee safety orientation. We train employees when a new hazard is introduced by discussing the product and exposure when it arrives.

Hazards of Non-routine Tasks

When employees are required to perform hazardous non-routine tasks that have the potential to expose workers to hazardous chemicals, we inform employees of these hazards by:

- Notifying each affected employee of the non-routine hazard
- Require each affected employee to review the hazards analysis for the chemical
- Require each affected employee to review any MSDS's for the new chemical
- Require each employee to acknowledge the precautionary measures and PPE requirements of the new chemical/non-routine task.

Hazards of Unlabeled Pipes

We inform employees of the hazards of chemicals contained in unlabeled pipes in their work areas by:

- Conducting a walk-thru of the area and documenting the unlabeled pipes on in the hazard analysis for the area

Multi-Employer Facility

When contractors or any other employers' workers (i.e., painters, electricians, or plumbers) will be working at this workplace, our CSO, will:

- Provide the other employer(s) with MSDSs for any of our chemicals to which their employees may be exposed.
- Relay necessary label and/or emergency precautionary information to the other employer(s).

Each contractor bringing chemicals on-site must provide the PM and our CSO with the appropriate hazard information on these substances, including the MSDSs, the labels used and the precautionary measures to be taken in working with these chemicals.

Additional Information

All employees, or their designated representatives, can obtain further information on this written program, the hazard communication standard, applicable MSDSs, and chemical information lists from the corporate office.

Section 10

Heavy Equipment Operation **Procedures for Construction**

Heavy Equipment Operation Procedures for Construction

Reference: 29 CFR 1926 Subpart O

Purpose

The written Heavy Equipment Operation Procedures for Construction establish guidelines to be followed whenever any of our employees work with heavy equipment at HEI the rules are established to:

- Provide a safe working environment,
- Govern operator use of heavy equipment, and
- Ensure proper care and maintenance of heavy equipment.

These procedures establish uniform requirements designed to ensure that heavy equipment operation practices are communicated to and understood by the affected employees. These requirements are also designed to ensure that procedures are in place to protect the health and safety of all employees.

It is our intent to comply with the requirements of 29 CFR 1926, Subpart O for construction activities. This regulation has requirements for heavy equipment operations. We also comply with the applicable requirements of:

Standard or Regulation:	Name:
ANSI B56.1-1969	<i>Safety Standards for Powered Industrial Trucks</i>
SAE J166 -1971	<i>Trucks and Wagons</i>
SAE J236-1971	<i>Self-Propelled Graders</i>
SAE J237-1971	<i>Front End Loaders and Dozers</i>
SAE J319b-1971	<i>Self-Propelled Scrapers</i>
SAE J386-1969	<i>Seat Belts for Construction Equipment</i>
SAE J333a-1970	<i>Operator Protection for Agricultural and Light Industrial Tractors</i>
SAE J321a-1970	<i>Fenders for Pneumatic-Tired Earth moving Haulage Equipment</i>
29 CFR 1926.20(b)(4)	<i>General Safety and Health Provisions</i>
29 CFR 1926.178(l)	<i>Powered industrial trucks</i>

Administrative Duties

Our CSO is responsible for developing and maintaining the written Heavy Equipment Operation Procedures for Construction. These procedures are kept at the jobsite trailer.

Heavy Equipment at Our Worksite

A current list of our company's heavy equipment is available upon request.

Heavy Equipment Training

It is the policy of HEI to permit only those employees qualified by training or experience to operate heavy equipment. Our foremen and CSO will identify new employees in the employee orientation program who need heavy equipment training.

Our company coordinates training of our employees in heavy equipment operation. Our CSO has the job duty to coordinate and ensure the training of employees on heavy equipments operation. The qualifications of the heavy equipment trainer are verified prior to training. We communicate our training standards and requirements for heavy equipment training to the agency.

Our CSO is responsible for keeping heavy equipment training certification records.

A list of currently trained employees is available upon request from our CSO at the jobsite trailer.

Inspections

Heavy Equipment Competent Person

A competent person is someone 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.

Pre-shift

The company performs a pre-shift inspection to assure that parts, equipment, and accessories are in safe operating condition and free of apparent damage.

Cab Inspections

Our company performs the equipment and vehicle cab inspections prior to equipment use.

Periodic Inspections

We perform the following periodic equipment and vehicle inspections on equipment that has not been utilized over a period of time to monitor and maintain safe equipment storage.

Operating Procedures

Heavy equipment can create certain hazards that only safe operation can prevent. Some of the heavy equipment safe operating procedures that can be implemented include:

- Driving
- Load Lifting and Handling
- Fuel Handling and Storage
- Battery Charging and Changing
- Carbon Monoxide
- Overhead Obstacles
- Other Operating Procedures

Maintenance

Any deficiencies found in our heavy equipment are repaired, or defective parts replaced, before continued use. However, no modifications or additions that affect the capacity or safe operation of the equipment may be made without the manufacturer's written approval. If such modifications or changes are made, the capacity, operation, and maintenance instruction plates, tags, or decals must be changed accordingly. In no case may the original safety factor of the equipment be reduced.

The Foreman is responsible for ensuring the heavy equipment is capable of safe and reliable operation after any major repair or design modification.

While defective parts may be found, we prefer to invest time and effort into the proper upkeep of our equipment, which results in day-to-day reliability. Keeping up with the manufacturer's recommended maintenance schedules, and completing the proper records, will also increase our heavy equipments' longevity and enhance resale value.

Our CSO completes a receiving or delivery inspection whenever our company purchases heavy equipment, and performs the recommended "breaking in" inspections and maintenance.

The Foreman and operator follow the manufacturer's operator instruction manual for daily maintenance.

Our company does periodic maintenance (those completed monthly or less frequently) in-house.

First Aid and Protective Measures

We supply provisions for rendering first aid and medical assistance in accordance with 29 CFR 1926 Subpart D.

Our employees engaged in site clearing are protected from hazards of irritant and toxic plants and suitably instructed in the first aid treatment available. A list of those employees authorized to do site clearing is available upon request.

Load Ratings

Our company follows all equipment load ratings.

We comply with the safety requirements, ratios, or limitations applicable to machines or attachment usage covered in Power Equipment and Shovel Associations Standards No. 1 and No. 2 of 1968, and No. 3 of 1969.

Our industrial trucks meet the requirements of 29 CFR 1926.600 and the following:

- Lift trucks, stackers, etc., shall have the rated capacity clearly posted on the vehicle so as to be clearly visible to the operator. When auxiliary removable counterweights are provided by the manufacturer, corresponding alternate rated capacities also shall be clearly shown on the vehicle. These ratings shall not be exceeded.
- No modifications or additions which affect the capacity or safe operation of the equipment shall be made without the manufacturer's written approval. If such modifications or changes are made, the capacity, operation, and maintenance instruction plates, tags, or decals shall be changed accordingly. Our Foreman is the person who keeps the records of these modifications or additions and report them to the CSO at the jobsite trailer. In no case shall the original safety factor of the equipment be reduced.
- If a load is lifted by two or more trucks working in unison, the proportion of the total load carried by any one truck shall not exceed its capacity.

Recordkeeping

Our CSO maintains records related to heavy equipment safety at the main office.

Appendices

Current List of Equipment

Section 11

Housekeeping Program

for

Construction

Housekeeping Program for Construction

Reference: 29 CFR 1926.25

Good housekeeping is a necessary requirement for maintaining safety at construction sites. Clean and tidy work sites hold fewer hazards for all employees. Accidents and injuries are avoided and productivity improved where good housekeeping is a daily occurrence. This document informs interested persons, including employees that our company is complying with OSHA's housekeeping requirements, including:

- 29 CFR 1926.25 - Housekeeping, and
- 29 CFR 1926.151 - Fire Prevention.

Many other regulations also lead to housekeeping procedures. Common sense and safety concerns encourage standardization of housekeeping measures in the workplace. HEI has developed a set of written housekeeping procedures. In this way we have standardized housekeeping measures and are providing clear expectations and procedures for housekeeping at our company.

Good housekeeping is possibly the most visible evidence of management and employee concern for safety and health that a company displays on a day-to-day basis. Orderliness in our workplace contributes to a safe working environment by minimizing obstacles and potential safety and health threats such as spills, trip hazards, etc. In fact, we have nine good reasons for housekeeping:

- Prevents accidents
- Prevents fire
- Saves time
- Gives control to our workers
- Increases production
- Gives our workers the freedom to move
- Gives our workers pride
- Protects our products and equipment
- Reduces our waste.

Purpose Statement

This document serves as the written procedures for general housekeeping at HEI. These guidelines provide housekeeping standards in this facility to help ensure a safe work environment at all times in all areas.

Administrative Duties

Our CSO is responsible for developing and maintaining the program. A copy of the plan may be reviewed by employees. It is located in the main office. In addition, our foremen

and CSO are responsible for maintaining any records related to the housekeeping program at each jobsite.

Walk-Around Assessment

Foremen and our CSO walk(s) around the jobsites for an assessment to identify main housekeeping issues. These persons look for a lack of order, unremoved spills or obstructions, or other hazards due to poor organization or poor housekeeping. They ask employees working in each area to identify and recommend corrective actions for their area. They also walk around the grounds to see if there is refuse or an untidy appearance due to storing materials haphazardly.

Housekeeping Procedures

It is the intent of this company to standardize housekeeping measures, meet OSHA requirements, and encourage safety. The procedures listed below cover many locations in our facility.

Storage Areas

Open yard storage housekeeping procedures include:

- Combustible materials must be piled with due regard to the stability of piles and in no case higher than 20 feet.
- Driveways between and around combustible storage piles must be at least 15 feet wide and maintained free from accumulation of rubbish, equipment, or other articles or materials. Driveways must be so spaced that a maximum grid system unit of 50 feet by 150 feet is produced.
- The entire storage site must be kept free from accumulation of unnecessary combustible materials. Weeds and grass must be kept down and a regular procedure provided for the periodic cleanup of the entire area.
- When there is a danger of an underground fire, that land must not be used for combustible or flammable storage.
- Method of piling must be solid wherever possible and in orderly and regular piles. No combustible material may be stored outdoors within 10 feet of a building or structure.

Here is our indoor storage housekeeping measures:

- Storage may not obstruct, or adversely affect, means of exit.
- All materials must be stored, handled, and piled with due regard to their fire characteristics.
- Noncompatible materials, which may create a fire hazard, must be segregated by a barrier having a fire resistance of at least 1 hour.
- Material must be piled to minimize the spread of fire internally and to permit convenient access for firefighting. Stable piling shall be maintained at all times.

Aisle space shall be maintained to safely accommodate the widest vehicle that may be used within the building for firefighting purposes.

- Clearance of at least 36 inches must be maintained between the top level of the stored material and the sprinkler deflectors.
- Clearance must be maintained around lights and heating units to prevent ignition of combustible materials.
- A clearance of 24 inches must be maintained around the path of travel of fire doors unless a barricade is provided, in which case no clearance is needed. Material must not be stored within 36 inches of a fire door opening.

Machinery and Equipment

- Machinery and equipment are to be maintained and stored in designated trailers and toolboxes at the jobsites.

Aisles, Walkways, and Floor

Our facility does the following things to keep aisles, walkways and floors clean and open:

- Provide sufficient safe clearances and access to any and all work stations and work areas, fire aisles, fire extinguishers, fire blankets, electrical disconnects, safety showers, other emergency aids, doors, and access to stairways.
- Clearly mark to distinguish walkways from areas not for pedestrian traffic.
- Keep aisles and walkways free of physical obstructions that would prevent access, including path-blocking objects, liquid or solid spills, and other obstructions.
- Keep aisles at least 3 feet wide where necessary for reasons of access to doors, windows, or standpipe connections.
- Keep stairs clean, dry, and free of waste, well-lit, and provided with adequate hand rails and treads that are in good condition.
- Keep floors clean; dry (dry as possible); slip-resistant; and free of waste, unnecessary material, oil and grease, protruding nails, splinters, holes, or loose boards.
- Provide an adequate number of waste receptacles at accessible locations throughout all work areas.

Training

All of our employees, including maintenance and contractor employees, need to fully understand the safety and health hazards of poor housekeeping and improper chemical storage to protect themselves, their fellow employees, and the citizens of nearby communities. While training in Hazard Communication will help employees to be more knowledgeable about the chemicals they work with as well as familiarize them with reading and understanding MSDSs, we will also train them as part of our Housekeeping Program, covering housekeeping procedures and safe work practices, hazard reporting, and other areas pertinent to housekeeping.

Our CSO trains new employees at the time of their initial assignment and keeps track of their training. When a new procedure is introduced our CSO retrain all employees and keeps track of their retraining.

Discipline

Our company imposes and enforces the following disciplinary measures for employees who fail to abide by the housekeeping procedures.

Contracting

Our facility uses contractors to perform work in and around processes that involve housekeeping procedures. Our goal is to hire contractors who accomplish the desired job tasks without compromising the safety and health of employees at the facility.

Our facility evaluates the contract employer's safety performance and programs by conducting a daily walk through of the jobsites to address issue corrective actions to the contractors. We inform contract employers of the known hazards which could develop from poor housekeeping, but which relate to the contractor's work.

Employee Participation

Our employees are a significant ally in implementing and maintaining an effective housekeeping program for the facility. HEI strongly encourages employees to participate in:

- Conducting and developing the housekeeping program elements and hazard assessments as well as incident investigation findings.
- Obtaining access to the housekeeping program including any hazard analyses.

Incident Investigation

Incident investigation is the process of identifying the underlying causes of incidents and implementing steps to prevent similar events from occurring. With our incident investigations, we intend to learn from past experiences and thus avoid repeating past mistakes. Some of the incidents could be "near misses," meaning that a serious consequence did not occur, but could have.

Our Foremen and designated CSO are responsible for promptly addressing and resolving an incident report's findings and recommendations.

Section 13

Control of Hazardous Energies **Lockout / Tagout**

Lockout/Tagout - Energy Control Program

Reference: 29 CFR 1910.147

Purpose

This procedure establishes the minimum requirements for controlling hazardous energy whenever maintenance or repair is done on systems or machinery at construction sites. It is used to ensure that the system, machine or equipment is stopped, isolated from all potentially hazardous energy sources and locked out before employees perform any servicing or maintenance where the unexpected energization or start-up of the system, machine or equipment or release of stored energy could cause injury.

Authorized and Affected Employees

Authorized and affected employees subject to the requirements of this program are trained on their duties and the hazardous energies they are exposed to.

Systems, Machinery and Equipment

The systems, machinery and equipment in this facility that falls under the Control of Hazardous Energy Standard are identified in the hazard evaluation conducted prior to the start of work at each jobsite.

Lockout is the preferred method of isolating systems, machines or equipment from energy sources. Tagout is to be performed instead of lockout only when there is no way to lockout a system or machine.

Lockout/Tagout Procedures

- Notify all affected employees that a lockout system is going to be utilized and the reason thereof. The authorized employee shall know the type and magnitude of energy that the machine or equipment utilizes and shall understand the hazards thereof.
- If the machine or equipment is operating, shut it down by the normal stopping procedure (depress stop button, open toggle switch, etc.). ,
- Operate switch, valve, or other energy isolating device(s) so that the equipment is isolated from its energy source(s). Stored energy such as that in springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or water pressure, etc.) must be dissipated or restrained by methods such as repositioning, block, bleeding down, etc.

- Lockout the energy-isolating devices with assigned individual lock(s).
- If there is a possibility of re-accumulation of stored energy, verification shall be performed and continued until the servicing or maintenance is completed, or until the possibility of such accumulation no longer exists. **CAUTION: RETURN OPERATING CONTROLS TO NEUTRAL OR "OFF" POSITION AFTER EACH TEST .**
- The equipment is now locked out.
- In the preceding steps, if more than one individual is required to lockout equipment, each shall place his or her own personal lockout device on the energy-isolating device(s). When an energy-isolating device cannot accept multiple locks, a multiple lockout device (hasp) may be used. If lockout is used, a single lock may be used to lockout the machine or equipment, with the key being placed in a lockout box or cabinet which allows the use of multiple locks to secure it. Each employee will then use his or her own lock to secure the box or cabinet. As each person no longer needs to maintain his or her lockout protection, that person will remove his or her lock from the box or cabinet.

Restoring Systems, Machines or Equipment to Normal Operation

After the servicing and/or maintenance is completed and equipment is ready for normal production operations, check the area around the machines or equipment to ensure that no one is exposed.

After all tools have been removed from the machine or equipment, guards have been reinstalled, and employees are in the clear, remove all lockout devices. Operate the energy-isolating devices to restore energy to the machine or equipment.

Emergency Removal of Padlock

In the event a lockout device must be removed by anyone other than the person who installed the lockout, the project foremen will comply with the following steps and document in writing to the Safety Coordinator .

- Call employee
- Attempt outside plant contact
- Notify employee's supervisor
- Notify safety coordinator or designate
- Remove lock

Periodic Inspection

A periodic inspection is done, looking at the energy control procedures performed to ensure that the procedure and requirements of the standard are being followed.

Section 14

Machine and Equipment Guarding

Machine/Equipment Safety & Guarding Plan

Reference: 29 CFR 1910 Subpart O and 1926 Subpart I

Purpose

It is the policy of this company to permit only trained and authorized employees to operate machinery, tools, or equipment at any time. This policy is applicable to:

- daily operators of machinery, tools, and equipment; and
- those who only occasionally have cause to use machinery, tools, or equipment.

This written Machine/Equipment Safety and Guarding Plan describes methods and practices for care and use of machines, equipment, and tools that can be read and understood by all Foremen and employees at HEI This written plan is intended to be used to:

- create an awareness of the hazards among our workforce,
- standardize procedures for use and care of the equipment,
- provide a consistent format for training employees on the proper procedures to be used,
- minimize the possibility of injury or harm to our employees, and
- demonstrate HEI's compliance with machine safety and equipment usage requirements for general industry in Subpart O and P of 29 CFR 1910.

As our company is a construction employer, this plan is also intended to demonstrate HEI's compliance with machine and tool safety requirements for construction in Subpart I of 29 CFR 1926.

Administrative Duties

Our CSO is responsible for developing and maintaining this written Machine/Equipment Safety and Guarding Plan. This person is solely responsible for all facets of the plan and has full authority to make necessary decisions to ensure the success of this plan.

Pre-Operational Procedures

Hand tools must be inspected prior to use to ensure that:

- For tools with jaws, jaws are not sprung to the point of slippage.
- For impact tools, they are free of mushroom heads.
- For tools with wooden handles, the handles are free of splinters or cracks and are tight in the tool.
- The tool is otherwise safe for use.

Any machine or power-operated tool, function, or process which may cause injury will be guarded. All permanent guards are securely attached in good working order and all removable guards are in place on the machine or equipment before starting use. Guards meet these minimum general requirements:

- Prevent contact - The guards prevent hands, arms, or any part of an employee's body or clothing from making contact with dangerous moving parts.
- Secure - Guards are not easy to remove or alter. Guards and safety devices are made of durable material that will withstand the conditions of normal use. They are firmly secured to the machine.
- Protect from falling objects - The guards ensure that no objects can fall into moving parts.
- Create no new hazards - If a guard creates a hazard of its own such as shear point, a jagged edge, or an unfinished surface which can cause a laceration, then employees must not use the piece of machinery or equipment.

If a guard is defective, damaged, or in any way does not meet the requirements of these procedures, employees may not use the machine, and must immediately notify your foreman.

Where the operation of a machine or accidental contact with it can injure employees in the vicinity, the hazard is either controlled or eliminated.

Employees must locate and put on necessary and appropriate personal protective equipment (PPE) for use with the machinery or equipment before beginning use. PPE can be obtained from the foreman or CSO.

Employees must make sure that work areas are well-lit, dry, and clean before beginning work. Sawdust, paper and oily rags are a fire hazard and can damage machinery and equipment.

Employees must change clothing or take off jewelry that could become entangled in the machinery or equipment they are to use.

Only qualified personnel may install or repair equipment. Employees must notify their Foreman if machinery or equipment is in need of any type of repair.

If a lock or tag is in place on a piece of machinery or equipment, it may not be removed and the machinery or equipment may not be used.

Operating Procedures

Employees may not remove a guard for any reason while operating any piece of machinery or equipment.

All necessary personal protective equipment (PPE) is worn while the machinery or equipment is running.

If an employee is distracted or unable to focus on the work with the machinery or equipment, they must stop work with that machinery or equipment.

Upon finishing with a piece of equipment, tool, or machine, basic maintenance must be performed. It should be kept sharp, oiled, and stored properly, as appropriate.

Problem equipment must be immediately reported to the foreman so it can be repaired or replaced.

Employees must always use the proper piece of machinery or equipment for the job.

Electric cables and cords are kept clean and free from kinks. Equipment may never be carried by its cord.

Training Program

Under no circumstances will an employee operate a piece of machinery or equipment until he/she has successfully completed this company's machinery and equipment training program. This includes all new operators or users of machinery and equipment, regardless of claimed previous experience.

Classroom training consists of:

- Review of these written procedures by employee.
- Review general safety training video.
- Successful completion of examination.

Operational training consists of:

- Pre-operational procedures.
- Basic maintenance for machinery and equipment.
- Operational review of each piece of machinery, tool, or equipment the employee is expected to operate.

New Equipment Start-up Inspection Procedures

The procedures in this section are required at the following times:

- during and after the installation of new equipment,
- during and after the rearrangement of existing equipment into a new layout, and
- during the relocation of existing equipment.

While work is in progress on installation of new equipment, the foreman in charge of specific expertise, must be involved from the beginning to the end of the installation process.

Corrections that need implementation during the installation should be done as needed.

Before operation of the equipment in the workplace, all specialty departments must signify that the equipment meets all expectations in their area of concern.

Once completion has been verified, the equipment can be put into service.

Inspections

Machinery, tools, and equipment will be inspected regularly to insure safety and serviceability. Every employees using machinery, equipment, cords and accessories must inspect these items prior to use.

Disciplinary Procedures

Constant awareness of and respect for machine, tool, and equipment safety procedures and compliance with all safety rules are considered conditions of employment. Supervisors and individuals in the Safety and Personnel Department reserve the right to issue disciplinary warnings to employees, up to and including termination, for failure to follow the guidelines of this machine, tool, and equipment safety program.

Section 14

Means of Egress Compliance

Section 16

Personal Protective Equipment

Personal Protective Equipment (PPE) Program

Reference: 29 CFR 1910 & 1926 misc

This written program documents steps HEI has taken to minimize injury resulting from various occupational hazards present at our construction sites by protecting workers through the use of PPE when the hazards cannot be eliminated.

The CSO will designate appropriate foremen and safety representatives to assist in training employees and monitoring their use of PPE. This written plan is kept in the main office. Our CSO will review and update the program as necessary.

We at HEI believe it is our obligation to provide a hazard free environment to our employees. Any employee encountering hazardous conditions must be protected against the potential hazards. The purpose of protective clothing and equipment (PPE) is to shield or isolate individuals from electrical, chemical, physical, biological, or other hazards that may be present in the workplace.

Establishing an overall written PPE program detailing how employees use PPE makes it easier to ensure that they use PPE properly in the workplace and document our PPE efforts. Our PPE program covers:

- Purpose
- Hazard assessment
- PPE selection
- Employee training
- Cleaning and maintenance of PPE
- PPE specific information

Purpose of Program

The basic element of any PPE program is an in depth evaluation of the equipment needed to protect against the hazards at the workplace; this is the initial hazard assessment for which written documentation is required. Two basic objectives of any PPE program should be to protect the wearer from incorrect use and/or malfunction of PPE. The purpose of this Personal Protective Equipment (PPE) Program is to document the hazard assessment, protective measures in place, and PPE in use here at HEI. PPE devices are not to be relied on as the only means to provide protection against hazards, but are used in conjunction with guards, engineering controls, and sound manufacturing practices. If

possible, hazards will be abated first through engineering controls, with PPE to provide protection against hazards that cannot reasonably be abated otherwise.

Hazard Assessment

In order to assess the need for PPE the following steps are taken:

1. Our CSO and foreman identify job classifications where exposures occur or could occur. Our CSO examines the following records to identify and rank jobs according to exposure hazards:

- Project plan documents
- Hazard Assessments
- Injury/Illness Logs
- First Aid Logs

2. Our CSO conducts a walk through survey of workplace areas where hazards exist or may exist to identify sources of hazards to employees. They consider these basic hazard categories:

- Impact
- Heat
- Penetration
- Harmful dust
- Compression (roll over)
- Light (optical) radiation
- Chemical
- Electrocutation

During the walk through survey our CSO observes and records the following hazards along with PPE to use (type and purpose):

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

- Sources of falling objects or potential for dropping objects.
- Sources of sharp objects that might pierce the feet or cut the hands.
- Sources of rolling or pinching objects that could crush the feet.
- Layout of workplace and location of co-workers.
- Certain electrical hazards.

3. Following the walk through survey, our CSO organizes the data and information for use in the assessment of hazards to analyze the hazards and enable proper selection of protective equipment.

4. An estimate of the potential for injuries is now made. Each of the basic hazards is reviewed and a determination made as to the frequency, type, level of risk, and seriousness of potential injury from each of the hazards found. The existence of any situations where multiple exposures occur or could occur is considered.

5. Our CSO documents the hazard assessment via a written certification that identifies the workplace evaluated, the person certifying that the evaluation has been performed, the date(s) of the hazard assessment, and that the document is a certification of hazard assessment.

Selection Guidelines

Once any hazards have been identified and evaluated through hazard assessment, the general procedure for selecting protective equipment is to:

1. Become familiar with the potential hazards and the type of protective equipment (PPE) that are available, and what they can do.
2. Compare types of equipment to the hazards associated with the environment.
3. Select the PPE that ensures a level of protection greater than the minimum required to protect employees from the hazards.
4. Fit the user with proper, comfortable, well fitting protection and instruct employees on care and use of the PPE. It is very important that the users are aware of all warning labels for and limitations of their PPE. (See the Employee Training guidelines outlined in the next section of this program for a more detailed description of training procedures.)

It is the responsibility of our CSO to reassess the workplace hazard situation as necessary, to identify and evaluate new equipment and processes, to review accident records, and reevaluate the suitability of previously selected PPE. This reassessment will take place as needed.

Elements that should be considered in the reassessment include:

- Adequacy of PPE program
- Accidents and illness experience
- Levels of exposure (this implies appropriate exposure monitoring)
- Adequacy of equipment selection
- Number of person hours that workers wear various protective ensembles
- Adequacy of training/fitting of PPE
- Program costs
- The adequacy of program records
- Recommendation for program improvement and modification
- Coordination with overall safety and health program

Employee Training

The CSO coordinates or provides training for each employee who is required to use personal protective equipment. Training includes:

- When PPE is necessary
- What PPE is necessary
- How to wear assigned PPE
- Limitations of PPE
- The proper care, maintenance, useful life, and disposal of assigned PPE

Employees must demonstrate an understanding of the training and the ability to use the PPE properly before they are allowed to perform work requiring the use of the equipment.

Employees are prohibited from performing work without donning appropriate PPE to protect them from the hazards they will encounter in the course of that work.

If the CSO has reason to believe an employee does not have the understanding or skill required, the employee must be retrained. Since an employee's immediate supervisor is in

the best position to observe any problems with PPE use by individual employees, the CSO will seek this person's input when making this determination. Circumstances where retraining may be required include changes in the workplace or changes in the types of PPE to be used, which would render previous training obsolete. Also, inadequacies in an affected employee's knowledge or use of the assigned PPE, which indicates that the employee has not retained the necessary understanding or skills, would require retraining.

Our CSO certifies in writing that the employee has received and understands the PPE training.

Because failure to comply with company policy concerning PPE can result in OSHA citations and fines as well as employee injury, an employee who does not comply with this program will be disciplined for noncompliance.

- Verbal warning for the first offense accompanied by retraining
- Written reprimand for the second offense that goes in the employee's permanent record
- Suspension without pay for a third offense and documentation in the permanent record
- Dismissal as a last resort.

Cleaning and Maintenance

It is important that all PPE be kept clean and properly maintained by the employee to whom it is assigned. Cleaning is particularly important for eye and face protection where dirty or fogged lenses could impair vision. PPE is to be inspected, cleaned, and maintained by employees at regular intervals as part of their normal job duties so that the PPE provides the requisite protection. Foremen are responsible for ensuring compliance with cleaning responsibilities by employees. If a piece of PPE is in need of repair or replacement it is the responsibility of the employee to bring it to the immediate attention of his or her supervisor or the CSO. It is against work rules to use PPE that is in disrepair or not able to perform its intended function. Contaminated PPE that cannot be decontaminated is disposed of in a manner that protects employees from exposure to hazards.

PPE Specific Information

Eye and face protection – Safety Glasses, Goggles and face shields

It is the policy of the company that as a condition of employment, all regular full time, part time, and temporary employees working in designated work areas and/or job assignments are required to wear ANSI approved safety glasses/goggles/face shields to help prevent eye and face injuries, including those resulting from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or light

radiation, for example. Employees in the at all jobsites are required to wear safety glasses/goggles/face shields.

Employees from temporary work agencies and contractors are required to wear safety glasses/goggles/face shields if assigned to work in the designated work areas.

All Foremen are responsible for ensuring employees under their charge are in compliance with this policy.

All employees who work in designated work areas and/or job assignments are responsible for wearing company provided safety glasses/goggles/face shields to comply with this policy. Failure to comply will result in disciplinary action up to and including discharge.

All employees required to wear safety glasses/goggles/face shields must routinely inspect and properly care for their goggles/face shields.

Foot Protection-Safety Shoes

It is the policy of the company that as a condition of employment, all regular full time, part time, and temporary employees working at all jobsites are required to wear safety shoes to help prevent foot injuries, ankle injuries, slips, and falls.

Employees from temporary work agencies and contractors are required to wear safety shoes. It is the responsibility of the agency and/or contractor to ensure the employee reports to his/her temporary assignment at this company wearing approved safety shoes.

All employees who work at the jobsites are responsible for purchasing and wearing safety shoes to comply with this policy. Failure to comply will result in disciplinary action up to and including discharge.

Management is responsible for informing new employees who are assigned to the jobsite of the safety shoe policy. The new employee is responsible for reporting to his/her first day of work wearing approved safety shoes.

Hand Protection -- Gloves

It is the policy of the company that as a condition of employment, all regular full time, part time, and temporary employees working in designated work areas and/or job assignments are required to wear gloves to help prevent hand injuries, including cuts, burns, chemical exposure, for example.

Employees from temporary work agencies and contractors are required to wear protective gloves if assigned to work in the designated work areas.

All supervisors and managers are responsible for ensuring employees under their charge are in compliance with this policy.

All employees who work in designated work areas and/or job assignments are responsible for wearing company provided gloves to comply with this policy. Failure to comply will result in disciplinary action up to and including discharge.

All employees required to wear protective gloves must routinely inspect and properly care for their assigned gloves (if the gloves are not disposable).

Head protection -- Hard hats

It is the policy of the company that as a condition of employment, all regular full time, part time, and temporary employees working in designated work areas and/or job assignments are required to wear ANSI approved hard hats to help prevent head injuries, including those resulting from falling objects, bumping the head against a fixed object, or electrical shock.

Employees from temporary work agencies and contractors are required to wear hard hats if assigned to work in the designated work areas.

All Foremen are responsible for ensuring employees under their charge are in compliance with this policy.

All employees who work in designated work areas and/or job assignments are responsible for wearing company provided hard hats to comply with this policy. Failure to comply will result in disciplinary action up to and including discharge.

All employees required to wear hard hats must routinely inspect and properly care for their hard hats.

Section 17

Recording and Reporting **Injuries and Illnesses**

Recording and Reporting Injuries and Illnesses

Purpose

This Recording and Reporting Occupational Injuries and Illnesses Compliance Program explains our company's process for meeting the requirements of the Federal Regulatory Compliance Agency. This regulation allows the Bureau of Labor Statistics under the U.S. Department of Labor to uniformly gather statistics on occupational injuries and illnesses. With this data, the Occupational Safety and Health Administration (OSHA) can identify and solve work-related exposures nationwide through new and revised regulations and guidance.

At the same time, the data can help HEI identify its own company exposures and solve them with improved engineering, administrative, and work practice controls. It is essential that data we record be uniform, to assure the validity of the statistical data. This program is ultimately designed for the safety and health of our employees.

Administrative Duties

Human Resources Director is our Recording and Reporting Occupational Injuries and Illnesses Compliance Program Administrator and is responsible for developing and maintaining this written program. This person has full authority to make necessary decisions to ensure the success of this program. Copies of this written program may be obtained from him/her at the corporate office. If after reading this program, you find that improvements can be made, please contact our Human Resources Director or Corporate Safety Officer. We encourage all suggestions because we are committed to the success of this written program.

Employee Involvement

One of the goals of our program is to enhance employee involvement in the recordkeeping process. We believe that employee involvement is essential to the success of all aspects of safety and health for the company. This is especially true in the area of recordkeeping, because free and frank reporting by employees is the cornerstone of the system. If employees fail to report their injuries and illnesses, the "picture" of the workplace that the OSHA forms reveal will be inaccurate and misleading. This means that our company and our employees will not have the information we need to improve safety and health in the workplace.

Employee Injury and Illness Reporting System

Employee reports of injuries and illnesses are taken seriously by our company. Our reporting system ensures that the appropriate personnel and representatives receive the report. Our management staff has examined our existing reporting policies and practices to ensure that they encourage and do not discourage reporting and participation in our

program. Also, HEI does not discriminate against employees who file a work-related injury or illness or any other safety and health complaint.

Recording Injuries and Illnesses

HEI keeps records of its employee fatalities, injuries, and illnesses that have create or pose a threat to life or safety.

Each recordable injury or illness is documented accordingly and a separate, confidential list of privacy-concern cases, if any, within 7 calendar days of receiving information that a recordable injury or illness has occurred. Our Human Resources Director keeps these records up to date.

If there is a privacy-concern case, we have the option to not enter the employee's name on any forms. Instead, the text ***** is entered where the name is normally placed. Employees may request to have their names not entered on the log.

Annual Summary

At the end of each calendar year, our Human Resources Director and Corporate Safety Officer perform the following steps:

1. Reviews records to verify that the entries are complete and accurate,
2. Corrects any deficiencies identified in the entries,
3. Creates an annual summary of injuries and illnesses recorded,
4. Ensures that each certifies that he/she reasonably believes, based on his/her knowledge of the process by which the information was recorded, that the annual summary is correct and complete, and
5. Posts required logs of the year following the year covered by the form.

Employee Access to Report Forms

All employees, former employees, their personal representatives, and their authorized employee representatives have a right to access our regulatory-required injury and illness records, with the following limitations:

- We are allowed to give the requester a copy of the report and findings.
- We may choose to not record the employee's name on the logs in order to protect the privacy of injured and ill employees in certain privacy-concern cases.
- We are allowed to give an employee, former employee, or personal representative a copy of the report.
- We are allowed to give authorized employee representatives under a collective bargaining agreement a copy of the report within 7calendar days.
- While the first copy is free, we may charge a reasonable amount for retrieving and copying additional copies.

HEI does not discriminate against employees who request access to any records or otherwise exercise any rights afforded by the OSHA Act.

If we receive OSHA's annual survey form, our Human Resources Director fills it out and sends it to OSHA or OSHA's designee, as stated on the survey form, within 30 calendar days, or by the date stated in the survey form, whichever is later. If our company receives a Survey of Occupational Injuries and Illnesses Form from the Bureau of Labor Statistics (BLS), or a BLS designee, and promptly completes the form and returns it following the instructions contained on the survey form.

Section 18

Safety and Health Program **For** **Construction**

Safety and Health Program for Construction

Purpose

We at HEI are committed to the safety and health of our employees, and know that our strength as a company is only as good as the strength of each individual. We will strive to place safety and health above all else, and will involve all workers at every level in establishing, implementing, and evaluating our efforts. This written Safety and Health Program is intended to reduce the severity of job-related illnesses and injuries at this company. It is our intent to comply with the requirements of 29 CFR 1926.20 and .21, which require employers to maintain programs as necessary to keep employees from working in hazardous or dangerous conditions.

Management Leadership

Our CSO is the Safety and Health Program Administrator. He coordinates the Safety and Health Program elements for our company.

Our CSO is responsible for setting up and managing the program so that managers, supervisors, and employees know what our company expects. He is accountable for meeting these responsibilities. He has the authority (delegated ability to take action) to carry out his duties in a timely manner so that progress is made in meeting program goals. He is also provided with sufficient resources, information, and training to meet those responsibilities.

Our CSO has examined our existing policies and practices to ensure that they encourage and do not discourage reporting and participation in our program. In this way, early reporting of injuries, illnesses, and hazards and meaningful employee participation in the program are more likely to occur. The reporting of injuries, illnesses, and hazards is especially important because the success of the program depends on such reporting.

Our CSO communicates with employees about the program so they have the information necessary to protect themselves from hazards and have effective input into the operation of the program.

Employee Participation and Information

All employees are trained and expected to understand our safety and health reporting system, so that reports are received in a timely and systematic manner. See the Safety and Health Reporting section of this program.

A copy of OSHA's draft proposed Safety and Health Program Rule, 29 CFR 1900.1, is accessible at our main office. We also provide access to other information about this standard. This and other information about the program can be obtained from our .CSO However, this information does not include confidential or private information that is of a personal nature, such as medical records.

We have provided ways for employees, or their designated representatives, if applicable, to be involved in establishing, implementing, and evaluating each of these program elements as applicable to our company:

While we provide opportunities for employee participation, we also comply with the National Labor Relations Act.

Our company holds employees accountable if they violate safety and health rules or safe work practices. Our disciplinary procedures are as follows:

- Verbal warning for the first offense accompanied by retraining
- Written reprimand for the second offense that goes in the employee's permanent record
- Suspension without pay for a third offense and documentation in the permanent record
- Dismissal as a last resort.

Safety and Health Reporting

Our safety and health reporting system ensures that the CSO receives and promptly responds to the report, evaluates the report to determine whether an injury or illness has occurred, and takes corrective action as OSHA standards require and where appropriate.

We use the following method for reporting job-related injuries, illnesses, fatalities, incidents, and hazards: Notice of Accident. Our company takes all employee reports seriously. If an injury, illness, fatality, incident, or hazard has occurred, we will identify, assess, and control the hazard(s).

Hazard Identification and Assessment

Our CSO performs or coordinates the performance of hazard inspections monthly. This person has a thorough knowledge of the jobsite and the regulations that apply.

The CSO identifies and evaluates hazards before we change, design, or purchase equipment, materials, or processes. This is called proactive safety, and the concept encompasses facilities, hardware, equipment, tooling, materials, layout and configuration, energy controls, environmental concerns, and products. Our CSO ensures that foremen are equipped with appropriate information and knowledge about the following before making any equipment or process decisions.

In addition, our CSO will investigate each work-related death, serious injury or illness, or incident (near-miss) having the potential to cause death or serious physical harm.

Our CSO is responsible for determining what repairs or corrections need to be made, and assigning responsibility to get them done. Once corrected, our CSO reassesses all hazards.

Hazard Prevention and Control

Job hazard controls are engineering, administrative, and/or work practice controls used to eliminate or materially reduce hazards. While engineering controls, where feasible, are the preferred methods, administrative and work practice controls also may be important in addressing hazards. Personal protective equipment (PPE) may also be used to supplement engineering, work practice, and administrative controls, but may only be used alone where other controls are not feasible. Where PPE is used, our company provides it at no cost to employees.

Ultimately, we implement job hazard controls to bring our jobsite(s) into compliance with the General Duty Clause and OSHA standards. Generally this means coming to one of three ends: (1) the hazards are materially reduced using the incremental abatement process; (2) the hazards are reduced to the extent feasible, and then the Safety Officer periodically looks to see whether additional controls are feasible and, if so, he/she implements them promptly; or (3) the hazards are eliminated.

Preventative Maintenance

Timely maintenance of facilities and equipment is an effective preventive measure.

Emergency Planning and Preparation

We have written procedures for every likely emergency, with clear evacuation routes and emergency telephone numbers.

Training

Under no circumstances may an employee work until he/she has successfully completed the proper training. This includes all existing and new employees.

However, if an employee has received training in certain required topics within the last three years, initial training in those specific topics is not required. Documented proof of prior training must be provided before we can meet the prior training exception. The CSO must be able to demonstrate that the employee has retained sufficient knowledge to meet the requirements for initial training. Our CSO determines this by employee evaluation. Our CSO will identify trainees in each set of new employees and make arrangements with department management to schedule training. Our CSO will also identify those existing employees who need retraining. Our CSO is responsible for conducting that training. The company's training program includes an opportunity for employees to ask questions and receive answers via the CSO. This allows employees to fully

understand the material presented to them. All training and information is provided in a language the trainee will understand.

Training topic information

Informed employees are critical to assure the accuracy of our reporting system. All existing and new employees receive the following information for each topic: existing hazards, how to identify hazards, hazard control measures, protective measures to prevent or minimize exposure, and provisions of applicable standards.

Training Certification

Our CSO is responsible for keeping records certifying each employee who has successfully completed training. Each certificate includes:

- Trainers Names
- Employees Name
- Date of Training

Program Evaluation

It is inherent that problems may occasionally arise in this written Safety and Health Program. Although we may not be able to eliminate all problems, we try to eliminate as many problems as possible to improve employee protection and encourage employee safe practices. By having our Corporate Safety Officer, thoroughly evaluate and, as necessary, revise our written Safety and Health Program in a timely manner, we can eliminate problems effectively and ensure that our program is appropriate to workplace conditions.

Section 19

Safety and Health Program **For** **General Industry**

Safety and Health Program for General Industry

Purpose

We at HEI are committed to the safety and health of our employees, and know that our strength as a company is only as good as the strength of each individual. We will strive to place safety and health above all else, and will involve all workers at every level in establishing, implementing, and evaluating our efforts. This written Safety and Health Program is intended to reduce the severity of job-related illnesses and injuries at this company. It is our intent to comply with the requirements of draft proposed rule 29 CFR 1900.1.

Management Leadership

Our Corporate Safety Officer (CSO) is the person responsible for setting up and managing the program so that managers, supervisors, and employees know what our company expects. He has the authority (delegated ability to take action) to carry out his duties in a timely manner so that progress is made in meeting program goals. He is also provided with sufficient resources, information, and training to meet those responsibilities.

Our CSO has examined our existing policies and practices to ensure that they encourage and do not discourage reporting and participation in our program. In this way, early reporting of injuries, illnesses, and hazards and meaningful employee participation in the program are more likely to occur. The reporting of injuries, illnesses, and hazards is especially important because the success of the program depends on such reporting.

Our CSO reviews all incentive programs to ensure that they are designed to reward safe work practices, such as active participation in the program, the identification of hazards in the workplace, and the reporting of the early signs and symptoms of illnesses, rather than to reward employees for having fewer injuries or illnesses.

Our Foremen and CSO communicates with employees about the program so they have the information necessary to protect themselves from hazards and have effective input into the operation of the program.

Employee Participation and Information

All employees are trained and expected to understand our safety and health reporting system, so that reports are received in a timely and systematic manner. See the Safety and Health Reporting section of this program.

A copy of OSHA's draft proposed Safety and Health Program Rule, 29 CFR 1900.1, is accessible upon request from our CSO. We also provide access to other information about the standard. This and other information about the program can be obtained from

the corporate office. However, this information does not include confidential or private information that is of a personal nature, such as medical records.

We have provided ways for employees, or their designated representatives, if applicable, to be involved in establishing, implementing, and evaluating each of these program elements as applicable to our company.

While we provide opportunities for employee participation, we also comply with the National Labor Relations Act.

Our company holds employees accountable if they violate safety and health rules or safe work practices.

Safety and Health Reporting

Our safety and health reporting system ensures that the appropriate management personnel receives and promptly responds to the report, evaluates the report to determine whether an injury or illness has occurred, and takes corrective action as OSHA standards require and where appropriate. When determining whether an employee who has experienced signs or symptoms of an injury or illness actually has an injury or illness, we have the employee evaluated, at no cost to the employee.

Hazard Identification and Assessment

Before existing and potential hazards can be prevented and controlled, they must be identified and assessed. It is critical that this be done for the entire workplace, not just the production floor. Our CSO reviews existing safety and health records.

Our foremen, CSO or designated safety representative performs hazard inspections weekly. This person has a thorough knowledge of the facility and the regulations that apply.

Our CSO identifies and evaluates hazards before we change, design, or purchase equipment, materials, or processes. This is called proactive safety, and the concept encompasses facilities, hardware, equipment, tooling, materials, layout and configuration, energy controls, environmental concerns, and products. Our CSO ensures that each site is equipped with appropriate information and knowledge making any equipment or process decisions. This evaluation procedure is reviewed for effectiveness annually or as often as necessary.

Hazard Prevention and Control

Job hazard controls are engineering, administrative, and/or work practice controls used to eliminate or materially reduce hazards. While engineering controls, where feasible, are the preferred method, administrative and work practice controls also may be important in addressing hazards. Personal protective equipment (PPE) may also be used to supplement

engineering, work practice, and administrative controls, but may only be used alone where other controls are not feasible. Where PPE is used, our company provides it at no cost to employees.

Ultimately, we implement job hazard controls to bring our facility into compliance with the General Duty Clause and OSHA standards. Generally this means coming to one of three ends: (1) the hazards are materially reduced using the incremental abatement process; (2) the hazards are reduced to the extent feasible, and then periodically looks to see whether additional controls are feasible and, if so, he/she implements them promptly; or (3) the hazards are eliminated.

Our company follows these steps for each hazard control:

1. Our CSO asks employees in the problem job for recommendations about eliminating or materially reducing the hazards.
2. Our CSO identifies, assesses, sets deadlines, and implements feasible controls (interim and/or permanent) to eliminate or materially reduce the hazards identified. This includes prioritizing which hazards are controlled first.. Where controls are not obvious or off-the-shelf, the identification and assessment of controls may require more effort.

The assessment of controls is our effort, with input from employees, to select controls that are reasonably anticipated to eliminate or materially reduce the hazards. Often there are several controls that would be reasonably likely to reduce a hazard. Our CSO assesses which of the possible controls should be tried.

Because it is not always clear whether a selected control will achieve the intended reduction in exposure to the hazard(s), we often need to test and modify controls before implementing them throughout the job.

3. We track our progress in eliminating or materially reducing the hazards. This includes consulting with employees in problem jobs about whether the implemented controls have eliminated or materially reduced the hazards. Following up on control efforts is important because it will tell us whether hazards have been adequately controlled, whether the abatement process needs to continue, whether we are on schedule with our abatement plans, and whether the elements of the program are functioning properly.

Preventative Maintenance

Timely maintenance of facilities and equipment is an effective preventive measure.

Medical Surveillance

At our company, persons will not be assigned to certain tasks unless it has been determined that they are physically able to perform the work.

Emergency Planning and Preparation

We have written procedures for every likely emergency, with clear evacuation routes, head count locations, and emergency telephone numbers. These procedures are found in our Emergency Response Plan.

Training

Under no circumstances may an employee perform work until he/she has successfully completed proper training. This includes all existing and new employees.

However, if an employee has received training in certain required topics within the last three years, initial training in those specific topics is not required. Before we can meet the prior training exception, the immediate supervisor must be able to demonstrate that the employee has retained sufficient knowledge to meet the requirements for initial training. He/She determines this by testing and/or practical application. More specifically, we are training and retraining schedule that is identified in each related section of our Environmental Health and Safety Manual.

Our Human Resources Director and Corporate Safety Officer will identify trainees in each set of new employees and make arrangements with department management to schedule training. He will also identify those existing employees who need retraining. Our Corporate Safety Officer is responsible for coordinating training

Training topic information

Informed employees are critical to assure the accuracy of our reporting system. All existing and new employees receive the following information for each topic: existing hazards, how to identify hazards, hazard control measures, protective measures to prevent or minimize exposure, and provisions of applicable standards.

Training Certification

Our CSO is responsible for keeping records certifying each employee who has successfully completed training. Each certificate includes:

- Topic of training
- Who conducted the training
- Date of training
- Date training expires

Current Trained Employees

A list of currently trained personnel is available upon request.

Multi-employer Work Situations

As a host employer, we are obligated to share certain hazard information with our contract employers. The PM is responsible for: (1) providing information about hazards, controls, safety and health rules, and emergency procedures to all employers at the workplace, and (2) ensuring that safety and health responsibilities are assigned as appropriate to contract employers.

Contract employers in turn must: (1) ensure that our company is aware of the hazards associated with the contract employer's work and what the contract employer is doing to address them, and (2) advise the designated representative. Our contracts require the contractor to follow our facility safety and health rules.

Note: "Host employer" means an employer who controls conditions at a multi-employer worksite. "Contract employers" are those who perform work for our company at our facility. A contract employer does not include an employer who provides incidental services that do not influence the workplace safety and health program, whose employees are only incidentally exposed to hazards at our facility (e.g., food and drink services, delivery services, or other supply services).

Program Evaluation

It is inherent that problems may occasionally arise in this written Safety and Health Program. Although we may not be able to eliminate all problems, we try to eliminate as many problems as possible to improve employee protection and encourage employee safe practices. By having our Program Administrator(s) thoroughly evaluate and, as necessary, revise our written Safety and Health Program in a timely manner, we can eliminate problems effectively and ensure that our program is appropriate to workplace conditions.

Section 20

Scaffolding Safety Program

Scaffolding Safety Program for Construction

Reference: 29 CFR 1926.450-454 Subpart L

Note: HEI does not own, erect for dismantle scaffolding. HEI employees occasionally, with permission, and appropriate training access the scaffolding of their clients or fellow contractors to perform work. This plan is intended to demonstrate the understanding of the program and its guidelines.

Purpose

It is this company's purpose in issuing these procedures to further ensure a safe workplace based on the following formal, written procedures for scaffold work. These procedures will be reviewed and updated as needed to comply with new OSHA regulations, new best practices in scaffolding, and as business practices demand.

General Procedures

The following general procedures apply to all scaffold and aerial lift operations for HEI

Capacity

Taking into account the OSHA rules we must apply and the engineering/manufacturing requirements of our scaffolds, the following rules apply

- Each scaffold and scaffold component we use will support, without failure, its own weight and at least four times the maximum intended load applied or transmitted to it.
- When we use non-adjustable suspension scaffolds, each suspension rope, including connecting hardware, will support, without failure, at least six times the maximum intended load applied or transmitted to that rope.

Platform Construction

The following safety rules apply for this scaffold platform construction:

- Each scaffold plank will be installed so that the space between adjacent planks and the space between the platform and uprights is no more than one inch wide. If, in certain situations, we need to make this space wider, we will attach our demonstration in the appendix to this plan.
- Except for outrigger scaffolds (3 inches) and plastering and lathing operations (18 inches), the front edge of all platforms will not be more than 14 inches from the face of the work, unless we have a guardrail or personal fall arrest system in place that meets regulations.

The following additional construction and safety information is included depending on the type of scaffold being erected.

Supported Scaffolds

- Supported scaffolds with a height to base width ratio of more than four to one (4:1) must be restrained from tipping by guying, tying, bracing, or equivalent means.
- Supported scaffold poles, legs, posts, frames, and uprights will always bear on base plates and mud sills or other adequate firm foundations.

Suspension Scaffolds

- Before a scaffold is used, all direct connections will be evaluated by our competent person. Our competent person will confirm, based on the evaluation, that the supporting surfaces are capable of supporting the loads that will be imposed.
- When winding drum hoists are used on a suspension scaffold, they will never contain less than four wraps of the suspension rope at the lowest point of scaffold travel.

Gaining Access to Scaffolds

We know that getting to the working platform is critical to the safety of our employees. This section outlines the mechanical requirements for gaining access to scaffold platforms such as: (1) ladders, (2) ramps and walkways, (3) stairrails, and (4) direct access from another scaffold. This section is divided into two parts. The first part is for employees erecting and dismantling scaffolds.

Working Employees:

- Portable, hook-on, and attachable ladders will be positioned so as not to tip the scaffold.
- All stairrail systems and handrails will be surfaced to prevent injury to our employees from punctures or lacerations, and to prevent snagging of their clothes.

Erectors and Dismantlers:

Our company shall provide safe means of access for each employee erecting or dismantling a scaffold where the provision of safe access is feasible and does not create a greater hazard. We shall have a competent person determine whether it is feasible or would pose a greater hazard to provide, and have employees use a safe means of access.

This determination shall be based on site conditions and the type of scaffold being erected or dismantled.

Hook-on or attachable ladders shall be installed as soon as scaffold erection has progressed to a point that permits safe installation and use.

When erecting or dismantling tubular welded frame scaffolds, (end) frames, with horizontal members that are parallel, level and are not more than 22 inches apart vertically may be used as climbing devices for access, provided they are erected in a manner that creates a usable ladder and provides good hand hold and foot space.

Cross braces on tubular welded frame scaffolds shall not be used as a means of access or egress.

Fall Protection Plan

Fall protection planning is critical to the safety and well being of our employees. Our fall protection plan follows the OSHA requirements that are different depending on the type of scaffold we are using. In this plan we address fall protection for our scaffold erectors and dismantlers separately.

One fact never changes. We know we must provide fall protection for any employee on a scaffold more than 10 feet above a lower level.

Working Employees:

Self-contained adjustable scaffold supported by the frame structure-We will protect each employee on our self-contained, frame structure supported, adjustable scaffolds by a guardrail system. The guardrail system:

- Has a minimum 200-pound toprail capacity.
- Will be installed before being released for use by our employees.

Falling Object Protection

All employees must wear hardhats when working on, assembling, or dismantling scaffolds. This is our primary protection from falling objects. Additionally, we will:

- Install all guardrail systems with openings small enough to prevent passage of potential falling objects.
- Prevent tools, materials, or equipment that inadvertently fell from our scaffolds from striking employees by barricading the area below the scaffold.

Using Scaffolds

Site preparation, scaffold erection, fall protection, and gaining access to the working platform are only some of the requirements for scaffold work. While this all takes concentration and safe work practices, the most dangerous time can be when employees are concentrating on their work and not particularly aware of the hazards of working from scaffolds. It is critical that employees who use scaffolds be trained, among other things, in the recognition of the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards. Our competent person will inspect all scaffolds and scaffold components for visible defects before each work shift, and after any occurrence that could affect a scaffold's structural integrity. However, in addition to that, all users of scaffolds in this company will know and understand the following safety rules:

- Scaffolds and scaffold components will never be loaded in excess of their maximum intended loads or rated capacities.
- Debris must not be allowed to accumulate on platforms.

Prohibited Practices

The following practices will never be tolerated in this company:

- Scaffold components manufactured by different manufacturers will never be intermixed unless the components fit together without force and the scaffold's structural integrity is maintained.
- Unstable objects will never be used to support scaffolds or platform units. Footings must be level, sound, rigid, and capable of supporting the loaded scaffold without settling or displacement.
- Crossbraces will never be used as a means of access.
- The use of shore or lean-to scaffolds is prohibited.

Aerial Lifts

Anytime aerial lifts, including: (1) extensible boom platforms, (2) aerial ladders, (3) articulating boom platforms, (4) vertical towers, or (5) a combination of any such devices, are used to elevate employees to job-sites above ground, the following safety rules will apply:

- No aerial lift this company owns or uses will be 'field modified' for uses other than those intended by the manufacturer unless: (1) the manufacturer certifies the modification in writing, or (2) any other equivalent entity, such as a nationally recognized testing lab, certifies the aerial lift modification conforms to all applicable provisions of ANSI A92.2-1969, and the OSHA rules at 1926.453. The lift must be at least as safe as the equipment was before modification.

Duties of Competent and Qualified Persons

When working with scaffolds in this company there are some tasks that must be done by our competent or a qualified person. By definition they are:

- Competent person-One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
- Qualified person-One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work, or the project.

The following tasks will only be done by the person we have deemed competent or qualified to perform them:

Competent Person:

- We will not intermix scaffold components manufactured by different manufacturers unless the components fit together without force and the scaffold's structural integrity is maintained. Scaffold components manufactured by different manufacturers will not be modified in order to intermix them unless our competent person determines the resulting scaffold is structurally sound.
- Before a suspension scaffold is used, direct connections must be evaluated by our competent person who will confirm, based on the evaluation, that the supporting surfaces are capable of supporting the loads to be imposed.
- Prior to each work shift and after every occurrence that could affect a rope's integrity, suspension scaffold ropes will be inspected by our competent person. Ropes will be replaced if any of the conditions outlined in 1926.451(d)(10) exist.
- Scaffolds will be erected, moved, dismantled, or altered only under the supervision and direction of a competent person.

Qualified Person:

- Scaffolds must be designed by a qualified person and shall be constructed and loaded in accordance with that design.
- Swaged attachments or spliced eyes on wire suspension ropes of suspension scaffolds will not be used unless they are made by the wire rope manufacturer or a qualified person.
- We will have each employee who performs work while on a scaffold trained by a person qualified in the subject matter to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards.

Training

Recognizing the need for training for employees who: (1) perform work while on scaffolds, (2) are involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting scaffolds, and (3) have lost the requisite proficiency.

Employees Who Use Scaffolds:

Our employees who perform work on scaffolds will be trained by a qualified person to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards. The training will include the following areas as applicable:

- The nature of and the correct procedures for dealing with electrical hazards.
- The nature of and the correct procedures for erecting, maintaining, and disassembling the fall protection and falling object protection systems used.
- The proper use of the scaffold, and the proper handling of materials on the scaffold.
- The maximum intended load and the load-carrying capacities of the scaffolds used.
- Any other pertinent requirements of the OSHA rules.

Employees Who Erect, Disassemble, Move, Operate, Repair, Maintain, or Inspect Scaffolds:

Our employees who erect, disassemble, move, operate, repair, maintain, or inspect scaffolds will be trained by our competent person to recognize the hazards associated with the work being done. The training will include the following topics as applicable:

- The nature of scaffold hazards.
- The correct procedures for erecting, disassembling, moving, operating, repairing, inspecting, and maintaining the type of scaffold in question.
- The design criteria, maximum intended load-carrying capacity, and intended use of the scaffold.
- Any other pertinent requirements of this subpart.

Employees Who Need Retraining:

When we have reason to believe that one of our employees lacks the skill or understanding needed for safe work involving the erection, use or dismantling of scaffolds, we will retrain the employee so that the requisite proficiency is regained. Retraining will be done in at least the following situations:

- Where changes at the worksite present a hazard about which the employee has not been previously trained.
- Where changes in the types of scaffolds, fall protection, falling object protection, or other equipment present a hazard about which an employee has not been previously trained.

- Where inadequacies in an affected employee's work involving scaffolds indicate that the employee has not retained the requisite proficiency.

Section 21

Signs and Tags

Compliance Program

Signs and Tags Compliance Program

Purpose

Ideally our company and our jobsites would be hazard-free and safe from potential injuries and accidents. However, many operations by their nature involve a certain amount of risk which cannot be controlled through engineering measures. These situations require careful planning and prevention measures. Safety markings, such as signs, labels, tags, barricades, signals, and other markings, have been developed as one means of preventing work accidents and subsequent injury. These markings tell employees about hazards and warn them to be careful.

We at HEI intend not only to comply with the marking regulations but to also take a proactive approach to injury prevention that focuses on our hazards and on the markings that can help protect our employees from those hazards.

Administrative Duties

Our Corporate Safety Officer (CSO) is responsible for developing and maintaining the written Signs and Tags Compliance Program. This program is kept at the corporate office and our CSO can be contacted for a copy of our program. If after reading this program, you find that improvements can be made, please contact our CSO. We encourage all suggestions because we are committed to the success of this written program.

Hazard Evaluation

Our CSO is responsible for our company's hazard evaluation. He evaluates hazards by conducting thorough project, facility and property reviews and assessments as applicable to our scope of work. Once a hazard is identified he determines whether or not:

- The hazard is required to be marked according to regulations, or
- Failure to identify hazards may lead to property damage and/or to accidental injury to workers and/or the public.

Once our CSO determines a marking to be necessary, he ensures that the proper marking or employees awareness of markings at our client's sites are identified at the hazard as soon as possible. Through this hazard evaluation process, our company has ensured our hazards have received proper marking or employees are aware of our client's markings.

Safety Colors

Many facilities that our clients work at have developed color schemes to communicate a specific type of hazard or identify a level of hazard. Under these circumstances it is necessary that all employees must recognize and make themselves aware of the potential exposure that our clients are attempting to communicate.

Safety Symbols

In addition to sign color, the symbols and pictorials contribute to a sign's meaning. When practical, a symbol or a combination of a symbol and words are used over words alone because symbols carry universal meaning. Symbols allow fast communication of hazards and information.

Safety Messages

Our and our client's safety messages should be concise and easy to read. They contain enough information to be easily understood. Also, our messages make a positive rather than negative suggestion and are accurate in fact.

Signs

A sign is a surface prepared for the warning of, or safety instructions of, industrial workers or members of the public who may be exposed to hazards. Signs do not include news releases, displays commonly known as safety posters, and bulletins used for employee education.

We do not vary the design types of signs posted to warn of specific dangers. All signs are furnished with rounded or blunt corners and are free from sharp edges, burrs, splinters, or other sharp projections. The ends or heads of bolts or other fastening devices are located in such a way that they do not constitute a hazard. When a sign is selected, our company considers the environment where the sign will be placed in order to select a sign with a reasonable life expectancy. This may include protecting signs in some manner. Proper illumination or retroreflectorization is also considered.

Signs are placed where they are visible and can alert employees in time for them to avoid the related hazard. Our CSO inspects our facility, yard and jobsites to ensure that signs are not blocked by doors, racks, or other items, and that faded, defaced, or damaged signs are replaced. If related hazards no longer exist, our CSO is responsible for removing or covering the signs.

Labels

A label is any written, printed, or graphic material, displayed on or affixed to equipment, a container, or other item. Labels are not intended to be either the sole, or the most complete source of information regarding the nature or identity of the item.

Our CSO inspects our facility, yard and jobsites to ensure that soiled, unreadable, or missing labels are replaced.

Tags

Tags are cards, papers, pasteboard, plastic, or other material to identify a hazardous condition. Tags are used as a means to prevent accidental injury or illness to employees who are exposed to hazardous or potentially hazardous conditions, equipment, or operations which are out of the ordinary, unexpected, or not readily apparent. Tags must be used until such time as the identified hazard is eliminated or the hazardous operation is completed. Tags need not be used where signs, guarding, or other positive means of protection are being used.

Our tags contain a signal word and a major message, according to the regulations. They are affixed as close as safely possible to their respective hazards by a positive means such as string, wire, or adhesive that prevents their loss or unintentional removal. When a tag is selected, our company considers the environment where the tag will be placed in order to select one that can withstand its environment throughout its expected use.

Our CSO is responsible for authorizing, applying, and removing all tags. Our CSO inspects our facility, yard and jobsites to ensure that soiled, unreadable, or missing tags are replaced.

Barricades

Barricades are obstructions to deter the passage of persons or vehicles. Jobsite foreman is responsible for authorizing, placing, and removing all barricades. Our CSO inspects our facility, yard and jobsites to ensure that our barricades are in good working order.

Signals

Signals are moving signs, provided by workers, such as flagmen, or by devices such as flashing lights, to warn of possible or existing hazards. Our jobsite foreman is responsible for authorizing, placing, and removing or covering signals. Our CSO inspects our facility, yard and jobsites to ensure that our signals are in good working order. If related hazards no longer exist, our jobsite foreman removes or covers the signals.

Training

Our CSO is responsible for ensuring that all employees who need to be trained get trained on our signs and tags compliance program. Employees who have not been trained are not allowed to work under circumstances where the information in this program is necessary for them to work safely.

Program Evaluation

By having our CSO thoroughly evaluate and, as necessary, revise our program, we ensure our program's effectiveness and prevent or eliminate any problems. Program evaluation is performed at least annually.

Section 22

Site Safety Plan

This section is reserved for a project specific site safety plan meant to be used in conjunction with the programs included in HEI's EHS plan.

Section 23

Stairways and Ladders

Stairway and Ladder Safety Plan

Reference: 29 CFR 1910 Subpart D

Purpose

This written Stairway and Ladder Safety Plan describes methods and practices for care and use of stairways and ladders that can be read and understood by all managers, supervisors, and employees at HEI. This written plan is intended to be used to:

- create an awareness of the hazards among our workforce,
- standardize procedures for use and care of the equipment,
- provide a consistent format for training employees on the proper procedures to be used,
- minimize the possibility of injury or harm to our employees, and
- demonstrate HEI's compliance with stairway and ladder requirements in Subpart D of 29 CFR 1910.

The procedures establish guidelines to be followed whenever an employee works with ladders or stairways at our company.

Fixed Stairs

Fixed stairs are provided at our jobsites in the following circumstances:

- for access from one structure level to another where operations necessitate regular travel between levels,
- for access to operating platforms which requires attention routinely during construction activities
- where access to elevations is daily or at each shift for such purposes as gauging, inspection, regular maintenance, etc., where such work may expose employees to acids, caustics, gases, or other harmful substances, or for which purposes the carrying of tools or equipment by hand is normally required.

All fixed stairs are provided according to OSHA specifications for stair strength, stair width, angle of stairway rise, stair treads, stairway platforms, railings and handrails, and vertical clearance.

Portable Ladders

All portable ladders provided by HEI for use by employees are constructed according to OSHA specifications in order to insure safety under normal conditions of usage.

Portable ladders chosen for use by HEI are:

- designed without structural defects or accident hazards such as sharp edges, burrs, etc;
- of sufficient strength to meet the test requirements; and
- protected against corrosion unless inherently corrosion-resistant.
- Consist of both A frame and straight extension type ladders

Work Practices

When ascending or descending, the climber must face the ladder.

Portable ladders are designed as a one-man working ladder based on a 200-pound load and will be used accordingly.

Portable rung and cleat ladders will be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is one-quarter of the working length of the ladder (the length along the ladder between the foot and the top support).

The ladder will be so placed as to prevent slipping, or it will be lashed, or held in position. The ladder base section must be placed with a secure footing.

Employees will equip all portable rung ladders with nonslip bases when there is a hazard of slipping. However, nonslip bases are not intended as a substitute for care in safely placing, lashing, or holding a ladder that is being used on oily, metal, concrete, or slippery surfaces.

The top of the ladder must be placed with the two rails supported, unless equipped with a single support attachment.

On two-section extension ladders, the minimum overlap for the two sections in use will be according to OSHA specifications.

Portable rung ladders with reinforced rails will be used only with the metal reinforcement on the under side.

The bracing on the back legs of step ladders is designed solely for increasing stability and not for climbing.

Ladders will not be:

- used in a horizontal position as platforms, runways, or scaffolds.
- placed in front of doors opening toward the ladder unless the door is blocked open, locked, or guarded.
- placed on boxes, barrels, or other unstable bases to obtain additional height.
- tied or fastened together to provide longer sections. They must be equipped with the hardware fittings necessary if the manufacturer endorses extended uses.

- used to gain access to a roof unless the top of the ladder extends at least 3 feet above the point of support, at eave, gutter, or roofline.
- used as a brace, skid, guy or gin pole, gangway, or for other uses than that for which they were intended, unless specifically recommended for use by the manufacturer.

Ladders for which dimensions are specified should not be used by more than one man at a time nor with ladder jacks and scaffold planks where use by more than one man is anticipated.

Ladders with broken or missing steps, rungs, or cleats, broken side rails, or other faulty equipment must not be used. Employees finding ladders with any of these conditions must report them to their superintendent. Improvised repairs may not be made.

Ladders made by fastening cleats across a single rail will not be used.

Tops of the ordinary types of stepladders will not be used as steps.

Middle and top sections of sectional or window cleaner's ladders will not be used for bottom section unless the user equips them with safety shoes.

Inspections and Maintenance

Ladders will be inspected prior to each use by the employee to insure safety and serviceability.

Ladders will be maintained in good usable condition at all times.

The joint between the steps and side rails is kept tight, all hardware and fittings are securely attached, and the movable parts operate freely without binding or undue play.

Metal bearings of locks, wheels, pulleys, etc., will be frequently lubricated.

Frayed or badly worn rope will be replaced.

Safety feet and other auxiliary equipment will be kept in good condition to insure proper performance.

Ladders which have developed defects will be withdrawn from service for repair or destruction and tagged or marked as *Dangerous, Do Not Use*.

If ladders tip over the foreman will:

- inspect the ladder for side rails dents or bends, or excessively dented rungs;
- check all rung-to-side-rail connections;
- check hardware connections; and

- check rivets for shear.

If ladders are exposed to oil and grease, equipment will be cleaned and kept free of oil, grease, or slippery materials.

Training

For all employees who work on ladders and stairways, training is provided.

Our CSO is responsible for coordinating ladder safety training.

Elements included in the training program include the safe work practices and other requirements of this written plan.

Disciplinary Procedures

Constant awareness of and respect for stairway and ladder safety procedures and compliance with all safety rules are considered conditions of employment. Supervisors, foremen and our CSO reserve the right to issue disciplinary warnings to employees, up to and including termination, for failure to follow the guidelines of this stairway and ladder safety program.

Section 24

Substance Abuse Program

Substance Abuse Program

Substance abuse, here defined as “any abuse of alcohol, drugs, or controlled substance,” is a significant problem for employers. The economic impact of substance abuse in medical bills and cost output is estimated at over \$100 billion nationally.

Abuse of alcohol, drugs and controlled substances and their residuals are present in the work place. Employers are and will be affected by employees with substance abuse problems. Employers are confronted not only with traditional work place problems such as absenteeism, safety, security, and job performance, but also the aggravation of those same problems and additional employee problems involving the use at any time of any non-prescribed illegal chemical substance or abuse of prescribed substances capable of altering mood, perception, and judgment. Thus, it is clear that substance abuse significantly affects the employer, the employee, work place and work environment and is an issue of concern to HEI. HEI is concerned for the safety of its employees while at work, appropriate safeguarding of classified information and company private confidential information, and compliance with security regulations, contractual requirements and of course the providing of a safe work place and work environment for all its employees. It has long been required that information regarding substance abuse by an individual possessing security clearances be reported as “adverse information” which would be investigated and which could jeopardize the security clearance involved. More recently, government policies and contracts are requiring contractors to implement substance abuse screening tests.

Policy

In the interest of a safe and healthy work environment for all employees, and the protection of classified matter and company private information, HEI personnel may not be under the influence of or use at any time any non-prescribed illegal chemical substance or abuse prescribed substances or alcohol.

Scope

This policy applies to all HEI employees without exception including all full-time and part-time employees. HEI’s Substance Screening Program includes testing for illegal drugs, controlled substance and alcohol on a “pre-employment” and “for cause” basis.

Selection Methods

Pre-employment Selection

Any prospective new hire, recall, or transferee will be required to take a pre-employment drug and alcohol screen to ensure their fitness for employment. The prospective employee, recall or transferee will be informed in advance that the drug test will be

performed, and that if the results are positive, the individual will be denied employment. If any prospective new hire, recall or transferee refuses to submit to the drug screen, consideration for employment will immediately cease. If a person is requested to supply a urine sample and is unable to do so on the date, it shall be considered refusing to supply a sample.

“For Cause” Selection

“For cause” selection requires any HEI employee so selected to be screened immediately. There are three categories of circumstances that result in a “for cause” selection.

Category I – Accidents/Safety: Any HEI employee involved in an on-the-job accident, or incident, which results in any injury requiring the services of a physician or hospital or which is caused by or related to violations of safety rules, regulations, or procedures may be screened as soon as practical after the accident/incident.

Category II – Referral: any HEI employee who exhibits any evidence of impaired performance, including unexplained absence; temper outbursts at work; adverse changes in mood or behavior; other signs of emotional instability including threats to fellow employees or other individuals, must be reported to management. Management, after review of the circumstances, will evaluate the situation and determine whether substance abuse screening is justified in either eliminating substance abuse as an explanation for the unusual behavior, or for determining that it may be an explanation. If management determines that substance abuse screening is appropriate, the employee will be required to cooperate in the testing process as soon as practical.

Where to Report

After selection in any of the previously described manners, the selected HEI employee will be notified of his/her selection and shall be given instructions as to when and where to deliver a urine sample. Employee will required to deliver a urine sample the same day as requested.

HEI is contracted with an appropriate laboratory, agency, and other facility to perform the alcohol and drug screens. The notification shall direct the employee to present him/herself to the screening facility at the date and time specified (with due regard to the notice requirements under “Selection Methods”) and the employee will furnish his/her urine specimen in the containers provided by the screening facility. Every reasonable effort will be maintained to honor personal privacy during specimen delivery. As minimum, an individual may expect requests to remove loose clothing and be the single occupant of the restroom. All specimens delivered unwitnessed will be temperature tested. If a specimen fails a temperature test, the individual will be immediately requested to provide another specimen, this second specimen to be delivered under witnessed conditions. The procedure required by the screening facility as to sealing,

signing, accomplishing forms such as release forms and claim of custody forms must be properly accomplished as part of the delivery of the specimen. Employees may be required to deliver a specimen after work hours. Travel and time to deliver a specimen are not included in compensation.

Screening and Confirmation of Results

Screening

Screening of a properly delivered specimen results in either a negative or positive test result. A negative result means that no amounts exceeding threshold quantities were detected. These results are reported to HEI and no further action is taken. A positive result indicates that quantities were found in the specimen which exceeded the threshold amounts. The specimen is then subjected to a confirmation test by another method which identifies the substance and quantifies the amount. The positive confirmed results are reported to HEI.

Reports and Records

Alcohol and drug screening reports and records shall be received by designated management or the Human Resources Department. Reports and records on the individuals, or the program shall be kept in a separate and locked file whose access is limited to those with a need to know. Confidentiality of these records, reports or results shall not be breached. HEI shall not reveal these records to any person, or institution, or agency unless specifically required by regulation or court order. In all instances, confirmed positive test reports must be reported to the appropriate agency when the individual involved has a security clearance. Reports to these agencies can jeopardize the individual's security clearance, but are mandatory as "adverse" or "derogatory" information.

Substances

The following is a list of substances commonly detected in a screening program and the approximate threshold limits. HEI reserves the absolute right to add or delete substances from this list, change threshold limits, to test for all or only a selected few from this list, and HEI may screen for substances not on this list.

- Alcohol (Ethyl Alcohol, Ethanol) may be detected in the urine in a concentration approximately one-third higher than in the blood. This ratio depends on the time lapsed since ingestion and when the patient last urinated. Although urine may be the specimen of choice, blood is preferable since most studies relating alcohol levels to impairment are based on blood test results. Detection time varies with the amount of alcohol ingested. Blood alcohol levels decrease by 10 to 15 mg/dl per hour.
- Amphetamines and methamphetamines (speed, uppers, etc.) in concentrations greater than 0.3 micrograms per milliliter. This assay also detects high levels of some compounds found in prescription and nonprescription cold medications such as

pseudoephedrine. Any positive test result is automatically subjected to a confirmation process. The approximate detection time for amphetamines by this assay is 48 hours after ingestion.

- Barbiturates – detects long-acting (Phenobarbital) and short-acting (Secobarbital) barbiturates in concentrations greater than 0.3 micrograms per milliliter. Approximate detection times for long-acting barbiturates are 2-3 weeks: short-acting barbiturates can be found for approximately 24 hours.*
- Benzodiazepines – will detect metabolites of Valium, Librium, Xanax, Restoril, etc., in concentrations greater than 0.3 micrograms per milliliter. Approximate detection time for this class of drugs is 3 days for a single therapeutic dose of Valium.*
- Cannabinoids – detects the major urinary metabolites of THC (Marijuana, Hashish) in concentrations greater than 100 nanograms per milliliter. THC may be detected for up to 10 days or more after ingestion, although times may vary with frequency and amount of ingestion.*
- Cocaine – detects the metabolite of Cocaine (Benzoylecognine) in concentrations greater than 0.3 micrograms per milliliter. Approximate detection time is 2-4 days after ingestion.*
- Methadone – detects salt of Quaalude in concentrations greater than 0.3 micrograms per milliliter for approximately 2 weeks after ingestion.*
- Opiates – detects Morphine (metabolite of Heroin), Codeine and other in concentrations greater than 0.3 micrograms per milliliter, and Demerol in concentrations greater than 20 micrograms per milliliter. Approximate detection times for these compounds are 2 days.*
- Phencyclidine – detects PCP (Angel Dust) in concentrations greater than 75 nanograms per milliliter. Approximate detection time is 8 days.*
- Propoxyphene – detects Darvon salts (Darvon, Darvocet-N, etc.) in concentrations greater than 0.3 micrograms per milliliter. Approximate detection time for the metabolite is 6-48 hours.*

*Detection times are provided by the assay manufacturer, and are averages taking into consideration differences in individual metabolism, excretory functions, hydration, and drug purity and concentration, as well as usage patterns.

Enforcement

It is HEI's policy that all individuals show a "zero tolerance" for drug and alcohol abuse. This means that all employees must be able to pass drug and/or alcohol screening during work hours. Employees on a prescribed drug which may similarly affect them have a duty to report this to their supervisor/manager and to disclose the drugs when a urine specimen is delivered. **ONE CONFIRMED POSITIVE TEST OF SUBSTANCE ABUSE OR REFUSAL TO DELIVER A SPECIMEN MAY RESULT IN DISCIPLINE UP TO AND INCLUDING IMMEDIATE TERMINATION OF EMPLOYMENT.** All positive test results will be evaluated by management for possible disciplinary action. Since it is understood that some people use drugs as a profit-making venture, but abstain from their use, any activity of knowingly buying, selling, or transferring drugs illegally anywhere at any time may result in discipline up to and

including immediate termination of employment. HEI management reserves the right to impose discipline as is deemed appropriate and necessary at the absolute discretion of management. Any employee may request an appeal of any disciplinary action for review or reconsideration by management and management may reconsider, but the employee does not have a right to reconsideration of disciplinary action imposed.

WARNING

A SINGLE POSITIVE TEST OR REFUSAL TO DELIVER A SPECIMEN MAY RESULT IN IMMEDIATE TERMINATION OF EMPLOYMENT OF THE INVOLVED EMPLOYEE, AND THE EMPLOYEE DOES NOT HAVE AN AUTOMATIC RIGHT TO REVIEW OR RECONSIDERATION. EMPLOYEES ARE ADVISED TO ABSTAIN FROM ALCOHOL OR SUBSTANCE ABUSE AT ALL TIMES.

Section 25

Temperature Extremes Management **Program**

Temperature Extreme Management Plan

Purpose

This written Temperature Extreme Management Plan is instituted by this company to protect employees subject to temperature extremes. The plan is accessible to all interested persons, including employees and enforcing agencies. The information here will facilitate implementation of measures necessary to prevent inadequate or no protection for employees subject to temperature extreme environments.

This plan has been developed to comply with OSHA's General Duty Clause which states, *Each employer shall furnish to each of his employees employment and a place of employment which is free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees.*

Administrative Duties

Our Corporate Safety Officer (CSO) is our company's Temperature Extreme Management Plan Administrator and is responsible for establishing and implementing the written plan. This person has full authority to make necessary decisions to ensure the success of this plan. He is also qualified by appropriate training and experience to coordinate and direct our plan and conduct the required evaluations of the plans effectiveness. Our CSO understands the factors of temperature extreme stress. These factors include temperature extremes and factors leading to extreme temperatures.

Copies of the written Temperature Extreme Management Plan may be obtained from our CSO. If after reading this plan, you find that improvements can be made, please contact him at the office. We encourage all suggestions because we are committed to the success of our written plan. We strive for a comprehensive, integrated prevention system that obtains clear understanding, safe behavior, and involvement in the plan from every level of the company.

Hazard Assessment

Our CSO performs our company's temperature extreme hazard assessment. He determines exposure and potential risk by evaluating tasks to be performed and the environmental conditions they are to be performed in. If during the assessment temperature-related hazards exist work will not be performed until those hazards have been mitigated.

We understand that, after our initial hazard assessment, additional assessments are necessary. We perform additional hazard assessments on a daily basis if the hazards continue to exist.

Medical Surveillance

At our company, persons will not be assigned to certain temperature extreme tasks unless it has been determined that they are physically able to perform the work. Concentra Medical will perform medical evaluations using a medical questionnaire.

All medical questionnaires are confidential. The questionnaire is administered so that the employee understands its content. All employees are provided an opportunity to discuss the questionnaire and examination results with their physician or other licensed health care professional (PLHCP).

Before any initial examination or medical questionnaire is given, we supply the PLHCP with the project and potentially hazardous exposure information so that he/she can make the best recommendation concerning an employees ability to work.

Once the PLHCP determines whether the employee has the ability to do his/her job, the PLHCP sends our company a written recommendation.

A follow-up medical examination will be provided if any employee feels they have become affected by the circumstances under which they have worked. Employees may contact our Human Resources Department for a copy of their confidential medical evaluation or questionnaire.

Exposure Control

When a temperature extreme hazard exists, a site specific safety plan will be developed and project specific training will be conducted. Under no circumstances are employees who have not completed the specific training allowed to work on the jobsite.

Section 26

Welding & Cutting

Welding & Cutting Procedures

Reference: 29 CFR 1926.350

These written Welding & Cutting Procedures establish guidelines to be followed whenever any of our employees work with welding and cutting equipment at HEI. The procedures here establish uniform requirements designed to ensure that welding and cutting safety training, operation, and maintenance practices are communicated to and understood by the affected employees. These requirements also are designed to ensure that procedures are in place to safeguard the health and safety of all employees.

It is our intent to comply with the requirements of 29 CFR 1926.350 through .354. These regulations have requirements for welding and cutting operations. We also comply with applicable requirements of:

Standard or Regulation:	Name:
ANSI Z49.1-1967	<i>Safety in Welding and Cutting</i>
CGA Pamphlet P-1-1965	<i>Safe Handling of Compressed Gases</i>
29 CFR 1926, Subpart D	<i>Occupational Health and Environmental Controls</i>
29 CFR 1926, Subpart E	<i>Personal Protective And Life Saving Equipment</i>
29 CFR 1926.406(c)	<i>Electrical—Specific Purpose Equipment and Installations</i>
49 CFR 192	<i>Minimum Federal Safety Standards for Gas Pipelines</i>
49 CFR 178, Subpart C	<i>Specifications for Cylinders</i>

Training

It is the policy of HEI to permit only trained and authorized personnel to operate welding and cutting equipment.

Initial Training

During training, HEI covers the operational hazards of our welding and cutting operations, including:

- Hazards associated with the particular make and model of the welding and cutting equipment;

- Hazards of the workplace; and
- General hazards that apply to the operation of all or most welding and cutting equipment.

Each potential welder or cutter who has received training in any of the elements of our training program for the types of equipment which that employee will be authorized to operate and for the type of workplace in which the welding and cutting equipment will be operated need not be retrained in those elements before initial assignment in our workplace if HEI has written documentation of the training and if the employee is evaluated to be competent.

Performance Evaluation

Each certified welder or cutter is evaluated to verify that the welder or cutter has retained and uses the knowledge and skills needed to operate safely. If the evaluation shows that the welder or cutter is lacking the appropriate skills and knowledge, the welder or cutter is retrained. When a welder or cutter has an accident or near miss or some unsafe operating procedure is identified, they must be retraining.

Current Welders and Cutters

Under no circumstances may an employee operate welding or cutting equipment until he/she has successfully completed this company's welding and cutting training program.

A list of certified employees and equipment is available upon request.

All employees have a general obligation to work safely with and around welding and cutting operations.

Inspections

Any deficiencies found in our welding and cutting equipment are repaired, or defective parts replaced, before continued use. However, no modifications or additions that affect the capacity or safe operation of the equipment may be made without the manufacturer's written approval. If such modifications or changes are made, the capacity, operation, and maintenance instruction plates, tags, or decals, must be changed accordingly. In no case may the original safety factor of the equipment be reduced.

While defective parts may be found, we prefer to invest time and effort into the proper upkeep of our equipment, which results in day-to-day reliability. Keeping up with the manufacturer's recommended maintenance schedules, and completing the proper records, will also increase our welding and cutting equipment's longevity.

Periodic maintenance (those completed monthly or less frequently) is done by a factory-trained-expert, or a dealer.

Recycling and our Environment

HEI, Inc. actively participates in the salvage, collection and delivery of all materials that are safe and fit for recycling. This may include providing on site collection containers for specific materials or the transport of materials to a recycling center. Examples of such materials that are considered for collection and recycling are:

- Wood fiber
- Paper/Cardboard fiber (such as packing materials)
- Metals (framing materials, copper/aluminum wiring, other architectural materials)
- Glass
- Plastics
- Concrete & other masonry materials

The Project Manager for our UNM projects is a LEED Green Associate. He will ensure that HEI is taking full advantage of recycling opportunities and adhering to the below techniques for sustainability whenever possible or not restricted by cost components. We believe in reducing our footprint and providing a safer and healthier place for future generations.

- Prefabricate materials in controlled environments when possible
- Reduce waste through Job Packaging when possible. This usually applies to large quantities for light fixtures.
- Managing the site to ensure that correct receptacles are being used for discarded items and that recycling is being sorted out.
- Use of material which is generated through Lean Manufacturing Processes
- Selecting material, where applicable, that conforms to LEED standards such as purchasing wood approved by the Forest Stewardship Council.

Recycling and our Environment

HEI, Inc. actively participates in the salvage, collection and delivery of all materials that are safe and fit for recycling. This may include providing on site collection containers for specific materials or the transport of materials to a recycling center. Examples of such materials that are considered for collection and recycling are:

- Wood fiber
- Paper/Cardboard fiber (such as packing materials)
- Metals (framing materials, copper/aluminum wiring, other architectural materials)
- Glass
- Plastics
- Concrete & other masonry materials

The Project Manager for our UNM projects is a LEED Green Associate. He will ensure that HEI is taking full advantage of recycling opportunities and adhering to the below techniques for sustainability whenever possible or not restricted by cost components. We believe in reducing our footprint and providing a safer and healthier place for future generations.

- Prefabricate materials in controlled environments when possible
- Reduce waste through Job Packaging when possible. This usually applies to large quantities for light fixtures.
- Managing the site to ensure that correct receptacles are being used for discarded items and that recycling is being sorted out.
- Use of material which is generated through Lean Manufacturing Processes
- Selecting material, where applicable, that conforms to LEED standards such as purchasing wood approved by the Forest Stewardship Council.

Appendix E – Key Personnel
Project Manager

Name: Jesse Luna

Name: _____

Title: Project Manager

of Years with the Firm: 1

Experience with the Following Type of Construction Services:

General Construction Mechanical, Electrical, and Plumbing Roofing

of Years as a Project Manager for Type of Construction Services Selected Above: 10

Check All Relevant Experience:

Projects for Higher Education Owners Laboratory Renovations Clinical / Medical Environment

General Construction Roofing Replacement/Repair Mechanical Upgrades Electrical Upgrades

Interior Renovation Asbestos abatement Exterior / Interior painting Boiler Replacement

Bituminous Paving Concrete Masonry Exterior Facade Security Camera Installation

Canopy Replacement/Repair Elevator Repair/Replacement Escalator Repair/Replacement

Overhead Doors Glass Installation Steel Erection Concrete Floor

Duct bank repair / installation Outdoor light installation Fire Suppression System Installation

Landscaping Fencing Earthwork / Site Work Demolition Paintin

ATTACH RESUME Yes

Client Reference #1 for Construction: (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

Agency's contact: Name Saif Ismail Title CABQ Sustainability Division Manager

Telephone: 505-768-5391 Email Address: sismail@cabq.gov

Client Reference #2 for Construction: (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

Agency's contact: Name Georgene Dimas Title Metro Dispatch Manager

Telephone: 505-870-1392 Email Address: georgene.dimas@co.mckinley.nm.us



Personnel Resume

Jesse Luna
Project Manager
Phone: Office 505-880-1819 Cell: 505-553-5431

License
N/A

Education

High School

Manzano High School Diploma – graduated

Work Experience

HEI, Inc.

Project Manager November 2021 to Present

- Responsible for daily operations of major electrical projects work throughout the State of New Mexico. Work directly with all customers including private companies and several state agencies to coordinate costs and scheduling of multiple crews. Responsible for financial reporting and tracking of all projects. Supervising up to 10 personnel.

MAC GC-Electric

Project Manager 2019-2021

- General Contracting with a focus on self-performance of electrical scopes. Responsible for establishing and maintaining project budgets, project scheduling, subcontractors working closely with customers and design teams and management of project deliverables. Supervising up to 24 personnel.

Gardner Zemke

Journeyman Electrician / Project Manager 2009 – 2019

- Project Manager – Responsible for managing all aspects through life of a project from contracts through construction and closeout. Responsible for scheduling of resources and monitoring all labor and material costs to ensure that projects meet budget and schedule.
- Journeyman - responsible for interpreting construction drawings and implementing installation of electrical distribution and branch circuiting components in strict compliance with construction documents (drawings and specifications) as well as governing code guidelines.

Related Experience

- MS Project Scheduling
- Primavera P6
- Procure Project Management
- Design Build Assist Projects
- Accubid Estimating Suite
- Field Knowledge and Experience

Reference

- **Urban Wellness Alamo**
\$750,000.00
John Valdez
Email: john@urbanwellnessnm.com
Mobile: (505) 977-7597
- **CofA Los Volcanes Senior Center Lighting Upgrade**
\$318,000.00
Saif Ismail
Email: sismail@cabq.gov
Mobile: (505) 228-1827

Appendix F – Key Personnel
Lead Superintendent

Name: Craig Goodwin

Name: _____

Title: Superintendent

of Years with the Firm: 14

Experience with the Following Type of Construction Services:

General Construction Electrical Mechanical Roofing

of Years as a Project Manager for Type of Construction Services Selected Above: _____

Check All Relevant Experience:

Projects for Higher Education Owners Laboratory Renovations Clinical / Medical Environment
 General Construction Roofing Replacement/Repair Mechanical Upgrades Electrical Upgrades

Interior Renovation Asbestos abatement Exterior / Interior painting Boiler Replacement

Bituminous Paving Concrete Masonry Exterior Facade Security Camera Installation

Canopy Replacement/Repair Elevator Repair/Replacement Escalator Repair/Replacement

Overhead Doors Glass Installation Steel Erection Concrete Floor

Duct bank repair / installation Outdoor light installation Fire Suppression System Installation

Landscaping Fencing Earthwork / Site Work Demolition Painting

ATTACH RESUME Yes

Client Reference #1 for Construction: (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

Agency's contact: Name Lester Massegee Title Superintendent

Telephone: 505-345-5431 Email Address: lester.massegee@jaynescorp.com

Client Reference #2 for Construction: (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

Agency's contact: Name Rick Motelet Title Project Manager

Telephone: 505-795-2387 Email Address: richard.motelet@state.nm.us



Personnel Resume

Craig Goodwin
Superintendent

Phone: Office 505-880-1819 **Cell:** 505-228-6751

License

New Mexico EE98J

Certification Number 365218

Education

CNM

Electrician

Graduated 2004

Work Experience

HEI, Inc.

Project Superintendent/Lead Foreman

February 2008-Present

- Responsible for interpreting construction drawings and implementing installation of electrical distribution and branch circuiting components in strict compliance with construction documents (drawings and specifications) as well as governing code guidelines and Safety compliance. Supervise up to 20 employees

PTI

Journeyman

June 2006-February 2008

- Bidding and completing all electrical work on projects, head electrical manager pricing and estimates for projects and supervise up to 10 employees.

Technical Capabilities

- Interfacing and coordinating with other trades
- Requisitioning materials and on site material logistics
- Supervising support staff
- Supporting construction schedule
- Adhering to safe work practices
- Analyzes, testing and repair of defective or inoperative electrical systems and devices
- Professional interface, collaboration and cooperation with other construction trades and end users

Project Experience

- **State of NM FMD**
Department of Corrections Generator Replacement Level V and VI.
\$1,981,821.53
Mark Vigil
Email: Mark.Vigil@state.nm.us
Mobile: (505) 690-8087
- **State of NM GSD**
Electrical Upgrade Phase II 480V Electrical Distribution Chino Building, Santa Fe.
\$267,367.71
Rick Motelet
Email: Richard.Motelet@state.nm.us
Mobile: (505) 795-2387

Reference:

David Gonzales, PE

Peak Power Engineering – (505) 982-7071

Appendix G – Key Personnel
Safety Manager

Name: Norm Berget

Name: _____

Title: Quality and Safety Manager

of Years with the Firm: 4

Experience with the Following Type of Construction Services:

General Construction Mechanical, Electrical, and Plumbing Roofing

of Years as a Project Manager for Type of Construction Services Selected Above: 38

Check All Relevant Experience:

Projects for Higher Education Owners Laboratory Renovations Clinical / Medical Environment
 General Construction Roofing Replacement/Repair Mechanical Upgrades Electrical Upgrades

Interior Renovation Asbestos abatement Exterior / Interior painting Boiler Replacement

Bituminous Paving Concrete Masonry Exterior Facade Security Camera Installation

Canopy Replacement/Repair Elevator Repair/Replacement Escalator Repair/Replacement

Overhead Doors Glass Installation Steel Erection Concrete Floor

Duct bank repair / installation Outdoor light installation Fire Suppression System Installation

Landscaping Fencing Earthwork / Site Work Demolition Painting

ATTACH RESUME Yes

Client Reference #1 for Construction: (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

Agency's contact: Name Georgene Dimas Title Metro Disptach Director

Telephone: 505-870-1392 Email Address: georgene.dimas@co.mckinley.nm.us

Client Reference #2 for Construction: (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

Agency's contact: Name Nick Gonzales Title Facility Manager

Telephone: 505-923-1500 Email Address: nicholas.gonzales@curiaglobal.com



Personnel Resume

Norm Berget

Field Quality and Safety Supervisor

Phone: Office 505-880-1819 **Cell:** 980-5817

License

New Mexico EE98J

Certification Number 07125

Education

Manzano High School

High School Diploma – graduated 1976

Work Experience

HEI, Inc.

Electrical Supervisor/Safety/Quality Manager

November 2018 to Present

- Responsible for daily safety of crews on electrical projects throughout the state of New Mexico. Work closely with all Journeyman and Apprentices to ensure that customer specifications and expectations are met. Ensure that all work is done safely while training all crafts people on best trade methods for meeting or exceeding schedule and cost goals while maintaining a quality standard. Supervised up to 15 employees.

Chaparral Electric

Electrical Supervisor and Safety Manager

1978 - 2014

- Maintain highest safety standards pursuant to company policies and procedures: supervise job foreman in all issues related to implementation of company policies and safety practices. Implement company policies and safety practices and make recommendations for improvement to management. Supervised up to 60 employees.

Related Experience

- OSHA 10 Construction
- NFPA70E
- National Electrical Code
- Fall Projection
- Lock Out Tag Out
- First Aid
- Forklift Training
- Self-Propelled and Boom Support Training
- Confined Space Awareness
- EE-98-J New Mexico Journeyman's License

Reference

- **Mckinley County Courthouse Generator Install**
\$1,000,000.00
Georgene Dimas
Email: georgene.dimas@co.mckinley.nm.us
Mobile: (505) 870-1392
- **State of NM GSD**
Electrical Upgrade Phase II 480V Electrical Distribution
Chino Building, Santa Fe.
\$267,367.71
Rick Motelet
Email: Richard.Motelet@state.nm.us
Mobile: (505) 795-2387

Appendix I – Comparable Construction Experience Mechanical, Electrical, and Plumbing (MEP) Projects

Applicable to Firms Submitting a Proposal for the Mechanical, Electrical, and Plumbing (MEP) Contract

Proponent's Name: HEI, INC

Agency / Client Name: Santa Fe Community College

Project Name: Design and Install Main Power Distribution System Upgrade

Project Number: 075-20 Project Value: 436,703.83

Achieved or Anticipated Final Acceptance after January 1, 2021 Yes No

Company Role: Sub Contractor Prime / JV Contractor

Agency: Public Private

Location: On a UNM Campus Within State of New Mexico

Estimated Self Performance (%): 98
(Based on actual hours through the working foreperson. **Supervisory hours do NOT apply.**)

Project Type: (The project type should correspond to the applicable Contract the proposal is being submitted for: General Construction, MEP, Roofing)

General Construction Mechanical, Electrical, and Plumbing Roofing Painting

Project Scope: (Briefly describe the scope of work and the trades involved. The project scope should correspond to the applicable trade Contract the proposer is submitting for: General Construction, MEP, Roofing)

Complete design, repair and replacement of existing Main Distribution System.

This also included the complete design and replacement of the controls for

the lighting systems throughout the campus. The main distribution board was

completely removed and replaced along with service panels. The transfer

from existing to new was coordinated through outages accommodating user schedules.

Client Reference for Construction: (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

Agency's contact: Name Andrea Mueller Title Assistant Director Facilities & Campus Planning
Telephone: 505-428-1873 Email Address: andrea.mueller1@sfcc.edu

Briefly describe the project: Attached additional page, if necessary.

See scope above - Replace Existing Main Distribution System.

Appendix I – Comparable Construction Experience Mechanical, Electrical, and Plumbing (MEP) Projects

Applicable to Firms Submitting a Proposal for the Mechanical, Electrical, and Plumbing (MEP) Contract

Proponent's Name: HEI, Inc.
Agency / Client Name: CURIA New Mexico, LLC
Project Name: New cameras and gate power and controls
Project Number: 319712 Project Value: 199,283.79

Achieved or Anticipated Final Acceptance after January 1, 2021 Yes No

Company Role: Sub Contractor Prime / JV Contractor

Agency: Public Private

Location: On a UNM Campus Within State of New Mexico

Estimated Self Performance (%): 80
(Based on actual hours through the working foreperson. **Supervisory hours do NOT apply.**)

Project Type: (The project type should correspond to the applicable Contract the proposal is being submitted for: General Construction, MEP, Roofing)

General Construction Mechanical, Electrical, and Plumbing Roofing Painting

Project Scope: (Briefly describe the scope of work and the trades involved. The project scope should correspond to the applicable trade Contract the proposer is submitting for: General Construction, MEP, Roofing)

Install new conduit and power for gate operators at building 4401. The new conduit path included connections from existing panels to new operators. This required 1,300' of directional boring including 8 bore pits. Conduit was also ran for nine new camera locations. New cameras were installed and programed.

Client Reference for Construction: (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

Agency's contact: Name Nick Gonzales Title Facility Manager

Telephone: 505-923-1500 Email Address: Nicholas.Gonzales@curiaglobal.com

Briefly describe the project: Attached additional page, if necessary.

Appendix I – Comparable Construction Experience Mechanical, Electrical, and Plumbing (MEP) Projects

Applicable to Firms Submitting a Proposal for the Mechanical, Electrical, and Plumbing (MEP) Contract

Proponent's Name: HEI, INC

Agency / Client Name: Santa Fe Community College

Project Name: Design and Install Main Power Distribution System Upgrade

Project Number: 19-22 Project Value: 53,032.75

Achieved or Anticipated Final Acceptance after January 1, 2021 Yes No

Company Role: Sub Contractor Prime / JV Contractor

Agency: Public Private

Location: On a UNM Campus Within State of New Mexico

Estimated Self Performance (%): 99
(Based on actual hours through the working foreperson. **Supervisory hours do NOT apply.**)

Project Type: (The project type should correspond to the applicable Contract the proposal is being submitted for: General Construction, MEP, Roofing)

General Construction Mechanical, Electrical, and Plumbing Roofing Painting

Project Scope: (Briefly describe the scope of work and the trades involved. The project scope should correspond to the applicable trade Contract the proposer is submitting for: General Construction, MEP, Roofing)

Upgrade existing emergency management system by installing a new 150KW Caterpillar
generator. Extend existing pad and remove existing generator. Perform start-up
of generator. Keep critical load running during replacement and schedule with
users to minimize disruption.

Client Reference for Construction: (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

Agency's contact: Name Andrea Mueller Title Assistant Director Facilities & Campus Planning
Telephone: 505-428-1873 Email Address: andrea.mueller1@sfcc.edu

Briefly describe the project: Attached additional page, if necessary.

See scope above. Install new 150KVA 480V 3PH generator.

Appendix I – Comparable Construction Experience Mechanical, Electrical, and Plumbing (MEP) Projects

Applicable to Firms Submitting a Proposal for the Mechanical, Electrical, and Plumbing (MEP) Contract

Proponent's Name: HEI, Inc.
Agency / Client Name: UNM
Project Name: Campus Fiber Install
Project Number: PRO-CCA-2724-20 Project Value: 228,939

Achieved or Anticipated Final Acceptance after January 1, 2021 Yes No

Company Role: Sub Contractor Prime / JV Contractor

Agency: Public Private

Location: On a UNM Campus Within State of New Mexico

Estimated Self Performance (%): 100
(Based on actual hours through the working foreperson. **Supervisory hours do NOT apply.**)

Project Type: (The project type should correspond to the applicable Contract the proposal is being submitted for: General Construction, MEP, Roofing)

General Construction Mechanical, Electrical, and Plumbing Roofing Painting

Project Scope: (Briefly describe the scope of work and the trades involved. The project scope should correspond to the applicable trade Contract the proposer is submitting for: General Construction, MEP, Roofing)

Install 4 new routes of fiber throughout the campus. This included backbone fiber
and building fiber in fourteen buildings. Fiber was jet blown where required and
installed in both new and existing conduit and basket tray. This also included
termination and testing of fiber and new enclosures. New racks were also installed
in some of the buildings.

Client Reference for Construction: (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

Agency's contact: Name Don Wooster Title IT Engineer

Telephone: 505-277-1552 Email Address: dwooster@unm.edu

Briefly describe the project: Attached additional page, if necessary.

New communication fiber - see scope of work above.

Appendix I – Comparable Construction Experience Mechanical, Electrical, and Plumbing (MEP) Projects

Applicable to Firms Submitting a Proposal for the Mechanical, Electrical, and Plumbing (MEP) Contract

Proponent's Name: HEI, Inc.
Agency / Client Name: UNM
Project Name: Clark Hall - Riebsomer Wing Renovation Phase II
Project Number: PRO-CCA-3558-21 Project Value: 274,333

Achieved or Anticipated Final Acceptance after January 1, 2021 Yes No

Company Role: Sub Contractor Prime / JV Contractor

Agency: Public Private

Location: On a UNM Campus Within State of New Mexico

Estimated Self Performance (%): 100
(Based on actual hours through the working foreperson. **Supervisory hours do NOT apply.**)

Project Type: (The project type should correspond to the applicable Contract the proposal is being submitted for: General Construction, MEP, Roofing)

General Construction Mechanical, Electrical, and Plumbing Roofing Painting

Project Scope: (Briefly describe the scope of work and the trades involved. The project scope should correspond to the applicable trade Contract the proposer is submitting for: General Construction, MEP, Roofing)

Install 24" open wall-mount rack. Install 12-fiber interlocking plenum from IDF to
first floor T1. Provide horizontal cables for the lecture hall. Also installed 526
new cat 6 lines including 85 WAP locations. This included 48 cat 6 patch panels
and demo of old non-working cables. All lines were terminated, tested and labeled.

Client Reference for Construction: (It is your responsibility to assure that the contact information listed is correct. If your reference can not be contacted, this project may not be considered.)

Agency's contact: Name Don Wooster Title IT Engineer

Telephone: 505-277-1552 Email Address: dwooster@unm.edu

Briefly describe the project: Attached additional page, if necessary.

Clark Hall-Riebsomer Wing Renovation Phase II. See above scope.

Appendix K – Indefinite Quantity Contract Experience

General

1. Agency Name: State of New Mexico
2. Contract Number: 10-000000-21-00095

Reference Information

3. Reference Name, Position: Michael Saavedra, Procurement Specialist Supervisor
4. Address: 1100 St. Francis Drive, Room 2016

5. City, State, Zip Code: Santa Fe, NM 87505
6. Phone Number: 505-372-8489
7. Email Address: Michael.Saavedra@state.nm.us

Contract Time:

8. Potential Maximum Time:* three years
9. Award Date: 15JUN2021
10. Expiration/Termination Date(or still active): Active

Contract Amounts:

11. Potential Maximum Amount:** \$10,000,000
12. Total Amount of Work Issued (\$): \$910,657.34
13. Total Number of Job Orders Issued (#): 24

Key Personnel

14. Name and Position: Jesse Luna, Project Manager
15. Name and Position: Norm Berget, Safety and Quality
16. Name and Position: Craig Goodwin, Superintendent
17. Name and Position: Ruben Torrez, Lead Journeyman
18. Yes or No, Did any of the key personnel proposed for this contract work on the contract referenced? Yes
19. If answer to the above question is "Yes" and if those individuals are not listed as key personnel above list the name and position below:

***Potential Maximum Time** shall mean the entire possible duration of the contract. The Potential Maximum Time is calculated by adding together the base term plus all possible option terms.

****Potential Maximum Amount** shall be the sum of the potential Maximum for the base term and all possible option terms

Appendix K – Indefinite Quantity Contract Experience

General

1. Agency Name: University of New Mexico
2. Contract Number: P0187392

Reference Information

3. Reference Name, Position: Angela Eckhardt, Purchasing
4. Address: Perovich Business Center, Ste 2600
1 University of New Mexico
5. City, State, Zip Code: Albuquerque, New Mexico, 87131
6. Phone Number: 505-277-2036
7. Email Address: ang0699@unm.edu

Contract Time:

8. Potential Maximum Time:* 1 year
9. Award Date: 9/28/2021
10. Expiration/Termination Date(or still active): 9/27/2022

Contract Amounts:

11. Potential Maximum Amount:** 200,000
12. Total Amount of Work Issued (\$): 106,311,12
13. Total Number of Job Orders Issued (#): 47

Key Personnel

14. Name and Position: George Cox, Journeyman
15. Name and Position: Debbie Lisotto, Project Manager
16. Name and Position: Ron Apodaca, Journeyman
17. Name and Position: _____
18. Yes or No, Did any of the key personnel proposed for this contract work on the contract referenced? No
19. If answer to the above question is "Yes" and if those individuals are not listed as key personnel above list the name and position below:

***Potential Maximum Time** shall mean the entire possible duration of the contract. The Potential Maximum Time is calculated by adding together the base term plus all possible option terms.

****Potential Maximum Amount** shall be the sum of the potential Maximum for the base term and all possible option terms

Expressed as a dollar amount.

Appendix L – Price Proposal

University of New Mexico

BID FOR JOB ORDER CONTRACT (PRICE PROPOSAL)

Date of Bid: 17NOV22

New Mexico State Contractor's License No. 061439

Resident Contractor's Preference Certificate No. L0819237680

Contractor's New Mexico Gross Receipts Tax No. 02-360288-00-7

Contractor's Federal Employee Identification No. 85-0449865

Dept. Workforce Solutions Registered Contractors Number 002495720120723

UNM Purchasing Department

Request for Proposals No. RFP-2127-19

Bid (Price Proposal) of (company name): HEI, Inc.
(hereinafter called the "Bidder") organized and existing under the laws of the State of New Mexico, doing business as a Corporation, Partnership or Individual. (Circle correct one).

To: The Regents of The University of New Mexico, Albuquerque, New Mexico
(hereinafter called the "Owner").

The undersigned, as an authorized representative for the Bidder named above, in compliance with the Request For proposals (RFP) for Job Order Contracting services, having examined the Contract Documents, hereby proposes to furnish all labor, materials and supplies, and to construct the project in accordance with the contract documents at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the contract documents, of which this proposal is a part.

Offeror must agree to commence work on a date specified in a written "Notice to Proceed" issued by the Owner. The Offeror must agree to complete the Project within the Job Order Completion Time stipulated date in the "Notice of Proceed". At the sole discretion of the Owner, liquidated damages will be assessed, if at all, on a Job Order-by-Job-Order basis. For each calendar day that the Detailed Scope of Work for a Job Order shall remain incomplete after the Job Order Completion Time, as amended pursuant to this Contract, the amount per calendar will be determined with each Job Order, and that amount will be deducted from any money due the Contractor, not as a penalty but as liquidated damages.

The following information is required for state reporting purposes only, and will not be used in evaluating or awarding the contract.

Is project material offered grown, produced or wholly manufactured in New Mexico? No

Business Size / Classification:

Small Business Concern Disadvantaged Business Concern
 Large Business Concern Women Owned Business Concern

The Contractor shall perform all Work required called for in each individual Job Order issued under this Contract using the Construction Task Catalog[®] and Technical Specifications incorporated herein. Contractor shall perform any or all functions called for in the Contract Documents in the quantities specified in individual Job Orders against this Contract for the Unit Prices specified in the Construction Task Catalog[®] (CTC) multiplied by the Adjustment Factors being proposed.

The Bidder shall set forth Adjustment Factors in clearly legible figures in the respective space provided. Failure to submit Adjustment Factors for all categories may result in the Proposal being deemed non-responsive. **All amounts shall exclude NM Gross Receipts Tax.** The Contractor shall perform the Tasks required by each individual Job Order using the following Adjustment Factors:

The Schedule of Prices is contained in a separate Microsoft Excel document. Complete the Microsoft Excel document and submit as part of this Appendix L. Be sure to enter Adjustment Factors for each campus and trade being proposed.

PART 1: SCHEDULE OF PRICES:

Attach Schedule of Prices from the Microsoft Excel document. On the Microsoft Excel document, be sure to enter Adjustment Factors for each campus and trade being proposed.

Has the Part 1: Schedule of Prices been attached to this Appendix L: Yes No

PART 2: SIGNATURES

The Bidder understands that the contract(s) will be awarded in accordance with the all terms and conditions contained in this RFP and that the Owner reserves the right to reject any or all bids and to waive any formalities in the bidding.

The Bidder agrees that this response will be good and may not be withdrawn for a period of thirty (30) calendar days after the scheduled closing time for receiving bids.

Respectfully Submitted,

By:(Authorized Signature) _____ Date: 03NOV22

By:(Same Name, Printed or Typed) Kelly Adams

Title: Director

Company: HEI, Inc.

Address: 3800 Vassar Dr NE

Zip: 87107

Phone: 505-880-1819 Fax: 505-837-1516 Email: kadams@heinm.com

(Affix Corporate Seal if response by Corporation):



Part 1 Schedule of Prices

Attach this schedule of Prices to Appendix L

OFFEROR'S NAME: HEI, Inc.

For the UNM Job Order Contracting Program the Offeror shall complete the cells highlighted grey below. Failure to submit all the Adjustment Factors for the Campus/Contract Type being proposed may result in the bid for that Campus/Contract Type being deemed non-responsive. **The Contractor is to include the administrative fee of 2.98% into their responding adjustment factors.** The Contractor shall perform the Tasks required by each individual Job Order using the following Adjustment Factors:

UNM Job Order Contracting Program		CONTRACT TYPES		
Campus / Region	Adjustment Factor Name	General Construction	Mechanical, Electrical, Plumbing	Roofing
Main Campus (Albuquerque)	Normal Working Hours (60%)		1.3	
	Other Than Normal Working Hours (30%)		1.35	
	Non Pre-Priced (10%)		1.2	
	<i>Award Criteria Figure</i>	0.0000	1.3050	0.0000
Campus / Region	Adjustment Factor Name	General Construction	Mechanical, Electrical, Plumbing	Roofing
Northern New Mexico Branch Campuses	Normal Working Hours (60%)		1.3	
	Other Than Normal Working Hours (30%)		1.35	
	Non Pre-Priced (10%)		1.2	
	<i>Award Criteria Figure</i>	0.0000	1.3050	0.0000
Campus / Region	Adjustment Factor Name	General Construction	Mechanical, Electrical, Plumbing	Roofing
Southern New Mexico Branch Campuses	Normal Working Hours (60%)		1.35	
	Other Than Normal Working Hours (30%)		1.4	
	Non Pre-Priced (10%)		1.25	
	<i>Award Criteria Figure</i>	0.0000	1.3550	0.0000

For the UNM Cooperative Purchasing Job Order Contracting Program the Offeror shall complete the cells highlighted grey below. Failure to submit all the Adjustment Factors for the Region/Contract Type being propose may result in the bid for that Region/Contract Type being deemed non-responsive. A complete map of the regions can be found in the Purpose of this RFP Document. **The Contractor is to include the administrative fee of 7.50% into their responding adjustment factors.** The Contractor shall perform the Tasks required by each individual Job Order using the following Adjustment Factors:

UNM Cooperative Purchasing Job Order Contracting Program		CONTRACT TYPES		
Campus / Region	Adjustment Factor Name	General Construction	Mechanical, Electrical, Plumbing	Roofing
Region #1	Normal Working Hours (60%)		1.3	
	Other Than Normal Working Hours (30%)		1.35	
	Non Pre-Priced (10%)		1.2	
	<i>Award Criteria Figure</i>	0.0000	1.3050	0.0000
Campus / Region	Adjustment Factor Name	General Construction	Mechanical, Electrical, Plumbing	Roofing
Region #2	Normal Working Hours (60%)		1.3	
	Other Than Normal Working Hours (30%)		1.35	
	Non Pre-Priced (10%)		1.2	
	<i>Award Criteria Figure</i>	0.0000	1.3050	0.0000
Campus / Region	Adjustment Factor Name	General Construction	Mechanical, Electrical, Plumbing	Roofing
Region #3	Normal Working Hours (60%)		1.35	
	Other Than Normal Working Hours (30%)		1.4	
	Non Pre-Priced (10%)		1.25	
	<i>Award Criteria Figure</i>	0.0000	1.3550	0.0000
Campus / Region	Adjustment Factor Name	General Construction	Mechanical, Electrical, Plumbing	Roofing
Region #4	Normal Working Hours (60%)		1.35	
	Other Than Normal Working Hours (30%)		1.4	
	Non Pre-Priced (10%)		1.25	
	<i>Award Criteria Figure</i>	0.0000	1.3550	0.0000
Campus / Region	Adjustment Factor Name	General Construction	Mechanical, Electrical, Plumbing	Roofing
Region #5	Normal Working Hours (60%)		1.35	
	Other Than Normal Working Hours (30%)		1.4	
	Non Pre-Priced (10%)		1.25	
	<i>Award Criteria Figure</i>	0.0000	1.3550	0.0000

NOTES TO OFFERERS

1. The Other Than Normal Working Hours Adjustment Factors must be greater than or equal to the Normal Working Hours Adjustment Factors.

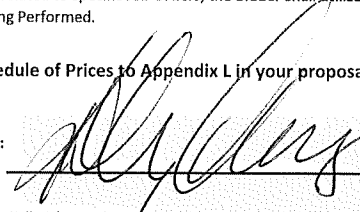
2. The Non Pre-Priced Adjustment Factor must be greater than or equal to 1.000

3. The weighted multipliers above are for the purpose of calculating an Award Criteria Figure only. No assurances are made by the owner that Work will be ordered under the Contract in a distribution consistent with the weighted percentages above. The Award Criteria Figure is only used for the purpose of determining the Bid.

4. When submitting Job Order Price Proposals related to specific Job Orders, the Bidder shall utilize one or more of the Adjustment Factors applicable to the Work being Performed.

5. Make sure to attach this Part 1: Schedule of Prices to Appendix L in your proposal

By: Authorized Signature: _____



By: Same Name and title Printed or typed: _____

Kelly Adams, Director

Date: _____

11/3/2022



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

10/28/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Burke Insurance Group, LLC 1690 S. Telshor Blvd Las Cruces NM 88011	CONTACT NAME: Dianne Dawkins PHONE (A/C. No. Ext): 575-524-2222 E-MAIL ADDRESS:		FAX (A/C. No.): 575-525-1716
	INSURER(S) AFFORDING COVERAGE		
INSURED HEI, Inc. 3800 Vassar PO Box 31310 Albuquerque NM 87190-1310	HEIINC0-01	INSURER A: Cincinnati Insurance Company (
		INSURER B: Builders Trust of NM	
		INSURER C:	
		INSURER D:	
		INSURER E:	
		INSURER F:	
		NAIC # 10677 52519	

COVERAGES

CERTIFICATE NUMBER: 1846143349

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER:	Y	Y	EPP 0087604	6/1/2022	6/1/2023	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 500,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY	Y	Y	EPP 0087604	6/1/2022	6/1/2023	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ Hired & Non-Owned \$ 1,000,000
A	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ 0			EPP 0087604	6/1/2022	6/1/2023	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000 \$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A	WC-100-0005961-2022A	1/1/2022	1/1/2023	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 2,000,000 E.L. DISEASE - EA EMPLOYEE \$ 2,000,000 E.L. DISEASE - POLICY LIMIT \$ 2,000,000
A	Installation Floater			EPP 0087604	6/1/2022	6/1/2023	Jobsite Limit 100,000 Temporary Storage 100,000 Deductible 1,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RFP number is #RFP-2379-23
 UNM Job Order Contracting (JOC)

See Attached...

CERTIFICATE HOLDER

University of New Mexico
 Purchasing Department
 700 Lomas Blvd. NE #2600
 MSC01 1240
 Albuquerque NM 87131-0001
 USA

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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ADDITIONAL REMARKS SCHEDULE

AGENCY Burke Insurance Group, LLC		NAMED INSURED HEI, Inc. 3800 Vassar PO Box 31310 Albuquerque NM 87190-1310	
POLICY NUMBER		EFFECTIVE DATE:	
CARRIER	NAIC CODE		

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
FORM NUMBER: 25 FORM TITLE: CERTIFICATE OF LIABILITY INSURANCE

The Regents of The University of New Mexico, The University of New Mexico, its agents, servants and employees and Owner are named as Additional Insured per Additional Insured Endorsement for ongoing and completed operation for General Liability as required by written contract. The Regents of The University of New Mexico, The University of New Mexico, its agents, servants and employees and Owner are named as Additional Insured on all policies except Worker's Compensation per written contract. A waiver of subrogation exists in favor of The Regents of The University of New Mexico, The University of New Mexico, its agents, servants and employees and Owner as to the general liability, auto, umbrella and workers compensation policies per written contract. The general liability, auto and umbrella policies are primary and non-contributory. Thirty (30) day written notice of cancellation applies.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

CONTRACTORS' COMMERCIAL GENERAL LIABILITY BROADENED ENDORSEMENT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

A. Endorsement - Table of Contents:

<u>Coverage:</u>	<u>Begins on Page:</u>
1. Employee Benefit Liability Coverage.....	3
2. Unintentional Failure To Disclose Hazards.....	9
3. Damage To Premises Rented To You.....	9
4. Supplementary Payments.....	10
5. Medical Payments.....	10
6. 180 Day Coverage For Newly Formed Or Acquired Organizations.....	10
7. Waiver Of Subrogation.....	11
8. Automatic Additional Insured - Specified Relationships:.....	11
• Managers Or Lessors Of Premises;	
• Lessor Of Leased Equipment;	
• Vendors;	
• State Or Governmental Agency Or Subdivision Or Political Subdivision - Permits Or Authorizations Relating To Premises; and	
• Mortgagee, Assignee Or Receiver	
9. Property Damage To Borrowed Equipment.....	14
10. Employees As Insureds - Specified Health Care Services And Good Samaritan Services.....	15
11. Broadened Notice Of Occurrence.....	15
12. Nonowned Aircraft.....	15
13. Bodily Injury Redefined.....	15
14. Expected Or Intended Injury Redefined.....	15
15. Former Employees As Insureds.....	15
16. Voluntary Property Damage Coverage And Care, Custody Or Control Liability Coverage.....	16
17. Broadened Contractual Liability - Work Within 50' Of Railroad Property.....	17
18. Alienated Premises.....	17

B. Limits Of Insurance:

The Commercial General Liability Limits of Insurance apply to the insurance provided by this endorsement, except as provided below:

1. Employee Benefit Liability Coverage

Each Employee Limit: \$1,000,000
Aggregate Limit: \$3,000,000
Deductible Amount: \$ 1,000

3. Damage To Premises Rented To You

The lesser of:

- The Each Occurrence Limit shown in the Declarations; or
- \$500,000 unless otherwise stated \$ _____

4. Supplementary Payments

- Bail Bonds: \$2,500

b. Loss Of Earnings: \$ 500

5. Medical Payments

Medical Expense Limit: \$ 10,000

9. Property Damage To Borrowed Equipment

Each Occurrence Limit: \$10,000

Deductible Amount: \$ 250

16. Voluntary Property Damage Coverage (Coverage a.) And Care, Custody Or Control Liability Coverage (Coverage b.)

Limits Of Insurance

Coverage **a.**

\$1,000 Each Occurrence

\$5,000 Aggregate

Coverage **b.** \$5,000 Each Occurrence unless otherwise stated \$ _____

Deductible Amount (Each Occurrence)

Coverage **a.** \$250

Coverage **b.** \$250 unless otherwise stated \$ _____

COVERAGE	PREMIUM BASIS (a) Area (b) Payroll (c) Gross Sales (d) Units (e) Other	RATE (For Limits in Excess of \$5,000)	ADVANCE PREMIUM (For Limits in Excess of \$5,000)
b. Care, Custody Or Control			\$
TOTAL ANNUAL PREMIUM			\$

C. Coverages

1. Employee Benefit Liability Coverage

- a. The following is added to **Section I - Coverages**:

Employee Benefit Liability Coverage

(1) Insuring Agreement

- (a) We will pay those sums that the insured becomes legally obligated to pay as damages caused by any act, error or omission of the insured, or of any other person for whose acts the insured is legally liable, to which this insurance applies. We will have the right and duty to defend the insured against any "suit" seeking those damages. However, we will have no duty to defend against any "suit" seeking damages to which this insurance does not apply. We may, at our discretion, investigate any report of an act, error or omission and settle any claim or "suit" that may result. But:

- 1) The amount we will pay for damages is limited as described in **Section III - Limits Of Insurance**; and
- 2) Our right and duty to defend ends when we have used up the applicable limit of insurance in the payment of judgments or settlements.

No other obligation or liability to pay sums or perform acts or services is covered unless explicitly provided for under **Supplementary Payments**.

- (b) This insurance applies to damages only if the act, error or omission, is negligently committed in the "administration" of your "employee benefit program"; and
- 1) Occurs during the policy period; or
 - 2) Occurred prior to the "first effective date" of

this endorsement provided:

- a) You did not have knowledge of a claim or "suit" on or before the "first effective date" of this endorsement.

You will be deemed to have knowledge of a claim or "suit" when any "authorized representative";

- i) Reports all, or any part, of the act, error or omission to us or any other insurer;

- ii) Receives a written or verbal demand or claim for damages because of the act, error or omission; and

- b) There is no other applicable insurance.

(2) Exclusions

This insurance does not apply to:

- (a) **Bodily Injury, Property Damage Or Personal And Advertising Injury**

"Bodily injury", "property damage" or "personal and advertising injury".

- (b) **Dishonest, Fraudulent, Criminal Or Malicious Act**

Damages arising out of any intentional, dishonest, fraudulent, criminal or malicious act, error or omission, committed by any insured, including the willful or reckless violation of any statute.

- (c) **Failure To Perform A Contract**

Damages arising out of failure of performance of contract by any insurer.

(d) Insufficiency Of Funds

Damages arising out of an insufficiency of funds to meet any obligations under any plan included in the "employee benefit program".

(e) Inadequacy Of Performance Of Investment/Advice Given With Respect To Participation

Any claim based upon:

- 1) Failure of any investment to perform;
- 2) Errors in providing information on past performance of investment vehicles; or
- 3) Advice given to any person with respect to that person's decision to participate or not to participate in any plan included in the "employee benefit program".

(f) Workers' Compensation And Similar Laws

Any claim arising out of your failure to comply with the mandatory provisions of any workers' compensation, unemployment compensation insurance, social security or disability benefits law or any similar law.

(g) ERISA

Damages for which any insured is liable because of liability imposed on a fiduciary by the Employee Retirement Income Security Act of 1974, as now or hereafter amended, or by any similar federal, state or local laws.

(h) Available Benefits

Any claim for benefits to the extent that such benefits are available, with reasonable effort and cooperation of the insured, from the applicable funds accrued or other collectible insurance.

(i) Taxes, Fines Or Penalties

Taxes, fines or penalties, including those imposed under the Internal Revenue Code or any similar state or local law.

(j) Employment-Related Practices

Any liability arising out of any:

- (1) Refusal to employ;
- (2) Termination of employment;
- (3) Coercion, demotion, evaluation, reassignment, discipline, defamation, harassment, humiliation, discrimination or other employment - related practices, acts or omissions; or
- (4) Consequential liability as a result of (1), (2) or (3) above.

This exclusion applies whether the insured may be held liable as an employer or in any other capacity and to any obligation to share damages with or repay someone else who must pay damages because of the injury.

(3) Supplementary Payments

Section I - Coverages, Supplementary Payments - Coverages A And B also apply to this Coverage.

b. Who Is An Insured

As respects **Employee Benefit Liability Coverage, Section II - Who Is An Insured** is replaced by the following:

- (1) If you are designated in the Declarations as:
 - (a) An individual, you and your spouse are insureds, but only with respect to the conduct of a business of which you are the sole owner.
 - (b) A partnership or joint venture, you are an insured. Your members, your part-

ners, and their spouses are also insureds but only with respect to the conduct of your business.

- (c) A limited liability company, you are an insured. Your members are also insureds, but only with respect to the conduct of your business. Your managers are insureds, but only with respect to their duties as your managers.
 - (d) An organization other than a partnership, joint venture or limited liability company, you are an insured. Your "executive officers" and directors are insureds, but only with respect to their duties as your officers or directors. Your stockholders are also insureds, but only with respect to their liability as stockholders.
 - (e) A trust, you are an insured. Your trustees are also insureds, but only with respect to their duties as trustees.
- (2) Each of the following is also an insured:
- (a) Each of your "employees" who is or was authorized to administer your "employee benefit program";
 - (b) Any persons, organizations or "employees" having proper temporary authorization to administer your "employee benefit program" if you die, but only until your legal representative is appointed; or
 - (c) Your legal representative if you die, but only with respect to duties as such. That representative will have all your rights and duties under this Coverage Part.
- (3) Any organization you newly acquire or form, other than a partnership, joint venture or limited liability company, and over which you maintain ownership or majority interest, will qualify as a Named Insured if no other similar insurance applies to that organi-

zation. However, coverage under this provision:

- (a) Is afforded only until the 180th day after you acquire or form the organization or the end of the policy period, whichever is earlier; and
- (b) Does not apply to any act, error or omission that was committed before you acquired or formed the organization.

c. Limits Of Insurance

As respects **Employee Benefit Liability Coverage, Section III - Limits Of Insurance** is replaced by the following:

- (1) The Limits of Insurance shown in Section **B. Limits Of Insurance, 1. Employee Benefit Liability Coverage** and the rules below fix the most we will pay regardless of the number of:
 - (a) Insureds;
 - (b) Claims made or "suits" brought;
 - (c) Persons or organizations making claims or bringing "suits";
 - (d) Acts, errors or omissions; or
 - (e) Benefits included in your "employee benefit program".
- (2) The Aggregate Limit shown in Section **B. Limits Of Insurance, 1. Employee Benefit Liability Coverage** of this endorsement is the most we will pay for all damages because of acts, errors or omissions negligently committed in the "administration" of your "employee benefit program".
- (3) Subject to the limit described in (2) above, the Each Employee Limit shown in Section **B. Limits Of Insurance, 1. Employee Benefit Liability Coverage** of this endorsement is the most we will pay for all damages sustained by any one "employee", including damages sustained by such "employee's" dependents and beneficiaries, as a result of:
 - (a) An act, error or omission; or

- (b) A series of related acts, errors or omissions, regardless of the amount of time that lapses between such acts, errors or omissions;

negligently committed in the "administration" of your "employee benefit program".

However, the amount paid under this endorsement shall not exceed, and will be subject to the limits and restrictions that apply to the payment of benefits in any plan included in the "employee benefit program."

(4) Deductible Amount

- (a) Our obligation to pay damages on behalf of the insured applies only to the amount of damages in excess of the Deductible Amount stated in the Declarations as applicable to Each Employee. The limits of insurance shall not be reduced by the amount of this deductible.
- (b) The Deductible Amount stated in the Declarations applies to all damages sustained by any one "employee", including such "employee's" dependents and beneficiaries, because of all acts, errors or omissions to which this insurance applies.
- (c) The terms of this insurance, including those with respect to:
 - 1) Our right and duty to defend the insured against any "suits" seeking those damages; and
 - 2) Your duties, and the duties of any other involved insured, in the event of an act, error or omission, or claim;apply irrespective of the application of the Deductible Amount.
- (d) We may pay any part or all of the Deductible Amount to effect settlement of any claim or "suit" and, upon no-

tification of the action taken, you shall promptly reimburse us for such part of the Deductible Amount as we have paid.

d. Additional Conditions

As respects **Employee Benefit Liability Coverage, Section IV - Commercial General Liability Conditions** is amended as follows:

- (1) Item **2. Duties In The Event Of Occurrence, Offense, Claim Or Suit** is replaced by the following:

2. Duties In The Event Of An Act, Error Or Omission, Or Claim Or Suit

- a. You must see to it that we are notified as soon as practicable of an act, error or omission which may result in a claim. To the extent possible, notice should include:
 - (1) What the act, error or omission was and when it occurred; and
 - (2) The names and addresses of anyone who may suffer damages as a result of the act, error or omission.
- b. If a claim is made or "suit" is brought against any insured, you must:
 - (1) Immediately record the specifics of the claim or "suit" and the date received; and
 - (2) Notify us as soon as practicable.You must see to it that we receive written notice of the claim or "suit" as soon as practicable.
- c. You and any other involved insured must:
 - (1) Immediately send us copies of any demands, notices, summonses or legal papers re-

ceived in connection with the claim or "suit";

- (2) Authorize us to obtain records and other information;
- (3) Cooperate with us in the investigation or settlement of the claim or defense against the "suit"; and
- (4) Assist us, upon our request, in the enforcement of any right against any person or organization which may be liable to the insured because of an act, error or omission to which this insurance may also apply.

d. No insured will, except at that insured's own cost, voluntarily make a payment, assume any obligation, or incur any expense without our consent.

(2) Item **5. Other Insurance** is replaced by the following:

5. Other Insurance

If other valid and collectible insurance is available to the insured for a loss we cover under this Coverage Part, our obligations are limited as follows:

a. Primary Insurance

This insurance is primary except when **c.** below applies. If this insurance is primary, our obligations are not affected unless any of the other insurance is also primary. Then, we will share with all that other insurance by the method described in **b.** below.

b. Method Of Sharing

If all of the other insurance permits contribu-

tion by equal shares, we will follow this method also. Under this approach each insurer contributes equal amounts until it has paid its applicable limit of insurance or none of the loss remains, whichever comes first.

If any of the other insurance does not permit contribution by equal shares, we will contribute by limits. Under this method, each insurer's share is based on the ratio of its applicable limit of insurance to the total applicable limits of insurance of all insurers.

c. No Coverage

This insurance shall not cover any loss for which the insured is entitled to recovery under any other insurance in force previous to the effective date of this Coverage Part.

e. Additional Definitions

As respects **Employee Benefit Liability Coverage, Section V - Definitions** is amended as follows:

(1) The following definitions are added:

- 1. "Administration" means:
 - a. Providing information to "employees", including their dependents and beneficiaries, with respect to eligibility for or scope of "employee benefit programs";
 - b. Interpreting the "employee benefit programs";
 - c. Handling records in connection with the "employee benefit programs"; or
 - d. Effecting, continuing or terminating any "employee's" participation in

2. Unintentional Failure To Disclose Hazards

Section IV - Commercial General Liability Conditions, 7. Representations is amended by the addition of the following:

Based on our dependence upon your representations as to existing hazards, if unintentionally you should fail to disclose all such hazards at the inception date of your policy, we will not reject coverage under this Coverage Part based solely on such failure.

3. Damage To Premises Rented To You

a. The last Paragraph of **2. Exclusions** under **Section I - Coverage A - Bodily Injury And Property Damage Liability** is replaced by the following:

Exclusions **c.** through **q.** do not apply to "property damage" by fire, explosion, lightning, smoke or soot to premises while rented to you or temporarily occupied by you with permission of the owner, for which the amount we will pay is limited to the **Damage To Premises Rented To You** Limit as described in **Section III - Limits Of Insurance.**

b. The insurance provided under **Section I - Coverage A - Bodily Injury And Property Damage Liability** applies to "property damage" arising out of water damage to premises that are both rented to and occupied by you.

(1) As respects Water Damage Legal Liability, as provided in Paragraph **3.b.** above:

The exclusions under **Section I - Coverage A - Bodily Injury And Property Damage Liability, 2. Exclusions**, other than **i. War** and the **Nuclear Energy Liability Exclusion (Broad Form)**, are deleted and the following are added:

This insurance does not apply to:

(a) "Property damage":

- (i) Assumed in any contract or agreement; or
- (ii) Caused by or resulting from any of the following:
 - 1) Wear and tear;

2) Rust or other corrosion, decay, deterioration, hidden or latent defect or any quality in property that causes it to damage or destroy itself;

3) Smog;

4) Mechanical breakdown, including rupture or bursting caused by centrifugal force;

5) Settling, cracking, shrinking or expansion;

6) Nesting or infestation, or discharge or release of waste products or secretions, by insects, birds, rodents or other animals; or

7) Presence, growth, proliferation, spread or any activity of fungus, including mold or mildew, and any mycotoxins, spores, scents or byproducts produced or released by fungi.

(b) "Property damage" caused directly or indirectly by any of the following:

(i) Earthquake, volcanic eruption, landslide or any other earth movement;

(ii) Water that backs up or overflows or is otherwise discharged from a sewer, drain, sump, sump pump or related equipment;

(iii) Water under the ground surface pressing on, or flowing or seeping through:

1) Foundations, walls, floors or paved surfaces;

- 2) Basements, whether paved or not; or
 - 3) Doors, windows or other openings.
- (c) "Property damage" caused by or resulting from water that leaks or flows from plumbing, heating, air conditioning, fire protection systems, or other equipment, caused by or resulting from freezing, unless:
- (i) You did your best to maintain heat in the building or structure; or
 - (ii) You drained the equipment and shut off the water supply if the heat was not maintained.
- (d) "Property damage" to:
- (i) Plumbing, heating, air conditioning, fire protection systems, or other equipment or appliances; or
 - (ii) The interior of any building or structure, or to personal property in the building or structure, caused by or resulting from rain, snow, sleet or ice, whether driven by wind or not.

c. Limit Of Insurance

With respect to the insurance afforded in Paragraphs 3.a. and 3.b. above, the **Damage To Premises Rented To You** Limit as shown in the Declarations is amended as follows:

- (1) Paragraph 6. of **Section III - Limits Of Insurance** is replaced by the following:
 - 6. Subject to Paragraph 5. above, the **Damage To Premises Rented To You** Limit is the most we will pay under **Coverage A - Bodily Injury And Property Damage Liability** for damages because of "property damage" to any one premises:
 - a. While rented to you, or temporarily occupied by

you with permission of the owner;

- b. In the case of damage by fire, explosion, lightning, smoke or soot, while rented to you; or
- c. In the case of damage by water, while rented to and occupied by you.

(2) The most we will pay is limited as described in Section **B. Limits Of Insurance, 3. Damage To Premises Rented To You** of this endorsement.

4. Supplementary Payments

Under **Section I - Supplementary Payments - Coverages A And B:**

- a. Paragraph 2. is replaced by the following:

Up to the limit shown in Section **B. Limits Of Insurance, 4.a.** Bail Bonds of this endorsement for cost of bail bonds required because of accidents or traffic law violations arising out of the use of any vehicle to which the Bodily Injury Liability Coverage applies. We do not have to furnish these bonds.
- b. Paragraph 4. is replaced by the following:

All reasonable expenses incurred by the insured at our request to assist us in the investigation or defense of the claim or "suit", including actual loss of earnings up to the limit shown in Section **B. Limits Of Insurance, 4.b.** Loss Of Earnings of this endorsement per day because of time off from work.

5. Medical Payments

The Medical Expense Limit of Any One Person as stated in the Declarations is amended to the limit shown in Section **B. Limits Of Insurance, 5. Medical Payments** of this endorsement.

6. 180 Day Coverage For Newly Formed Or Acquired Organizations

Section II - Who Is An Insured is amended as follows:

- Subparagraph a. of Paragraph 3. is replaced by the following:
 - a. Insurance under this provision is afforded only until the 180th day after

you acquire or form the organization or the end of the policy period, whichever is earlier;

7. Waiver Of Subrogation

Section IV - Commercial General Liability Conditions, 9. Transfer Of Rights Of Recovery Against Others To Us is amended by the addition of the following:

We waive any right of recovery we may have against any person or organization against whom you have agreed to waive such right of recovery in a written contract or agreement because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a written contract or agreement with that person or organization and included in the "products-completed operations hazard". However, our rights may only be waived prior to the "occurrence" giving rise to the injury or damage for which we make payment under this Coverage Part. The insured must do nothing after a loss to impair our rights. At our request, the insured will bring "suit" or transfer those rights to us and help us enforce those rights.

8. Automatic Additional Insured - Specified Relationships

a. The following is added to **Section II - Who Is An Insured**:

(1) Any person(s) or organization(s) described in Paragraph **8.a.(2)** of this endorsement (hereinafter referred to as additional insured) whom you are required to add as an additional insured under this Coverage Part by reason of a written contract, written agreement, written permit or written authorization.

(2) Only the following persons or organizations are additional insureds under this endorsement, and insurance coverage provided to such additional insureds is limited as provided herein:

(a) Managers Or Lessors Of Premises

The manager or lessor of a premises leased to you with whom you have agreed per Paragraph **8.a.(1)** of this endorsement to provide insurance, but only with respect to liability arising out of the ownership, maintenance or

use of that part of the premises leased to you, subject to the following additional exclusions:

This insurance does not apply to:

(i) Any "occurrence" which takes place after you cease to be a tenant in that premises;

(ii) Structural alterations, new construction or demolition operations performed by or on behalf of such additional insured.

(b) Lessor Of Leased Equipment

Any person or organization from whom you lease equipment when you and such person(s) or organization(s) have agreed per Paragraph **8.a.(1)** of this endorsement to provide insurance. Such person(s) or organization(s) are insureds only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by your maintenance, operation or use of equipment leased to you by such person(s) or organization(s). A person's or organization's status as an additional insured under this endorsement ends when their contract or agreement with you for such leased equipment ends. However, this insurance does not apply to any "occurrence" which takes place after the equipment lease expires.

(c) Vendors

Any person or organization (referred to below as vendor) with whom you have agreed per Paragraph **8.a.(1)** of this endorsement to provide insurance, but only with respect to "bodily injury" or "property damage" arising out of "your products" which are distributed or sold in the regular course of the

vendor's business, subject to the following additional exclusions:

(i) The insurance afforded the vendor does not apply to:

- 1) "Bodily injury" or "property damage" for which the vendor is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that the vendor would have in the absence of the contract or agreement;
- 2) Any express warranty unauthorized by you;
- 3) Any physical or chemical change in the product made intentionally by the vendor;
- 4) Repackaging, except when unpacked solely for the purpose of inspection, demonstration, testing, or the substitution of parts under instructions from the manufacturer, and then repackaged in the original container;
- 5) Any failure to make such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products;
- 6) Demonstration, installation, servicing

or repair operations, except such operations performed at the vendor's premises in connection with the sale of the product;

7) Products which, after distribution or sale by you, have been labeled or re-labeled or used as a container, part or ingredient of any other thing or substance by or for the vendor; or

8) "Bodily injury" or "property damage" arising out of the sole negligence of the vendor for its own acts or omissions or those of its employees or anyone else acting on its behalf. However, this exclusion does not apply to:

a) The exceptions contained in Paragraphs (c) (i) 4) or 6) of this endorsement; or

b) Such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products.

(ii) This insurance does not apply to any insured person or organization:

1) From whom you have acquired such products, or any ingredient, part

or container, entering into, accompanying or containing such products; or

- 2) When liability included within the "products-completed operations hazard" has been excluded under this Coverage Part with respect to such products.

(d) State Or Governmental Agency Or Subdivision Or Political Subdivision - Permits Or Authorizations Relating To Premises

Any state or governmental agency or subdivision or political subdivision with which you have agreed per Paragraph **8.a.(1)** of this endorsement to provide insurance, subject to the following additional provision:

This insurance applies only with respect to the following hazards for which the state or governmental agency or subdivision or political subdivision has issued a permit or authorization in connection with premises you own, rent or control and to which this insurance applies:

- (i) The existence, maintenance, repair, construction, erection or removal of advertising signs, awnings, canopies, cellar entrances, coal holes, driveways, manholes, marquees, hoist away openings, sidewalk vaults, street banners or decorations and similar exposures; or
- (ii) The construction, erection or removal of elevators; or
- (iii) The ownership, maintenance or use of any elevators covered by this insurance.

(e) Mortgagee, Assignee Or Receiver

Any person or organization with whom you have agreed per Paragraph **8.a.(1)** of this endorsement to provide insurance, but only with respect to their liability as mortgagee, assignee, or receiver and arising out of the ownership, maintenance, or use of the premises by you. However, this insurance does not apply to structural alterations, new construction and demolition operations performed by or for that person or organization.

- (3) The insurance afforded to additional insureds described in Paragraph **8.a.(1)** of this endorsement:

- (a) Only applies to the extent permitted by law; and
- (b) Will not be broader than that which you are required by the written contract, written agreement, written permit or written authorization to provide for such additional insured; and
- (c) Does not apply to any person, organization, vendor, state, governmental agency or subdivision or political subdivision, specifically named as an additional insured under any other provision of, or endorsement added to, this Coverage Part, provided such other provision or endorsement covers the injury or damage for which this insurance applies.

- b. With respect to the insurance afforded to the additional insureds described in Paragraph **8.a.(1)** of this endorsement, the following is added to **Section III - Limits Of Insurance**:

The most we will pay on behalf of the additional insured is the amount of insurance:

- (1) Required by the written contract, written agreement, written permit or written authorization described

in Paragraph **8.a.(1)** of this endorsement; or

- (2) Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

- c. **Section IV - Commercial General Liability Conditions** is amended to include the following:

Automatic Additional Insured Provision

This insurance applies only if the "bodily injury" or "property damage" occurs, or the "personal and advertising injury" offense is committed:

- (1) During the policy period; and
- (2) Subsequent to your execution of the written contract or written agreement, or the issuance of a written permit or written authorization, described in Paragraph **8.a.(1)**.

- d. **Section IV - Commercial General Liability Conditions** is amended as follows:

Condition **5. Other Insurance** is amended to include:

Primary And Noncontributory Insurance

This insurance is primary to and will not seek contribution from any other insurance available to an additional insured per Paragraph **8.a.(1)** of this endorsement provided that:

- (1) The additional insured is a Named Insured under such other insurance; and
- (2) You have agreed in writing in a contract, agreement, permit or authorization described in **8.a.(2)** of this endorsement that this insurance would be primary and would not seek contribution from any other insurance available to the additional insured.

9. Property Damage To Borrowed Equipment

- a. The following is added to **Exclusion 2.j. Damage To Property** under **Sec-**

tion I - Coverage A - Bodily Injury And Property Damage Liability:

Paragraphs **(3)** and **(4)** of this exclusion do not apply to tools or equipment loaned to you, provided they are not being used to perform operations at the time of loss.

- b. With respect to the insurance provided by this section of the endorsement, the following additional provisions apply:

- (1) The Limits of Insurance shown in the Declarations are replaced by the limits designated in **Section B. Limits Of Insurance, 9. Property Damage To Borrowed Equipment** of this endorsement with respect to coverage provided by this endorsement. These limits are inclusive of and not in addition to the limits being replaced. The Limits of Insurance shown in **Section B. Limits Of Insurance, 9. Property Damage To Borrowed Equipment** of this endorsement fix the most we will pay in any one "occurrence" regardless of the number of:

- (a) Insureds;
- (b) Claims made or "suits" brought; or
- (c) Persons or organizations making claims or bringing "suits".

(2) Deductible Clause

- (a) Our obligation to pay damages on your behalf applies only to the amount of damages for each "occurrence" which are in excess of the Deductible Amount stated in **Section B. Limits Of Insurance, 9. Property Damage To Borrowed Equipment** of this endorsement. The limits of insurance will not be reduced by the application of such deductible amount.
- (b) **Section IV - Commercial General Liability Conditions, 2. Duties In The Event Of Occurrence, Offense, Claim Or Suit**, applies to each claim or "suit" irrespective of the amount.

- (c) We may pay any part or all of the deductible amount to effect settlement of any claim or "suit" and, upon notification of the action taken, you shall promptly reimburse us for such part of the deductible amount as has been paid by us.

10. Employees As Insureds - Specified Health Care Services And Good Samaritan Services

Paragraph **2.a.(1)(d)** under **Section II - Who Is An Insured** does not apply to:

- a. Your "employees" who provide professional health care services on your behalf as a duly licensed nurse, emergency medical technician or paramedic in the jurisdiction where an "occurrence" or offense to which this insurance applies takes place; or
- b. Your "employees" or "volunteer workers", other than an employed or volunteer doctor, providing first aid or good samaritan services during their work hours for you will be deemed to be acting within the scope of their employment by you or performing duties related to the conduct of your business.

11. Broadened Notice Of Occurrence

Paragraph **a.** of Condition **2. Duties In The Event Of Occurrence, Offense, Claim Or Suit** under **Section IV - Commercial General Liability Conditions** is replaced by the following:

- a. You must see to it that we are notified as soon as practicable of an "occurrence" or an offense which may result in a claim. To the extent possible, notice should include:
 - (1) How, when and where the "occurrence" or offense took place;
 - (2) The names and addresses of any injured persons and witnesses; and
 - (3) The nature and location of any injury or damage arising out of the "occurrence" or offense.

This requirement applies only when the "occurrence" or offense is known to an "authorized representative".

12. Nonowned Aircraft

The following is added to **Exclusion 2.g. Aircraft, Auto Or Watercraft** under **Section I - Coverage A - Bodily Injury And Property Damage Liability**:

This exclusion does not apply to an aircraft you do not own, provided that:

- a. The pilot in command holds a current effective certificate, issued by a duly constituted authority of the United States of America or Canada, designating that person as a commercial or airline transport pilot;
- b. The aircraft is rented with a trained, paid crew; and
- c. The aircraft does not transport persons or cargo for a charge.

13. Bodily Injury Redefined

Section V - Definitions, 4. "Bodily injury" is replaced by the following:

- 4. "Bodily injury" means bodily harm or injury, sickness, disease, disability, humiliation, shock, fright, mental anguish or mental injury, including care, loss of services or death resulting from any of these at any time.

14. Expected Or Intended Injury Redefined

The last sentence of **Exclusion 2.a. Expected Or Intended Injury** under **Section I - Coverage A - Bodily Injury And Property Damage Liability** is replaced by the following:

This exclusion does not apply to "bodily injury" or "property damage" resulting from the use of reasonable force to protect persons or property.

15. Former Employees As Insureds

The following is added to Paragraph **2.** under **Section II - Who Is An Insured**:

- 2. Each of the following is also an insured:

Any of your former "employees", directors, managers, members, partners or "executive officers", including but not limited to retired, disabled or those on leave of absence, but only for acts within the scope of their employment by you or for duties related to the conduct of your business.

16. Voluntary Property Damage Coverage

a. Coverage D - Voluntary Property Damage Coverage

Section I - Coverages is amended to include the following:

(1) Insuring Agreement

- (a) We will pay the cost to repair or replace "property damage" to property of others arising out of operations incidental to your business when:

- 1) Damage is caused by you; or
- 2) Damage occurs while in your possession.

At your written request, we will make this payment regardless of whether you are at fault for the "property damage".

If you, at our request, replace, or make any repairs to, damaged property of others, the amount we will pay under **Voluntary Property Damage Coverage** will be determined by your actual cost to replace or repair the damaged property, excluding any profit or overhead.

Any payment we make under **Voluntary Property Damage Coverage** shall not be interpreted as an admission of liability by you or by us.

It shall be your duty, not our duty, to defend any claim or "suit" to which this insurance applies.

No other obligation or liability to pay sums or perform acts or services is covered.

- (b) This insurance applies to "property damage" only if:

- 1) The "property damage" takes place in the "coverage territory"; and
- 2) The "property damage" occurs during the policy period.

(2) Exclusions

This insurance does not apply to "property damage" that would be excluded by **Coverage A - Bodily Injury And Property Damage Liability, 2. Exclusions**, except for **j. Damage To Property**, paragraphs (3), (4), (5) and (6), **k. Damage To Your Product**, and **l. Damage To Your Work**.

(3) Definitions

For purposes of **Voluntary Property Damage Coverage** only, the following definitions under **Section V - Definitions** are replaced by the following:

16. "Occurrence" means an incident, including continuous or repeated exposure to substantially the same general harmful conditions that result in "property damage".

20. "Property damage" means physical injury to tangible property. "Electronic data" is not tangible property, and "property damage" does not include disappearance, abstraction or theft.

b. Care, Custody Or Control Liability Coverage

For purposes of the coverage provided by **Care, Custody Or Control Liability Coverage** in this endorsement only:

(1) **Section I - Coverage A - Bodily Injury And Property Damage Liability, 2. Exclusions, j. Damage To Property**, Subparagraphs (3), (4) and (5) do not apply to "property damage" to the property of others described therein.

(2) It shall be your duty, not our duty, to defend any claim or "suit" to which this insurance applies.

No other obligation or liability to pay sums or perform acts or services is covered.

This Paragraph (2) supersedes any provision in the Coverage Part to the contrary.

(3) "Property damage" for which **Care, Custody Or Control Liability Coverage** provides cover-

age shall be deemed to be caused by an "occurrence" but shall not serve to limit or restrict the applicability of any exclusion for "property damage" under this Coverage Part.

c. Limits Of Insurance And Deductibles

For purposes of the coverage provided by **Voluntary Property Damage Coverage** and **Care, Custody Or Control Liability Coverage, Section III - Limits Of Insurance** is amended to include the following:

(1) The Limits of Insurance shown in the Declarations are replaced by the limits designated in **Section B. Limits Of Insurance, 16. Voluntary Property Damage Coverage And Care, Custody Or Control Liability Coverage**, in this endorsement. These limits are inclusive of, and not in addition to, the limits being replaced. The Limits of Insurance shown in the Schedule fix the most we will pay regardless of the number of:

- (a) Insureds;
- (b) Claims made or "suits" brought; or
- (c) Persons or organizations making claims or bringing "suits".

(2) (a) Subject to (3) below, the **Voluntary Property Damage Coverage**, Each Occurrence Limit Of Insurance is the most we will pay for the sum of damages under **Voluntary Property Damage Coverage**;

(b) The **Care, Custody Or Control Liability Coverage**, Each Occurrence Limit Of Insurance is the most we will pay for the sum of damages under **Care, Custody Or Control Liability Coverage**;

because of all "property damage" arising out of any one "occurrence".

(3) The **Voluntary Property Damage Coverage**, Aggregate Limit Of Insurance is the most we will pay for the sum of all damages under **Voluntary Property Damage Coverage**. This limit applies separately to each "coverage term".

(4) Deductible Clause

(a) Our obligation to pay damages on your behalf applies only to the amount of damages for each "occurrence" which are in excess of the Deductible Amount stated for the applicable coverage in the Schedule. The limits of insurance will not be reduced by the application of such Deductible Amount.

(b) **Section IV - Commercial General Liability Conditions, 2. Duties In The Event Of Occurrence, Offense, Claim Or Suit**, applies to each claim or "suit" irrespective of the amount.

(c) We may pay any part or all of the Deductible Amount to effect settlement of any claim or "suit" and, upon notification of the action taken, you shall promptly reimburse us for such part of the Deductible Amount as has been paid by us.

17. Broadened Contractual Liability - Work Within 50' Of Railroad Property

Section V - Definitions, 12. "Insured contract" is amended as follows:

- a. Paragraph **c.** is replaced by the following:
 - c. Any easement or license agreement;
- b. Paragraph **f.(1)** is deleted in its entirety.

18. Alienated Premises

Exclusion 2.j. Damage to Property, Paragraph (2) under **Section I - Coverage A - Bodily Injury And Property Damage Liability** does not apply if the premises are "your work".

COMMERCIAL GENERAL LIABILITY COVERAGE FORM

Various provisions in this Coverage Part restrict this insurance. Read the entire Coverage Part carefully to determine rights, duties and what is and is not covered.

Throughout this Coverage Part the words "you" and "your" refer to the Named Insured shown in the Declarations, and any other person or organization qualifying as a Named Insured under this Coverage Part. The words "we", "us" and "our" refer to the Company providing this insurance.

The word "insured" means any person or organization qualifying as such under **SECTION II - WHO IS AN INSURED**.

Other words and phrases that appear in quotation marks have special meaning. Refer to **SECTION V - DEFINITIONS**.

SECTION I - COVERAGES

COVERAGE A. BODILY INJURY AND PROPERTY DAMAGE LIABILITY

1. Insuring Agreement

- a. We will pay those sums that the insured becomes legally obligated to pay as damages because of "bodily injury" or "property damage" to which this insurance applies. We will have the right and duty to defend the insured against any "suit" seeking those damages. However, we will have no duty to defend the insured against any "suit" seeking damages for "bodily injury" or "property damage" to which this insurance does not apply. We may, at our discretion, investigate any "occurrence" and settle any claim or "suit" that may result. But:

- (1) The amount we will pay for damages is limited as described in **SECTION III - LIMITS OF INSURANCE**; and
- (2) Our right and duty to defend ends when we have used up the applicable limit of insurance in the payment of judgments or settlements under **SECTION I - COVERAGES, COVERAGE A. BODILY INJURY AND PROPERTY DAMAGE LIABILITY**; **SECTION I - COVERAGES, COVERAGE B. PERSONAL AND ADVERTISING INJURY LIABILITY**; or medical expenses under **SECTION I - COVERAGES, COVERAGE C. MEDICAL PAYMENTS**.

No other obligation or liability to pay sums or perform acts or services is covered unless expressly provided for under

SUPPLEMENTARY PAYMENTS - COVERAGES A AND B.

- b. This insurance applies to "bodily injury" and "property damage" only if:
- (1) The "bodily injury" or "property damage" is caused by an "occurrence" that takes place in the "coverage territory";
 - (2) The "bodily injury" or "property damage" occurs during the policy period; and
 - (3) Prior to the "coverage term" in which "bodily injury" or "property damage" occurs, you did not know, per Paragraph **1.d.** below, that the "bodily injury" or "property damage" had occurred or had begun to occur, in whole or in part.
- c. "Bodily injury" or "property damage" which:
- (1) Occurs during the "coverage term"; and
 - (2) Was not, prior to the "coverage term", known by you, per Paragraph **1.d.** below, to have occurred;
- includes any continuation, change or resumption of that "bodily injury" or "property damage" after the end of the "coverage term" in which it first became known by you.
- d. You will be deemed to know that "bodily injury" or "property damage" has occurred at the earliest time when any "authorized representative":
- (1) Reports all, or any part, of the "bodily injury" or "property damage" to us or any other insurer;
 - (2) Receives a written or verbal demand or claim for damages because of the "bodily injury" or "property damage";
 - (3) First observes, or reasonably should have first observed, the "bodily injury" or "property damage";
 - (4) Becomes aware, or reasonably should have become aware, by any means other than as described in (3) above, that "bodily injury" or "property damage" had occurred or had begun to occur; or
 - (5) Becomes aware, or reasonably should have become aware, of a

condition from which "bodily injury" or "property damage" is substantially certain to occur.

- e. Damages because of "bodily injury" include damages claimed by any person or organization for care, loss of services or death resulting at any time from the "bodily injury".

2. Exclusions

This insurance does not apply to:

a. Expected or Intended Injury

"Bodily injury" or "property damage" which may reasonably be expected to result from the intentional or criminal acts of the insured or which is in fact expected or intended by the insured, even if the injury or damage is of a different degree or type than actually expected or intended. This exclusion does not apply to "bodily injury" resulting from the use of reasonable force to protect persons or property.

b. Contractual Liability

"Bodily injury" or "property damage" for which the insured is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages:

- (1) That the insured would have in the absence of the contract or agreement; or
- (2) Assumed in a contract or agreement that is an "insured contract", provided the "bodily injury" or "property damage" occurs subsequent to the execution of the contract or agreement. When a claim for such "bodily injury" or "property damage" is made, we will defend that claim provided the insured has assumed the obligation to defend such claim in the "insured contract". Such defense payments will not reduce the limits of insurance.

c. Liquor Liability

"Bodily injury" or "property damage" for which any insured may be held liable by reason of:

- (1) Causing or contributing to the intoxication of any person;
- (2) The furnishing of alcoholic beverages to a person under the legal drinking age or under the influence of alcohol; or

- (3) Any statute, ordinance or regulation relating to the sale, gift, distribution or use of alcoholic beverages.

This exclusion applies only if you are in the business of manufacturing, distributing, selling, serving or furnishing alcoholic beverages.

d. Workers' Compensation and Similar Laws

Any obligation of the insured under a workers' compensation, disability benefits or unemployment compensation law or any similar law.

e. Employer's Liability

"Bodily injury" to:

- (1) An "employee" of the insured sustained in the "workplace";
- (2) An "employee" of the insured arising out of the performance of duties related to the conduct of the insured's business; or
- (3) The spouse, child, parent, brother or sister of that "employee" as a consequence of Paragraphs (1) or (2) above.

This exclusion applies:

- (1) Whether the insured may be liable as an employer or in any other capacity; and
- (2) To any obligation to share damages with or repay someone else who must pay damages because of the injury.

This exclusion does not apply to liability assumed by the insured under an "insured contract".

f. Pollutant

- (1) "Bodily injury" or "property damage" arising out of the actual, alleged or threatened discharge, dispersal, seepage, migration, release, escape or emission of "pollutants":

- (a) At or from any premises, site or location which is or was at any time owned or occupied by, or rented or loaned to, any insured. However, Paragraph (a) does not apply to:

- 1) "Bodily injury" to any person injured while on any premises, site or location owned or occupied by, or rented or loaned to, you provided:

- a) The injury is caused by the inadequate ventilation of vapors;
- b) The person injured is first exposed to such vapors during the policy period; and
- c) Within 30 days of such first exposure, the person injured is clinically diagnosed or treated by a physician for the medical condition caused by the exposure to such vapors. However, Paragraph **c)** does not apply if the "bodily injury" is caused by vapors produced by or originating from equipment that is used to heat, cool or dehumidify the building, or equipment that is used to heat water for personal use, by the building's occupants or their guests.

This exception **1)** shall apply only to Named Insureds; we shall have no duty to defend or pay damages for any person or organization that is not a Named Insured. However, this paragraph does not apply if the "bodily injury" is caused by vapors produced by or originating from equipment that is used to heat, cool or dehumidify the building, or equipment that is used to heat water for personal use, by the building's occupants or their guests.

For the purpose of the exception granted in Paragraph **1)** only, vapors means any gaseous or airborne irritant or airborne contaminant, including smoke, fumes, vapor or soot, but excluding asbestos, which is discharged, dispersed, emitted, released or escapes from materials, machinery or equipment used in the service or maintenance of the premises. Vapors does not mean any gaseous or

airborne irritants or contaminants used in a manufacturing process or which is the product or by-product of any manufacturing process;

- 2) "Bodily injury" or "property damage" for which you may be held liable, if you are a contractor, and the owner or lessee of such premises, site or location has been added to this Coverage Part as an additional insured with respect to your ongoing operations or "your work" performed for that additional insured at that premises, site or location and such premises, site or location is not and never was owned or occupied by, or rented or loaned to, any insured, other than that additional insured; or
- 3) "Bodily injury" or "property damage" arising out of heat, smoke or fumes from a "hostile fire";

- (b) At or from any premises, site or location which is or was at any time used by or for any insured or others for the handling, storage, disposal, processing or treatment of waste;
- (c) Which are or were at any time transported, handled, stored, treated, disposed of, or processed as waste by or for:
 - 1) Any insured; or
 - 2) Any person or organization for whom you may be legally responsible;
- (d) At or from any premises, site or location on which any insured or any contractors or subcontractors working directly or indirectly on any insured's behalf are performing operations if the "pollutants" are brought on or to the premises, site or location in connection with such operations by such insured, contractor or subcontractor. However, Paragraph **(d)** does not apply to:
 - 1) "Bodily injury" or "property damage" arising out of the discharge, dispersal, seepage, migration, release, es-

cape or emission of fuels, lubricants or other operating fluids, or exhaust gases, which are needed to perform, or are the result of, the normal electrical, hydraulic or mechanical functions necessary for the operation of "mobile equipment" or its parts, if such fuels, lubricants or other operating fluids, or exhaust gases, escape, seep or migrate, or are discharged, dispersed, released or emitted from a vehicle part designed to hold, store or receive them. This exception does not apply if the fuels, lubricants or other operating fluids, or exhaust gases, escape, seep or migrate, or are discharged, dispersed, released or emitted with the intent to cause "bodily injury" or "property damage" or with the knowledge that "bodily injury" or "property damage" is substantially certain to occur, or if such fuels, lubricants or other operating fluids, or exhaust gases, are brought on or to the premises, site or location with such intent to escape, seep or migrate, or be discharged, dispersed, released or emitted as part of the operations being performed by such insured, contractor or subcontractor;

- 2) "Bodily injury" or "property damage" sustained within a building and caused by the release of gases, fumes or vapors from materials brought into that building in connection with operations being performed by you or on your behalf by a contractor or subcontractor; or
- 3) "Bodily injury" or "property damage" arising out of heat, smoke or fumes from a "hostile fire"; or
- (e) At or from any premises, site or location on which any insured or any contractors or subcontractors working directly or indirectly on any insured's behalf are performing operations if the op-

erations are to test for, monitor, clean up, remove, contain, treat, detoxify or neutralize, or in any way respond to, or assess the effects of, "pollutants".

- (2) Any loss, cost or expense arising out of any:
 - (a) Request, demand, order or statutory or regulatory requirement that any insured or others test for, monitor, clean up, remove, contain, treat, detoxify or neutralize, or in any way respond to, or assess the effects of, "pollutants"; or
 - (b) Claim or suit by or on behalf of a governmental authority for damages because of testing for, monitoring, cleaning up, removing, containing, treating, detoxifying or neutralizing, or in any way responding to, or assessing the effects of, "pollutants".

However, Paragraphs (2)(a) and (b) do not apply to liability for damages because of "property damage" that the insured would have in the absence of such request, demand, order or statutory or regulatory requirement, or such claim or "suit" by or on behalf of a governmental authority.

g. Aircraft, Auto or Watercraft

"Bodily injury" or "property damage" arising out of the ownership, maintenance, use or entrustment to others of any aircraft, "auto" or watercraft owned or operated by or rented or loaned to any insured. Use includes operation and "loading or unloading".

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage" involved the ownership, maintenance, use or entrustment to others of any aircraft, "auto" or watercraft that is owned or operated by or rented or loaned to any insured.

This exclusion does not apply to:

- (1) A watercraft while ashore on premises you own or rent;
- (2) A watercraft you do not own that is:
 - (a) Less than 51 feet long; and

(b) Not being used to carry persons or property for a charge;

(3) Parking an "auto" on, or on the ways next to, premises you own or rent, provided the "auto" is not owned by or rented or loaned to you or the insured;

(4) Liability assumed under any "insured contract" for the ownership, maintenance or use of aircraft or watercraft; or

(5) "Bodily injury" or "property damage" arising out of:

(a) The operation of machinery or equipment that is on, attached to, or part of, a land vehicle that would qualify under the definition of "mobile equipment" if it were not subject to a compulsory or financial responsibility law or other motor vehicle insurance law in the state where it is licensed or principally garaged; or

(b) The operation of any of the machinery or equipment listed in Paragraph **f.(2)** or **f.(3)** of the definition of "mobile equipment".

h. Mobile Equipment

"Bodily injury" or "property damage" arising out of:

(1) The transportation of "mobile equipment" by an "auto" owned or operated by or rented or loaned to any insured; or

(2) The use of "mobile equipment" in, or while in practice for, or while being prepared for, any prearranged racing, speed, demolition, or stunting activity.

i. War

"Bodily injury" or "property damage", however caused, arising, directly or indirectly, out of:

(1) War, including undeclared or civil war;

(2) Warlike action by a military force, including action in hindering or defending against an actual or expected attack, by any government, sovereign or other authority using military personnel or other agents; or

(3) Insurrection, rebellion, revolution, usurped power, or action taken by

governmental authority in hindering or defending against any of these.

j. Damage to Property

"Property damage" to:

(1) Property you own, rent or occupy, including any costs or expenses incurred by you, or any other person, organization or entity, for repair, replacement, enhancement, restoration or maintenance of such property for any reason, including prevention of injury to a person or damage to another's property;

(2) Premises you sell, give away or abandon, if the "property damage" arises out of any part of those premises;

(3) Property loaned to you;

(4) Personal property in the care, custody or control of an insured;

(5) That particular part of real property on which you or any contractors or subcontractors working directly or indirectly on your behalf are performing operations, if the "property damage" arises out of those operations; or

(6) That particular part of any property that must be restored, repaired or replaced because "your work" was incorrectly performed on it.

Paragraphs (1), (3) and (4) of this exclusion do not apply to "property damage" (other than damage by fire or explosion) to premises, including the contents of such premises, rented to you for a period of 7 or fewer consecutive days, for which the amount we will pay is limited to the Damage To Premises Rented To You Limit as described in **SECTION III - LIMITS OF INSURANCE**.

Paragraph (2) of this exclusion does not apply if the premises are "your work" and were never occupied, rented or held for rental by you.

Paragraphs (3), (4), (5) and (6) of this exclusion do not apply to liability assumed under a sidetrack agreement.

Paragraph (6) of this exclusion does not apply to "property damage" included in the "products-completed operations hazard".

k. Damage to Your Product

"Property damage" to "your product" arising out of it or any part of it.

i. Damage to Your Work

"Property damage" to "your work" arising out of it or any part of it and included in the "products-completed operations hazard".

This exclusion does not apply if the damaged work or the work out of which the damage arises was performed on your behalf by a subcontractor.

m. Damage to Impaired Property or Property Not Physically Injured

"Property damage" to "impaired property" or property that has not been physically injured, arising out of:

- (1) A defect, deficiency, inadequacy or dangerous condition in "your product" or "your work"; or
- (2) A delay or failure by you or anyone acting on your behalf to perform a contract or agreement in accordance with its terms.

This exclusion does not apply to the loss of use of other property arising out of sudden and accidental physical injury to "your product" or "your work" after it has been put to its intended use.

n. Recall of Products, Work or Impaired Property

Any liability or damages claimed for any loss, cost or expense incurred by you or others for the loss of use, withdrawal, recall, inspection, repair, replacement, adjustment, removal or disposal of:

- (1) "Your product";
- (2) "Your work"; or
- (3) "Impaired property";

if such product, work or property is withdrawn or recalled from the market or from use by any person or organization because of a known or suspected defect, deficiency, inadequacy or dangerous condition in it.

o. Personal and Advertising Injury

"Bodily injury" arising out of "personal and advertising injury".

p. Asbestos

"Bodily injury" or "property damage" arising out of, attributable to, or any way related to asbestos in any form or transmitted in any manner.

q. Employment-Related Practices

"Bodily injury" to:

- (1) A person arising out of any:
 - (a) Refusal to employ that person;
 - (b) Termination of that person's employment; or
 - (c) Other employment-related practices, policies, acts or omissions including but not limited to coercion, criticism, demotion, evaluation, failure to promote, reassignment, discipline, defamation, harassment, humiliation or discrimination directed at that person; or
- (2) The spouse, child, parent, brother or sister of that person as a consequence of "bodily injury" to that person at whom any of the employment-related practices described in Paragraphs (a), (b) or (c) above is directed.

This exclusion applies:

- (1) Whether the insured may be liable as an employer or in any other capacity; and
- (2) To any obligation to share damages with or repay someone else who must pay damages because of the injury.

r. Additional Insured Prior Knowledge

An additional insured added by attachment of an endorsement to this Coverage Part that is seeking coverage for a claim or "suit", if that additional insured knew, per the following paragraph, that "bodily injury" or "property damage" had occurred or had begun to occur, in whole or in part, prior to the "coverage term" in which such "bodily injury" or "property damage" occurs or begins to occur.

An additional insured added by attachment of an endorsement to this Coverage Part will be deemed to have known that "bodily injury" or "property damage" has occurred or has begun to occur at the earliest time when that additional insured, or any one of its owners, members, partners, managers, executive officers, "employees" assigned to manage that additional insured's insurance program, or "employees" assigned to give or receive notice of an "occurrence", "personal and advertising injury" offense, claim or "suit":

- (1) Reports all, or any part, of the "bodily injury" or "property damage" to us or any other insurer;
- (2) Receives a written or verbal demand or claim for damages because of the "bodily injury" or "property damage";
- (3) First observes, or reasonably should have first observed, the "bodily injury" or "property damage";
- (4) Becomes aware, or reasonably should have become aware, by any means other than as described in (3) above, that "bodily injury" or "property damage" had occurred or had begun to occur; or
- (5) Becomes aware, or reasonably should have become aware, of a condition from which "bodily injury" or "property damage" is substantially certain to occur.

s. Electronic Data

Damages arising out of the loss of, loss of use of, damage to, corruption of, inability to access, or inability to manipulate "electronic data".

t. Distribution of Material in Violation of Statutes

"Bodily injury" or "property damage" arising directly or indirectly out of any action or omission that violates or is alleged to violate:

- a. The Telephone Consumer Protection Act (TCPA), including any amendment of or addition to such law; or
- b. The CAN-SPAM Act of 2003, including any amendment of or addition to such law; or
- c. Any statute, ordinance or regulation, other than the TCPA or CAN-SPAM Act of 2003, that prohibits or limits the sending, transmitting, communicating or distribution of material or information.

Exclusions **c.** through **q.** do not apply to "property damage" by fire or explosion to premises while rented to you or temporarily occupied by you with permission of the owner, for which the amount we will pay is limited to the Damage to Premises Rented To You Limit as described in **SECTION III - LIMITS OF INSURANCE**.

COVERAGE B. PERSONAL AND ADVERTISING INJURY LIABILITY

1. Insuring Agreement

- a. We will pay those sums that the insured becomes legally obligated to pay as damages because of "personal and advertising injury" to which this insurance applies. We will have the right and duty to defend the insured against any "suit" seeking those damages. However, we will have no duty to defend the insured against any "suit" seeking damages for "personal and advertising injury" to which this insurance does not apply. We may, at our discretion, investigate any offense and settle any claim or "suit" that may result. But:
 - (1) The amount we will pay for damages is limited as described in **SECTION III - LIMITS OF INSURANCE**; and
 - (2) Our right and duty to defend ends when we have used up the applicable limit of insurance in the payment of judgments or settlements under **SECTION I - COVERAGES, COVERAGE A. BODILY INJURY AND PROPERTY DAMAGE LIABILITY; SECTION I - COVERAGES, COVERAGE B. PERSONAL AND ADVERTISING INJURY LIABILITY**; or medical expenses under **SECTION I - COVERAGES, COVERAGE C. MEDICAL PAYMENTS**.

No other obligation or liability to pay sums or perform acts or services is covered unless expressly provided for under **SUPPLEMENTARY PAYMENTS - COVERAGES A AND B**.

- b. This insurance applies to "personal and advertising injury" only if:
 - (1) The "personal and advertising injury" is caused by an offense arising out of your business; and
 - (2) The "personal and advertising injury" offense was committed in the "coverage territory" during the policy period; and
 - (3) Prior to the "coverage term" in which the "personal and advertising injury" offense is committed, you did not know, per Paragraph **1.d.** below, that the offense had been committed or had begun to be committed, in whole or in part.
- c. "Personal and advertising injury" caused by an offense which:
 - (1) Was committed during the "coverage term"; and

- (2) Was not, prior to the "coverage term", known by you, per Paragraph 1.d. below, to have been committed;

includes any continuation, change or resumption of that offense after the end of the "coverage term" in which it first became known by you.

- d. You will be deemed to know that a "personal and advertising injury" offense has been committed at the earliest time when any "authorized representative":

- (1) Reports all, or any part, of the "personal and advertising injury" to us or any other insurer;
- (2) Receives a written or verbal demand or claim for damages because of the "personal and advertising injury";
- (3) First observes, or reasonably should have first observed, the offense that caused the "personal and advertising injury";
- (4) Becomes aware, or reasonably should have become aware, by any means, other than as described in (3) above, that the offense had been committed or had begun to be committed; or
- (5) Becomes aware, or reasonably should have become aware, of a condition from which "personal and advertising injury" is substantially certain to occur.

2. Exclusions

This insurance does not apply to:

a. Knowing Violation of Rights of Another

"Personal and advertising injury" caused by or at the direction of the insured with the knowledge that the act would violate the rights of another and would inflict "personal and advertising injury".

b. Material Published With Knowledge of Falsity

"Personal and advertising injury" arising out of oral or written publication of material, if done by or at the direction of the insured with knowledge of its falsity.

c. Material Published Prior to Coverage Term

"Personal and advertising injury" arising out of oral or written publication of material whose first publication took place before the later of the following:

- (1) The inception of this Coverage Part; or
- (2) The "coverage term" in which insurance coverage is sought.

d. Criminal Acts

"Personal and advertising injury" arising out of a criminal act committed by or at the direction of the insured.

e. Contractual Liability

"Personal and advertising injury" for which the insured is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages:

- (1) That the insured would have in the absence of the contract or agreement; or
- (2) Assumed in a contract or agreement that is an "insured contract", provided the "personal and advertising injury" is caused by or arises out of an offense committed subsequent to the execution of the contract or agreement. When a claim for such "personal and advertising injury" is made, we will defend that claim, provided the insured has assumed the obligation to defend such claim in the "insured contract". Such defense payments will not reduce the limits of insurance.

f. Breach of Contract

"Personal and advertising injury" arising out of a breach of contract, except an implied contract to use another's advertising idea in your "advertisement".

g. Quality or Performance of Goods - Failure to Conform to Statements

"Personal and advertising injury" arising out of the failure of goods, products or services to conform with any statement of quality or performance made in your "advertisement".

h. Wrong Description of Prices

"Personal and advertising injury" arising out of the wrong description of the price of goods, products or services stated in your "advertisement".

i. Infringement of Copyright, Patent, Trademark or Trade Secret

"Personal and advertising injury" arising out of the infringement of copyright, pat-

ent, trademark, trade secret or other intellectual property rights.

However, this exclusion does not apply to infringement, in your "advertisement", of copyright, trade dress or slogan.

j. Insureds in Media and Internet Type Businesses

"Personal and advertising injury" committed by an insured whose business is:

- (1) Advertising, broadcasting, publishing or telecasting;
- (2) Designing or determining content of web-sites for others; or
- (3) An Internet search, access, content or service provider.

However, this exclusion does not apply to Paragraphs **17. a., b. and c.** of "personal and advertising injury" under **SECTION V - DEFINITIONS.**

For the purposes of this exclusion, the placing of frames, borders or links, or advertising, for you or others anywhere on the Internet is not, by itself, considered the business of advertising, broadcasting, publishing or telecasting.

k. Electronic Chatrooms or Bulletin Boards

"Personal and advertising injury" arising out of an electronic chatroom or bulletin board any insured hosts, owns, or over which any insured exercises control.

l. Unauthorized Use of Another's Name or Product

"Personal and advertising injury" arising out of the unauthorized use of another's name or product in your e-mail address, domain name or metatag, or any other similar tactics to mislead another's potential customers.

m. Employment Related Practices

"Personal and advertising injury" to:

- (1) A person arising out of any:
 - (a) Refusal to employ that person;
 - (b) Termination of that person's employment; or
 - (c) Other employment-related practices, policies, acts or omissions including but not limited to coercion, criticism, demotion, evaluation, failure to promote, reassignment, discipline, defamiation, harassment, humiliation

or discrimination directed at that person; or

- (2) The spouse, child, parent, brother or sister of that person as a consequence of "personal and advertising injury" to that person at whom any of the employment-related practices described in Paragraphs **(a), (b) or (c)** above is directed.

This exclusion applies:

- (1) Whether the insured may be liable as an employer or in any other capacity; and
- (2) To any obligation to share damages with or repay someone else who must pay damages because of the injury.

n. Pollutant

"Personal and advertising injury" arising out of the actual, alleged or threatened discharge, dispersal, seepage, migration, release, escape or emission of "pollutants" at any time.

o. Pollutant-Related

Any loss, cost or expense arising out of any:

- (1) Request, demand, order or statutory or regulatory requirement that any insured or others test for, monitor, clean up, remove, contain, treat, detoxify or neutralize, or in any way respond to, or assess the effects of, "pollutants"; or
- (2) Claim or suit by or on behalf of a governmental authority for damages because of testing for, monitoring, cleaning up, removing, containing, treating, detoxifying or neutralizing, or in any way responding to, or assessing the effects of, "pollutants".

p. Asbestos

"Personal and advertising injury" arising out of, attributable to, or any way related to asbestos in any form or transmitted in any manner.

q. Additional Insured Prior Knowledge

An additional insured added by attachment of an endorsement to this Coverage Part that is seeking coverage for a claim or "suit", if that additional insured knew, per the following paragraph, that a "personal and advertising injury" offense had been committed or had begun to be committed, in whole or in part, prior to the "coverage term" in which such offense

was committed or began to be committed.

An additional insured added by attachment of an endorsement to this Coverage Part will be deemed to have known that a "personal and advertising injury" offense has been committed or has begun to be committed at the earliest time when that additional insured, or any one of its owners, members, partners, managers, executive officers, "employees" assigned to manage that additional insured's insurance program, or "employees" assigned to give or receive notice of an "occurrence", "personal and advertising injury" offense, claim or "suit":

- (1) Reports all, or any part, of the "personal and advertising injury" to us or any other insurer;
- (2) Receives a written or verbal demand or claim for damages because of the "personal and advertising injury";
- (3) First observes, or reasonably should have first observed, the offense that caused the "personal and advertising injury";
- (4) Becomes aware, or reasonably should have become aware, by any means other than as described in (3) above, that the "personal and advertising injury" offense had been committed or had begun to be committed; or
- (5) Becomes aware, or reasonably should have become aware, of a condition from which "personal and advertising injury" is substantially certain to occur.

r. War

"Personal and advertising injury", however caused, arising, directly or indirectly, out of:

- (1) War, including undeclared or civil war;
- (2) Warlike action by a military force, including action in hindering or defending against an actual or expected attack, by any government, sovereign or other authority using military personnel or other agents; or
- (3) Insurrection, rebellion, revolution, usurped power, or action taken by governmental authority in hindering or defending against any of these.

s. Distribution of Material in Violation of Statutes

"Personal and advertising injury" arising directly or indirectly out of any action or omission that violates or is alleged to violate:

- a. The Telephone Consumer Protection Act (TCPA), including any amendment of or addition to such law; or
- b. The CAN-SPAM Act of 2003, including any amendment of or addition to such law; or
- c. Any statute, ordinance or regulation, other than the TCPA or CAN-SPAM Act of 2003, that prohibits or limits the sending, transmitting, communicating or distribution of material or information.

COVERAGE C. MEDICAL PAYMENTS

1. Insuring Agreement

- a. We will pay medical expenses as described below for "bodily injury" caused by an accident:

- (1) On premises you own or rent;
- (2) On ways next to premises you own or rent; or
- (3) Because of your operations;

provided that:

- (1) The accident takes place in the "coverage territory" and during the policy period;
- (2) The expenses are incurred and reported to us within three years of the date of the accident; and
- (3) The injured person submits to examination, at our expense, by physicians of our choice as often as we reasonably require.

- b. We will make these payments regardless of fault. These payments will not exceed the applicable limit of insurance. We will pay reasonable expenses for:

- (1) First aid administered at the time of an accident;
- (2) Necessary medical, surgical, x-ray and dental services, including prosthetic devices; and
- (3) Necessary ambulance, hospital, professional nursing and funeral services.

2. Exclusions

We will not pay expenses for "bodily injury":

a. Any Insured

To any insured, except "volunteer workers".

b. Hired Person

To a person hired to do work for or on behalf of any insured or a tenant of any insured.

c. Injury on Normally Occupied Premises

To a person injured on that part of premises you own or rent that the person normally occupies.

d. Workers' Compensation and Similar Laws

To a person, whether or not an "employee" of any insured, if benefits for the "bodily injury" are payable or must be provided under a workers' compensation or disability benefits law or a similar law.

e. Athletic Activities

To any person injured while officiating, coaching, practicing for, instructing or participating in any physical exercises or games, sports, or athletic contests or exhibitions of an athletic or sports nature.

f. Products-Completed Operations Hazard

Included within the "products-completed operations hazard".

g. Coverage A Exclusions

Excluded under **COVERAGE A. BODILY INJURY AND PROPERTY DAMAGE LIABILITY**.

SUPPLEMENTARY PAYMENTS - COVERAGES A AND B

We will pay, with respect to any claim we investigate or settle, or any "suit" against an insured we defend:

1. All expenses we incur.
2. Up to \$250 for cost of bail bonds required because of accidents or traffic law violations arising out of the use of any vehicle to which the Bodily Injury Liability Coverage applies. We do not have to furnish these bonds.
3. The cost of bonds to release attachments, but only for bond amounts within the applicable limit of insurance. We do not have to furnish these bonds.
4. All reasonable expenses incurred by the insured at our request to assist us in the investigation or defense of the claim or "suit", in-

cluding actual loss of earnings up to \$250 a day because of time off from work.

5. All costs taxed against the insured in the "suit".
6. Prejudgment interest awarded against the insured on that part of the judgment we become obligated to pay and which falls within the applicable limit of insurance. If we make an offer to pay the applicable limit of insurance, we will not pay any prejudgment interest based on that period of time after the offer.
7. All interest on the full amount of any judgment that accrues after entry of the judgment and before we have paid, offered to pay, or deposited in court the part of the judgment that is within the applicable limit of insurance.

These payments will not reduce the limits of insurance.

SECTION II - WHO IS AN INSURED

1. If you are designated in the Declarations as:
 - a. An individual, you and your spouse are insureds, but only with respect to the conduct of a business of which you are the sole owner.
 - b. A partnership or joint venture, you are an insured. Your members, your partners, and their spouses are also insureds, but only with respect to the conduct of your business.
 - c. A limited liability company, you are an insured. Your members are also insureds, but only with respect to the conduct of your business. Your managers are insureds, but only with respect to their duties as your managers.
 - d. An organization other than a partnership, joint venture or limited liability company, you are an insured. Your "executive officers" and directors are insureds, but only with respect to their duties as your officers or directors. Your stockholders are also insureds, but only with respect to their liability as stockholders.
 - e. A trust, you are an insured. Your trustees are also insureds, but only with respect to their duties as trustees.
2. Each of the following is also an insured:
 - a. Your "volunteer workers" only while performing duties related to the conduct of your business, or your "employees", other than either your "executive officers" (if you are an organization other than a partnership, joint venture or limited liability company) or your managers (if you are a limited liability company), but only for acts within the scope of their employment by

you or while performing duties related to the conduct of your business. However, none of these "employees" or "volunteer workers" are insureds for:

(1) "Bodily injury" or "personal and advertising injury":

(a) To you, to your partners or members (if you are a partnership or joint venture), to your members (if you are a limited liability company), to a co-"employee" while in the course of his or her employment or performing duties related to the conduct of your business, or to your other "volunteer workers" while performing duties related to the conduct of your business;

(b) To the spouse, child, parent, brother or sister of that co-"employee" or "volunteer worker" as a consequence of Paragraph (1)(a) above;

(c) For which there is any obligation to share damages with or repay someone else who must pay damages because of the injury described in Paragraphs (1)(a) or (b) above; or

(d) Arising out of his or her providing or failing to provide professional health care services.

(2) "Property damage" to property:

(a) Owned, occupied or used by; or

(b) Rented to, in the care, custody or control of, or over which physical control is being exercised for any purpose by,

you, any of your "employees", "volunteer workers", any partner or member (if you are a partnership or joint venture), or any member (if you are a limited liability company).

b. Any person (other than your "employee" or "volunteer worker"), or any organization while acting as your real estate manager.

c. Any person or organization having proper temporary custody of your property if you die, but only:

(1) With respect to liability arising out of the maintenance or use of that property; and

(2) Until your legal representative has been appointed.

d. Your legal representative if you die, but only with respect to duties as such. That representative will have all your rights and duties under this Coverage Part.

3. Any organization you newly acquire or form, other than a partnership, joint venture or limited liability company, and over which you maintain ownership or majority interest, will qualify as a Named Insured if there is no other similar insurance available to that organization. However:

a. Insurance under this provision is afforded only until the 90th day after you acquire or form the organization or the end of the policy period, whichever is earlier;

b. **COVERAGE A. BODILY INJURY AND PROPERTY DAMAGE LIABILITY** does not apply to "bodily injury" or "property damage" that occurred before you acquired or formed the organization; and

c. **COVERAGE B. PERSONAL AND ADVERTISING INJURY LIABILITY** does not apply to "personal and advertising injury" arising out of an offense committed before you acquired or formed the organization.

No person or organization is an insured with respect to the conduct of any current or past partnership, joint venture or limited liability company that is not shown as a Named Insured in the Declarations.

SECTION III - LIMITS OF INSURANCE

1. The Limits of Insurance shown in the Declarations and the rules below fix the most we will pay regardless of the number of:

a. Insureds;

b. Claims made or "suits" brought; or

c. Persons or organizations making claims or bringing "suits".

2. a. The General Aggregate Limit is the most we will pay for the sum of:

(1) Medical expenses under **COVERAGE C. MEDICAL PAYMENTS**;

(2) Damages under **COVERAGE A. BODILY INJURY AND PROPERTY DAMAGE LIABILITY**, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard"; and

(3) Damages under **COVERAGE B. PERSONAL AND ADVERTISING INJURY LIABILITY**.

This General Aggregate Limit will not apply if either the Location General Aggregate

gate Limit of Insurance, Paragraph **2.b.**, or the Construction Project General Aggregate Limit of Insurance, Paragraph **2.c.** applies.

- b. A separate Location General Aggregate Limit of Insurance, equal to the amount of the General Aggregate Limit shown in the Declarations, shall apply to each location owned by, or rented or leased to you and is the most we will pay for the sum of:

(1) Damages under **COVERAGE A. BODILY INJURY AND PROPERTY DAMAGE LIABILITY**, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard"; and

(2) Medical expenses under **COVERAGE C. MEDICAL PAYMENTS**,

which can be attributed to operations at only a single location owned by, or rented or leased to you.

- c. A separate Construction Project General Aggregate Limit of Insurance, equal to the amount of the General Aggregate Limit shown in the Declarations, shall apply to each construction project and is the most we will pay for the sum of:

(1) Damages under **COVERAGE A. BODILY INJURY AND PROPERTY DAMAGE LIABILITY**, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard"; and

(2) Medical expenses under **COVERAGE C. MEDICAL PAYMENTS**;

which can be attributed only to ongoing operations and only at a single construction project.

- d. Only for the purpose of determining which General Aggregate Limit of Insurance, **2.a.**, **2.b.**, or **2.c.**, applies:

(1) Location means premises involving the same or connecting lots, or premises, whose connection is interrupted only by a street, roadway, waterway or right-of-way of a railroad.

(2) Construction project means a location you do not own, rent or lease where ongoing improvements, alterations, installation, demolition or maintenance work is performed by you or on your behalf. All connected ongoing improvements, alterations, installation, demolition or maintenance work performed by you or on

your behalf at the same location for the same persons or organizations, no matter how often or under how many different contracts, will be deemed to be a single construction project.

3. The Products-Completed Operations Aggregate Limit is the most we will pay under **COVERAGE A. BODILY INJURY AND PROPERTY DAMAGE LIABILITY** for damages because of "bodily injury" and "property damage" included in the "products-completed operations hazard".

4. Subject to **2.a.** above, the Personal and Advertising Injury Limit is the most we will pay under **COVERAGE B. PERSONAL AND ADVERTISING INJURY LIABILITY** for the sum of all damages because of all "personal and advertising injury" sustained by any one person or organization.

5. Subject to **2.** or **3.** above, whichever applies, the Each Occurrence Limit is the most we will pay for the sum of:

a. Damages under **COVERAGE A. BODILY INJURY AND PROPERTY DAMAGE LIABILITY**; and

b. Medical expenses under **COVERAGE C. MEDICAL PAYMENTS**;

because of all "bodily injury" and "property damage" arising out of any one "occurrence".

6. Subject to **5.** above, the Damage to Premises Rented to You Limit is the most we will pay under **COVERAGE A. BODILY INJURY AND PROPERTY DAMAGE LIABILITY** for damages because of "property damage" to any one premises, while rented to you, or in the case of damage by fire or explosion, while rented to you or temporarily occupied by you with permission of the owner.

7. Subject to **5.** above, the Medical Expense Limit is the most we will pay under **COVERAGE C. MEDICAL PAYMENTS** for all medical expenses because of "bodily injury" sustained by any one person.

The Limits of Insurance of this Coverage Part apply separately to each "coverage term".

SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS

1. Bankruptcy

Bankruptcy or insolvency of the insured or of the insured's estate will not relieve us of our obligations under this Coverage Part.

2. Duties in the Event of Occurrence, Offense, Claim or Suit

a. You must see to it that we are notified as soon as practicable of an "occurrence" or

a "personal and advertising injury" offense which may result in a claim. To the extent possible, notice should include:

- (1) How, when and where the "occurrence" or offense took place;
- (2) The names and addresses of any injured persons and witnesses; and
- (3) The nature and location of any injury or damage arising out of the "occurrence" or offense.

b. If a claim is made or "suit" is brought against any insured, you must:

- (1) Immediately record the specifics of the claim or "suit" and the date received; and
- (2) Notify us as soon as practicable.

You must see to it that we receive written notice of the claim or "suit" as soon as practicable.

c. You and any other involved insured must:

- (1) Immediately send us copies of any demands, notices, summonses or legal papers received in connection with the claim or "suit";
- (2) Authorize us to obtain records and other information;
- (3) Cooperate with us in the investigation or settlement of the claim or defense against the "suit"; and
- (4) Assist us, upon our request, in the enforcement of any right against any person or organization which may be liable to the insured because of injury or damage to which this insurance may also apply.

d. No insured will, except at that insured's own cost, voluntarily make a payment, assume any obligation, or incur any expense, other than for first aid, without our consent.

3. Legal Action Against Us

No person or organization has a right under this Coverage Part:

- a. To join us as a party or otherwise bring us into a "suit" asking for damages from an insured; or
- b. To sue us on this Coverage Part unless all of its terms have been fully complied with.

A person or organization may sue us to recover on an agreed settlement or on a final judgment against an insured; but we will not be liable for damages that are not payable

under the terms of this Coverage Part or that are in excess of the applicable limit of insurance. An agreed settlement means a settlement and release of liability signed by us, the insured and the claimant or the claimant's legal representative.

4. Liberalization

If, within 60 days prior to the beginning of this Coverage Part or during the policy period, we make any changes to any forms or endorsements of this Coverage Part for which there is currently no separate premium charge, and that change provides more coverage than this Coverage Part, the change will automatically apply to this Coverage Part as of the latter of:

- a. The date we implemented the change in your state; or
- b. The date this Coverage Part became effective; and

will be considered as included until the end of the current policy period. We will make no additional premium charge for this additional coverage during the interim.

5. Other Insurance

If other valid and collectible insurance is available to the insured for a loss we cover under **COVERAGE A. BODILY INJURY AND PROPERTY DAMAGE LIABILITY** or **COVERAGE B. PERSONAL AND ADVERTISING INJURY LIABILITY** of this Coverage Part, our obligations are limited as follows:

a. Primary Insurance

This insurance is primary except when **b.** below applies. If this insurance is primary, our obligations are not affected unless any of the other insurance is also primary. Then, we will share with all that other insurance by the method described in **c.** below.

b. Excess Insurance

This insurance is excess over:

- (1) Any of the other insurance, whether primary, excess, contingent or on any other basis:
 - (a) That is Fire, Extended Coverage, Builder's Risk, Installation Risk or similar insurance for "your work";
 - (b) That is Fire or Explosion insurance for premises rented to you or temporarily occupied by you with permission of the owner;
 - (c) That is insurance purchased by you to cover your liability as a tenant for "property damage" to

premises rented to you or temporarily occupied by you with permission of the owner; or

- (d) If the loss arises out of the maintenance or use of aircraft, "autos" or watercraft to the extent not subject to **SECTION I - COVERAGES, COVERAGE A. BODILY INJURY AND PROPERTY DAMAGE LIABILITY, 2. Exclusions, g. Aircraft, Auto or Watercraft.**
- (2) Any other primary insurance available to the insured covering liability for damages arising out of the premises or operations, or the products and completed operations, for which the insured has been added as an additional insured by attachment of an endorsement.
- (3) Any other insurance:
 - (a) Whether primary, excess, contingent or on any other basis, except when such insurance is written specifically to be excess over this insurance; and
 - (b) That is a consolidated (wrap-up) insurance program which has been provided by the prime contractor/project manager or owner of the consolidated project in which you are involved.

When this insurance is excess, we will have no duty under **COVERAGE A. BODILY INJURY AND PROPERTY DAMAGE LIABILITY** or **COVERAGE B. PERSONAL AND ADVERTISING INJURY LIABILITY** to defend the insured against any "suit" if any other insurer has a duty to defend the insured against that "suit". If no other insurer defends, we will undertake to do so, but we will be entitled to the insured's rights against all those other insurers.

When this insurance is excess over other insurance, we will pay only our share of the amount of the loss, if any, that exceeds the sum of:

- (1) The total amount that all such other insurance would pay for the loss in the absence of this insurance; and
- (2) The total of all deductible and self-insured amounts under all that other insurance.

We will share the remaining loss, if any, with any other insurance that is not described in this Excess Insurance provision and was not bought specifically to apply in excess of the Limits of Insurance

shown in the Declarations of this Coverage Part.

c. Method of Sharing

If all of the other insurance permits contribution by equal shares, we will follow this method also. Under this approach each insurer contributes equal amounts until it has paid its applicable limit of insurance or none of the loss remains, whichever comes first.

If any of the other insurance does not permit contribution by equal shares, we will contribute by limits. Under this method, each insurer's share is based on the ratio of its applicable limit of insurance to the total applicable limits of insurance of all insurers.

6. Premium Audit

- a. We will compute all premiums for this Coverage Part in accordance with our rules and rates.
- b. Premium shown in this Coverage Part as advance premium is a deposit premium only. At the close of each audit period we will compute the earned premium for that period and send notice to the first Named Insured. The due date for audit and retrospective premiums is the date shown as the due date on the bill. If:
 - (1) The earned premium is less than the deposit premium, we will return the excess to the first Named Insured; or
 - (2) The earned premium is greater than the deposit premium, the difference will be due and payable to us by the first Named Insured upon notice from us.
- c. The first Named Insured must keep records of the information we need for premium computation, and send us copies at such times as we may request.

7. Representations

By accepting this Coverage Part, you agree:

- a. The statements in the Declarations are accurate and complete;
- b. Those statements are based upon representations you made to us; and
- c. We have issued this Coverage Part in reliance upon your representations.

8. Separation of Insureds

Except with respect to the Limits of Insurance, and any rights or duties specifically assigned in this Coverage Part to the first Named Insured, this insurance applies:

- a. As if each Named Insured were the only Named Insured; and
- b. Separately to each insured against whom claim is made or "suit" is brought.

9. Transfer of Rights of Recovery Against Others to Us

If the insured has rights to recover all or part of any payment we have made under this Coverage Part, those rights are transferred to us. The insured must do nothing after loss to impair them. At our request, the insured will bring "suit" or transfer those rights to us and help us enforce them.

10. Two or More Coverage Forms or Policies Issued by Us

If this Coverage Part and any other Coverage Form, Coverage Part or policy issued to you by us or any company affiliated with us apply to the same "occurrence" or "personal and advertising injury" offense, the aggregate maximum limit of insurance under all the Coverage Forms, Coverage Parts or policies shall not exceed the highest applicable limit of insurance under any one Coverage Form, Coverage Part or policy. This condition does not apply to any Coverage Form, Coverage Part or policy issued by us or an affiliated company specifically to apply as excess insurance over this Coverage Part.

11. When We Do Not Renew

If we decide not to renew this Coverage Part, we will mail or deliver to the first Named Insured shown in the Declarations written notice of the nonrenewal not less than 30 days before the expiration date.

If notice is mailed, proof of mailing will be sufficient proof of notice.

SECTION V - DEFINITIONS

1. "Advertisement" means a notice that is broadcast, telecast or published to the general public or specific market segments about your goods, products or services for the purpose of attracting customers or supporters. "Advertisement" includes a publicity article. For purposes of this definition:

- a. Notices that are published include material placed on the Internet or on similar electronic means of communication; and
- b. Regarding web-sites, only that part of a web-site that is about your goods, products or services for the purposes of attracting customers or supporters is considered an "advertisement".

2. "Authorized representative" means:

- a. If you are designated in the Declarations as:

- (1) An individual, you and your spouse are "authorized representatives".
 - (2) A partnership or joint venture, your members, your partners, and their spouses are "authorized representatives".
 - (3) A limited liability company, your members and your managers are "authorized representatives".
 - (4) An organization other than a partnership, joint venture or limited liability company, your "executive officers" and directors are "authorized representatives". Provided you are not a publicly traded organization, your stockholders are also "authorized representatives".
 - (5) A trust, your trustees are "authorized representatives".
- b. Your "employees":
- (1) Assigned to manage your insurance program; or
 - (2) Responsible for giving or receiving notice of an "occurrence", "personal and advertising injury" offense, claim or "suit";
- are also "authorized representatives".

3. "Auto" means:

- a. A land motor vehicle, trailer or semitrailer designed for travel on public roads, including any attached machinery or equipment; or
- b. Any other land vehicle that is subject to a compulsory or financial responsibility law or other motor vehicle insurance law in the state where it is licensed or principally garaged.

However, "auto" does not include "mobile equipment".

4. "Bodily injury" means bodily injury, sickness or disease sustained by a person, including death resulting from any of these at any time.

5. "Coverage term" means the following individual increment, or if a multi-year policy period, increments, of time, which comprise the policy period of this Coverage Part:

- a. The year commencing on the Effective Date of this Coverage Part at 12:01 AM standard time at your mailing address shown in the Declarations, and if a multi-year policy period, each consecutive annual period thereafter, or portion thereof if any period is for a period of less than 12 months, constitute individual "coverage terms". The last "coverage term" ends at

- 12:00 AM standard time at your mailing address shown in the Declarations on the earlier of:
- (1) The day the policy period shown in the Declarations ends; or
 - (2) The day the policy to which this Coverage Part is attached is terminated or cancelled.
- b. However, if after the issuance of this Coverage Part, any "coverage term" is extended for an additional period of less than 12 months, that additional period of time will be deemed to be part of the last preceding "coverage term".
6. "Coverage territory" means:
- a. The United States of America (including its territories and possessions), Puerto Rico and Canada;
 - b. International waters or airspace, but only if the injury or damage occurs in the course of travel or transportation between any places included in a. above; or
 - c. All other parts of the world if the injury or damage arises out of:
 - (1) Goods or products made or sold by you in the territory described in a. above;
 - (2) The activities of a person whose home is in the territory described in a. above, but is away for a short time on your business; or
 - (3) "Personal and advertising injury" offenses that take place through the Internet or similar electronic means of communication,

provided the insured's responsibility to pay damages is determined in a "suit" on the merits, in the territory described in a. above or in a settlement to which we agree.
7. "Electronic data" means information, facts or programs stored as or on, created or used on, or transmitted to or from computer software, including systems and applications software, hard or floppy disks, CD-ROMs, tapes, drives, cells, data processing devices or any other media which are used with electronically controlled equipment.
8. "Employee" includes a "leased worker". "Employee" does not include a "temporary worker".
9. "Executive officer" means a person holding any of the officer positions created by your charter, constitution, by-laws or any other similar governing document.
10. "Hostile fire" means one which becomes uncontrollable or breaks out from where it was intended to be.
11. "Impaired property" means tangible property, other than "your product" or "your work", that cannot be used or is less useful because:
- a. It incorporates "your product" or "your work" that is known or thought to be defective, deficient, inadequate or dangerous; or
 - b. You have failed to fulfill the terms of a contract or agreement;
- if such property can be restored to use by:
- a. The repair, replacement, adjustment or removal of "your product" or "your work"; or
 - b. Your fulfilling the terms of the contract or agreement.
12. "Insured contract" means:
- a. A contract for a lease of premises. However, that portion of the contract for a lease of premises that indemnifies any person or organization for "property damage" by fire or explosion to premises while rented to you or temporarily occupied by you with permission of the owner is not an "insured contract";
 - b. A sidetrack agreement;
 - c. Any easement or license agreement, except in connection with construction or demolition operations on or within 50 feet of a railroad;
 - d. An obligation, as required by ordinance, to indemnify a municipality, except in connection with work for a municipality;
 - e. An elevator maintenance agreement;
 - f. That part of any other contract or agreement pertaining to your business (including an indemnification of a municipality in connection with work performed for a municipality) under which you assume the tort liability of another party to pay for "bodily injury", "property damage" or "personal and advertising injury" to a third person or organization. Tort liability means a liability that would be imposed by law in the absence of any contract or agreement.
- Paragraph f. does not include that part of any contract or agreement:
- (1) That indemnifies a railroad for "bodily injury", "property damage" or "personal and advertising injury" arising out of construction or demolition operations, within 50 feet of any rail-

road property and affecting any rail-road bridge or trestle, tracks, roadbeds, tunnel, underpass or crossing;

- (2)** That indemnifies an architect, engineer or surveyor for injury or damage arising out of:
 - (a)** Preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
 - (b)** Giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage;
- (3)** Under which the insured, if an architect, engineer or surveyor, assumes liability for an injury or damage arising out of the insured's rendering or failure to render professional services, including those listed in Paragraph **(2)** above and supervisory, inspection, architectural or engineering activities;
- (4)** That indemnifies an advertising, public relations or media consulting firm for "personal and advertising injury" arising out of the planning, execution or failure to execute marketing communications programs. Marketing communications programs include but are not limited to comprehensive marketing campaigns; consumer, trade and corporate advertising for all media; media planning, buying, monitoring and analysis; direct mail; promotion; sales materials; design; presentations; point-of-sale materials; market research; public relations and new product development;
- (5)** Under which the insured, if an advertising, public relations or media consulting firm, assumes liability for "personal and advertising injury" arising out of the insured's rendering or failure to render professional services, including those services listed in Paragraph **(4)**, above;
- (6)** That indemnifies a web-site designer or content provider, or Internet search, access, content or service provider for injury or damage arising out of the planning, execution or failure to execute Internet services. Internet services include but are not limited to design, production, distribution, maintenance and administration of web-sites and web-banners; hosting web-sites; registering domain names; registering with search

engines; marketing analysis; and providing access to the Internet or other similar networks; or

- (7)** Under which the insured, if a web-site designer or content provider, or Internet search, access, content or service provider, assumes liability for injury or damage arising out of the insured's rendering or failure to render Internet services, including those listed in Paragraph **(6)**, above.

13. "Leased worker" means a person leased to you by a labor leasing firm under an agreement between you and the labor leasing firm, to perform duties related to the conduct of your business. "Leased worker" includes supervisors furnished to you by the labor leasing firm. "Leased worker" does not include a "temporary worker".

14. "Loading or unloading" means the handling of property:

- a.** After it is moved from the place where it is accepted for movement into or onto an aircraft, watercraft or "auto";
- b.** While it is in or on an aircraft, watercraft or "auto"; or
- c.** While it is being moved from an aircraft, watercraft or "auto" to the place where it is finally delivered;

but "loading or unloading" does not include the movement of property by means of a mechanical device, other than a hand truck, that is not attached to the aircraft, watercraft or "auto".

15. "Mobile equipment" means any of the following types of land vehicles, including any attached machinery or equipment:

- a.** Bulldozers, farm machinery, forklifts and other vehicles designed for use principally off public roads;
- b.** Vehicles maintained for use solely on or next to premises you own or rent;
- c.** Vehicles that travel on crawler treads;
- d.** Vehicles, whether self-propelled or not, maintained primarily to provide mobility to permanently mounted:

(1) Power cranes, shovels, loaders, diggers or drills; or

(2) Road construction or resurfacing equipment such as graders, scrapers or rollers;

- e.** Vehicles not described in **a.**, **b.**, **c.** or **d.** above that are not self-propelled and are maintained primarily to provide mobility to

permanently attached equipment of the following types:

- (1) Air compressors, pumps and generators, including spraying, welding, building cleaning, geophysical exploration, lighting and well servicing equipment; or
 - (2) Cherry pickers and similar devices used to raise or lower workers;
- f. Vehicles not described in **a.**, **b.**, **c.** or **d.** above maintained primarily for purposes other than the transportation of persons or cargo.

However, self-propelled vehicles with the following types of permanently attached equipment are not "mobile equipment" but will be considered "autos":

- (1) Equipment designed primarily for:
 - (a) Snow removal;
 - (b) Road maintenance, but not construction or resurfacing; or
 - (c) Street cleaning;
- (2) Cherry pickers and similar devices mounted on automobile or truck chassis and used to raise or lower workers; and
- (3) Air compressors, pumps and generators, including spraying, welding, building cleaning, geophysical exploration, lighting and well servicing equipment.

However, "mobile equipment" does not include any land vehicles that are subject to a compulsory or financial responsibility law or other motor vehicle insurance law in the state where it is licensed or principally garaged. Land vehicles subject to a compulsory or financial responsibility law or other motor vehicle insurance law are considered "autos".

16. "Occurrence" means an accident, including continuous or repeated exposure to substantially the same general harmful conditions.
17. "Personal and advertising injury" means injury, including consequential "bodily injury", arising out of one or more of the following offenses:
- a. False arrest, detention or imprisonment;
 - b. Malicious prosecution;
 - c. The wrongful eviction from, wrongful entry into, or invasion of the right of private occupancy of a room, dwelling or premises that a person occupies, committed by or on behalf of its owner, landlord or lessor;

- d. Oral or written publication, in any manner, of material that slanders or libels a person or organization or disparages a person's or organization's goods, products or services;
- e. Oral or written publication, in any manner, of material that violates a person's right of privacy;
- f. The use of another's advertising idea in your "advertisement"; or
- g. Infringing upon another's copyright, trade dress or slogan in your "advertisement".

18. "Pollutant" means any solid, liquid, gaseous or thermal irritant or contaminant, including smoke, vapor, soot, fumes, acids, alkalis, chemicals, petroleum, petroleum products and petroleum by-products, and waste. Waste includes materials to be recycled, reconditioned or reclaimed. "Pollutants" include but are not limited to substances which are generally recognized in industry or government to be harmful or toxic to persons, property or the environment regardless of whether the injury or damage is caused directly or indirectly by the "pollutants" and whether:

- a. The insured is regularly or otherwise engaged in activities which taint or degrade the environment; or
- b. The insured uses, generates or produces the "pollutant".

19. "Products-completed operations hazard":

- a. Includes all "bodily injury" and "property damage" occurring away from premises you own or rent and arising out of "your product" or "your work" except:

- (1) Products that are still in your physical possession; or

- (2) Work that has not yet been completed or abandoned. However, "your work" will be deemed completed at the earliest of the following times:

- (a) When all of the work called for in your contract has been completed; or

- (b) When all of the work to be done at the job site has been completed if your contract calls for work at more than one job site; or

- (c) When that part of the work done at a job site has been put to its intended use by any person or organization other than another contractor or subcontractor working on the same project.

Work that may need service, maintenance, correction, repair or replacement, but which is otherwise complete, will be treated as completed.

- b. Does not include "bodily injury" or "property damage" arising out of:
 - (1) The transportation of property, unless the injury or damage arises out of a condition in or on a vehicle not owned or operated by you, and that condition was created by the "loading or unloading" of that vehicle by any insured;
 - (2) The existence of tools, uninstalled equipment or abandoned or unused materials; or
 - (3) Products or operations for which the classification, listed in the Declarations or in a schedule, states that products-completed operations are included.
20. "Property damage" means:
- a. Physical injury to tangible property, including all resulting loss of use of that property. All such loss of use shall be deemed to occur at the time of the physical injury that caused it; or
 - b. Loss of use of tangible property that is not physically injured. All such loss of use shall be deemed to occur at the time of the "occurrence" that caused it.
- For the purposes of this insurance, "electronic data" is not tangible property.
21. "Suit" means a civil proceeding in which money damages because of "bodily injury", "property damage" or "personal and advertising injury" to which this insurance applies are alleged. "Suit" includes:
- a. An arbitration proceeding in which such damages are claimed and to which the insured must submit or does submit with our consent;
 - b. Any other alternative dispute resolution proceeding in which such damages are claimed and to which the insured submits with our consent; or
 - c. An appeal of a civil proceeding.
22. "Temporary worker" means a person who is furnished to you to substitute for a permanent "employee" on leave or to meet seasonal or short-term workload conditions.
23. "Volunteer worker" means a person who is not your "employee", and who donates his or

her work and acts at the direction of and within the scope of duties determined by you, and is not paid a fee, salary or other compensation by you or anyone else for their work performed for you.

24. "Workplace" means that place and during such hours to which the "employee" sustaining "bodily injury" was assigned by you, or any other person or entity acting on your behalf, to work on the date of "occurrence".
25. "Your product":
- a. Means:
 - (1) Any goods or products, other than real property, manufactured, sold, handled, distributed or disposed of by:
 - (a) You;
 - (b) Others trading under your name; or
 - (c) A person or organization whose business or assets you have acquired; and
 - (2) Containers (other than vehicles), materials, parts or equipment furnished in connection with such goods or products.
 - b. Includes:
 - (1) Warranties or representations made at any time with respect to the fitness, quality, durability, performance or use of "your product"; and
 - (2) The providing of or failure to provide warnings or instructions.
 - c. Does not include vending machines or other property rented to or located for the use of others but not sold.
26. "Your work":
- a. Means:
 - (1) Work or operations performed by you or on your behalf; and
 - (2) Materials, parts or equipment furnished in connection with such work or operations.
 - b. Includes:
 - (1) Warranties or representations made at any time with respect to the fitness, quality, durability, performance or use of "your work"; and
 - (2) The providing of or failure to provide warnings or instructions.

NUCLEAR ENERGY LIABILITY EXCLUSION (Broad Form)

1. The insurance does not apply:
 - A. Under any Liability Coverage, to "bodily injury" or "property damage":
 - (1) With respect to which an insured under this Coverage Part is also an insured under a nuclear energy liability policy issued by Nuclear Energy Liability Insurance Association, Mutual Atomic Energy Liability Underwriters, Nuclear Insurance Association of Canada, or any of their successors, or would be an insured under any such policy but for its termination upon exhaustion of its limit of liability; or
 - (2) Resulting from the "hazardous properties" of "nuclear material" and with respect to which (a) any person or organization is required to maintain financial protection pursuant to the Atomic Energy Act of 1954, or any law amendatory thereof, or (b) the insured is, or had this Coverage Part not been issued would be, entitled to indemnity from the United States of America, or any agency thereof, under any agreement entered into by the United States of America, or any agency thereof, with any person or organization.
 - B. Under any Medical Payments coverage, to expenses incurred with respect to "bodily injury" resulting from the "hazardous properties" of "nuclear material" and arising out of the operation of a "nuclear facility" by any person or organization.
 - C. Under any Liability Coverage, to "bodily injury" or "property damage" resulting from the "hazardous properties" of "nuclear material", if:
 - (1) The "nuclear material" (a) is at any "nuclear facility" owned by, or operated by or on behalf of, an insured, or (b) has been discharged or dispersed therefrom;
 - (2) The "nuclear material" is contained in "spent fuel" or "waste" at any time possessed, handled, used, processed, stored, transported or disposed of, by or on behalf of an insured; or
 - (3) The "bodily injury" or "property damage" arises out of the furnishing by an insured of services, materials, parts or equipment in connection with the planning, construction, maintenance, operation or use of any "nuclear facility", but if such facility is located within the United States of America, its territories or possessions or Canada, this Exclusion (3) applies only to "property damage" to such "nuclear facility" and any property thereat.
2. As used in this exclusion:

"Hazardous properties" includes radioactive, toxic or explosive properties.

"Nuclear material" means "source material", "special nuclear material" or "by-product material".

"Source material", "special nuclear material", and "by-product material" have the meanings given them in the Atomic Energy Act of 1954 or in any law amendatory thereof.

"Spent fuel" means any fuel element or fuel component, solid or liquid, which has been used or exposed to radiation in a "nuclear reactor".

"Waste" means any waste material (a) containing "by-product material" other than the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its "source material" content, and (b) resulting from the operation by any person or organization of any "nuclear facility" included under the first two paragraphs of the definition of "nuclear facility".

"Nuclear facility" means:

 - A. Any "nuclear reactor";
 - B. Any equipment or device designed or used for (1) separating the isotopes of uranium or plutonium, (2) processing or utilizing "spent fuel", or (3) handling, processing or packaging "waste";
 - C. Any equipment or device used for the processing, fabricating or alloying of "special nuclear material" if at any time the total amount of such material in the custody of the insured at the premises where such equipment or device is located consists of or contains more than 25 grams of plutonium or uranium 233 or any combination thereof, or more than 250 grams of uranium 235;

D. Any structure, basin, excavation, premises or place prepared or used for the storage or disposal of "waste";

and includes the site on which any of the foregoing is located, all operations conducted on such site and all premises used for such operations.

"Nuclear reactor" means any apparatus designed or used to sustain nuclear fission in a self-supporting chain reaction or to contain a critical mass of fissionable material.

"Property damage" includes all forms of radioactive contamination of property.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

CinciPlus®
BUSINESS AUTO XC+®
(EXPANDED COVERAGE PLUS)
ENDORSEMENT

This endorsement modifies insurance provided by the following:

BUSINESS AUTO COVERAGE FORM

With respect to the coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by this endorsement.

A. Blanket Waiver of Subrogation

SECTION IV - BUSINESS AUTO CONDITIONS, A. Loss Conditions, 5. Transfer of Rights of Recovery Against Others to Us is amended by the addition of the following:

We waive any right of recovery we may have against any person or organization because of payments we make for "bodily injury" or "property damage" arising out of the operation of a covered "auto" when you have assumed liability for such "bodily injury" or "property damage" under an "insured contract", provided the "bodily injury" or "property damage" occurs subsequent to the execution or the "insured contract".

B. Noncontributory Insurance

SECTION IV - BUSINESS AUTO CONDITIONS, B. General Conditions, 5. Other Insurance c. is deleted in its entirety and replaced by the following:

- c. Regardless of the provisions of Paragraph a. above, this Coverage Form's Liability Coverage is primary and we will not seek contribution from any other insurance for any liability assumed under an "insured contract" that requires liability to be assumed on a primary noncontributory basis.

C. Additional Insured by Contract

SECTION II - LIABILITY COVERAGE, A. Coverage, 1. Who is an Insured is amended to include as an insured any person or organization for whom you have agreed in a valid written contract to provide insurance as afforded by this policy.

This provision is limited to the scope of the valid written contract.

This provision does not apply unless the valid written contract has been:

1. Executed prior to the accident causing "bodily injury" or "property damage"; and
2. Is still in force at the time of the "accident" causing "bodily injury" or "property damage".

D. Employee Hired Auto

1. Changes in Liability Coverage

The following is added to the **SECTION II - LIABILITY COVERAGE, A. Coverage, 1. Who is an Insured**:

An "employee" of yours is an "insured" while operating an "auto" hired or rented under a contract or agreement in that "employee's" name, with your permission, while performing duties related to the conduct of your business.

2. Changes in General Conditions

SECTION IV - BUSINESS AUTO CONDITIONS, B. General Conditions, 5. Other Insurance is deleted in its entirety and replaced by the following:

- b. For Hired Auto Physical Damage Coverage the following are deemed to be covered "autos" you own:

- (1) Any covered "auto" you lease, hire, rent or borrow; and
- (2) Any covered "auto" hired or rented by your "employee" under a contract in that individual "employee's" name, with your permission, while performing duties related to the conduct of your business.

However, any "auto" that is leased, hired, rented or borrowed with a driver is not a covered "auto".

E. Audio, Visual and Data Electronic Equipment

SECTION III - PHYSICAL DAMAGE COVERAGE, C. Limit of Insurance is amended by adding the following:

4. The most we will pay for all "loss" to audio, visual or data electronic equipment and any accessories used with this equipment as a result of any one "accident" is the lesser of:
 - a. The actual cash value of the damaged or stolen property as of the time of the "accident";
 - b. The cost of repairing or replacing the damaged or stolen property with other property of like kind and quality; or
 - c. \$2,500.

Provided the equipment, at the time of the "loss" is:

- a. Permanently installed in or upon the covered "auto" in a housing, opening or other location that is not normally used by the "auto" manufacturer for the installation of such equipment;
- b. Removable from a permanently installed housing unit as described in Paragraph 2.a. above; or
- c. An integral part of such equipment.

F. Who is an Insured - Amended

SECTION II - LIABILITY COVERAGE, A. Coverage, 1. Who is an Insured is amended by adding the following:

The following are "insureds":

1. Any subsidiary which is a legally incorporated entity of which you own a financial interest of more than 50% of the voting stock on the effective date of this coverage form.

However, the insurance afforded by this provision does not apply to any subsidiary that is an "insured" under any other automobile liability policy or would be an "insured" under such policy but for termination of such policy or the exhaustion of such policy's limits of insurance.

2. Any organization that is newly acquired or formed by you and over which you maintain majority ownership. The insurance provided by this provision:

- a. Is effective on the date of acquisition or formation, and is afforded for 180 days after such date;
 - b. Does not apply to "bodily injury" or "property damage" resulting from an "accident" that occurred before you acquired or formed the organization;
 - c. Does not apply to any newly acquired or formed organization that is a joint venture or partnership; and
 - d. Does not apply to an insured under any other automobile liability policy or would be an insured under such a policy but for the termination of such policy or the exhaustion of such policy's limits of insurance.
3. Any of your "employees" while using a covered "auto" in your business or your personal affairs, provided you do not own, hire or borrow that "auto".

G. Liability Coverage Extensions - Supplementary Payments - Higher Limits

SECTION II - LIABILITY COVERAGE, A. Coverage, 2. Coverage Extensions, a. Supplementary Payments is amended by:

1. Replacing the \$2,000 Limit of Insurance for bail bonds with \$4,000 in (2); and
2. Replacing the \$250 Limit of Insurance for reasonable expenses with \$500 in (4).

H. Amended Fellow Employee Exclusion

SECTION II - LIABILITY COVERAGE, B. Exclusions, 5. Fellow Employee is modified as follows:

Exclusion 5. **Fellow Employee** is deleted.

I. Hired Auto - Physical Damage

If hired "autos" are covered "autos" for Liability Coverage, then Comprehensive and Collision Physical Damage Coverages as provided under **SECTION III - PHYSICAL DAMAGE COVERAGE** of this Coverage Part are extended to "autos" you hire, subject to the following:

1. The most we will pay for "loss" to any hired "auto" is \$50,000 or the actual cash value or cost to repair or replace, whichever is the least, minus a deductible.
2. The deductible will be equal to the largest deductible applicable to any owned "auto" for that coverage, or \$1,000, whichever is less.
3. Hired Auto - Physical Damage coverage is excess over any other collectible insurance.

4. Subject to the above limit, deductible, and excess provisions we will provide coverage equal to the broadest coverage applicable to any covered "auto" you own insured under this policy.

Coverage includes loss of use of that hired auto, provided it results from an "accident" for which you are legally liable and as a result of which a monetary loss is sustained by the leasing or rental concern. The most we will pay for any one "accident" is \$3,000.

If a limit for Hired Auto - Physical Damage is shown in the Schedule, then that limit replaces, and is not added to, the \$50,000 limit indicated above and the deductibles shown in the Schedule are applicable.

J. Rental Reimbursement

SECTION III - PHYSICAL DAMAGE COVERAGE is amended by adding the following:

1. We will pay for rental reimbursement expenses incurred by you for the rental of an "auto" because of a "loss" to a covered "auto". Payment applies in addition to the otherwise applicable amount of each coverage you have on a covered "auto". No deductible applies to this coverage.
2. We will pay only for those expenses incurred during the policy period beginning 24 hours after the "loss" and ending, regardless of the policy's expiration, with the lesser of the following number of days:
 - a. The number of days reasonably required to repair the covered "auto". If "loss" is caused by theft, this number of days is added to the number of days it takes to locate the covered "auto" and return it to you; or
 - b. 30 days.
3. Our payment is limited to the lesser of the following amounts:
 - a. Necessary and actual expenses incurred; or
 - b. \$50 per day.
4. This coverage does not apply while there are spare or reserve "autos" available to you for your operations.
5. We will pay under this coverage only that amount of your rental reimbursement expenses which is not already provided for under **SECTION III - PHYSICAL DAMAGE COVERAGE, A. Coverage, 4. Coverage Extensions**.

K. Transportation Expense - Higher Limits

SECTION III - PHYSICAL DAMAGE COVERAGE, A. Coverage, 4. Coverage Extensions is amended by replacing \$20 per day with \$50 per day, and \$600 maximum with \$1,500 maximum in **Extension a. Transportation Expenses**.

L. Airbag Coverage

SECTION III - PHYSICAL DAMAGE COVERAGE, B. Exclusions, 3.a. is amended by adding the following:

However, the mechanical and electrical breakdown portion of this exclusion does not apply to the accidental discharge of an airbag. This coverage for airbags is excess over any other collectible insurance or warranty.

M. Loan or Lease Gap Coverage

1. **SECTION III - PHYSICAL DAMAGE COVERAGE, C. Limit of Insurance** is deleted in its entirety and replaced by the following, but only for private passenger type "autos" with an original loan or lease, and only in the event of a "total loss" to such a private passenger type "auto":
 - a. The most we will pay for "loss" in any one "accident" is the greater of:
 - (1) The amount due under the terms of the lease or loan to which your covered private passenger type "auto" is subject, but will not include:
 - (a) Overdue lease or loan payments;
 - (b) Financial penalties imposed under the lease due to high mileage, excessive use or abnormal wear and tear;
 - (c) Security deposits not refunded by the lessor;
 - (d) Costs for extended warranties, Credit Life Insurance, Health, Accident or Disability Insurance purchased with the loan or lease; and
 - (e) Carry-over balances from previous loans or leases, or
 - (2) Actual cash value of the stolen or damaged property.
 - b. An adjustment for depreciation and physical condition will be made in determining actual cash value at the time of "loss".

2. **SECTION V - DEFINITIONS** is amended by adding the following, but only for the purposes of this **Loan or Lease Gap Coverage**:

"Total loss" means a "loss" in which the cost of repairs plus the salvage value exceeds the actual cash value.

N. Glass Repair - Waiver of Deductible

SECTION III - PHYSICAL DAMAGE COVERAGE, D. Deductible is amended by adding the following:

No deductible applies to glass damage if the glass is repaired in a manner acceptable to us rather than replaced.

O. Duties in the Event of an Accident, Claim, Suit or Loss - Amended

SECTION IV - BUSINESS AUTO CONDITIONS, A. Loss Conditions, 2. Duties in the Event of Accident, Claim, Suit or Loss, a. is amended by adding the following:

This condition applies only when the "accident" or "loss" is known to:

1. You, if you are an individual;
2. A partner, if you are a partnership;
3. An executive officer or insurance manager, if you are a corporation; or
4. A member or manager, if you are a limited liability company.

P. Unintentional Failure to Disclose Hazards

SECTION IV - BUSINESS AUTO CONDITIONS, B. General Conditions, 2. Concealment, Misrepresentation or Fraud is amended by adding the following:

However, if you unintentionally fail to disclose any hazards existing on the effective date of this Coverage Form, we will not deny coverage under this Coverage Form because of such failure.

Q. Mental Anguish Resulting from Bodily Injury

SECTION V - DEFINITIONS, C. "Bodily injury" is deleted in its entirety and replaced by the following:

"Bodily injury" means bodily injury, sickness or disease sustained by a person, including mental anguish and death sustained by the same person that results from such bodily injury, sickness or disease. "Bodily injury" does not include mental anguish or death that does not result from bodily injury, sickness or disease.

R. Coverage for Certain Operations in Connection with Railroads

With respect to the use of a covered "auto" in operations for or affecting a railroad:

1. **SECTION V - DEFINITIONS, H. "Insured contract", 1.c.** is deleted in its entirety and replaced by the following:
 - c. An easement or license agreement;
2. **SECTION V - DEFINITIONS, H. "Insured contract", 2.a.** is deleted.



WAIVER OF SUBROGATION

Insured Name: HEI INC
Insured Policy Number: WC100-0005961-2022A

Builders Trust of New Mexico waives any right of recovery of subrogation against the certificate holder named on this certificate of insurance, but only to the extent that the employers to whom we provide coverage performs work under a written contract with the certificate holder that requires this waiver.

Name of Person	Name of Organization
	Blanket Waiver of Subrogation

Date: 12/9/2021

Countersigned by Randy L. Alkin

Agency Number: 6 – 8
Agency Name: Burke Insurance Group LLC

DIVERSITY VENDOR CERTIFICATION PARTICIPATION

Diversity Vendor Certification Participation - It is the policy of some Members participating in Omnia Partners to involve minority and women business enterprises (M/WBE), small and/or disadvantaged business enterprises, disabled veterans business enterprises, historically utilized businesses (HUB) and other diversity recognized businesses in the purchase of goods and services. Respondents shall indicate below whether or not they hold certification in any of the classified areas and include proof of such certification with their response.

1. Minority Women Business Enterprise

Respondent certifies that this firm is an MWBE Yes No

List certifying agency: _____

2. Small Business Enterprise (SBE) or Disadvantaged Business Enterprise (DBE)

Respondent certifies that this firm is a SBE or DBE Yes No

List certifying agency: Self Certified through sam.gov small busines

3. Disabled Veterans Business Enterprise (DVBE)

Respondent certifies that this firm is an DVBE Yes No

List certifying agency: _____

4. Historically Underutilized Businesses (HUB)

Respondent certifies that this firm is an HUB Yes No

List certifying agency: _____

5. Historically Underutilized Business Zone Enterprise (HUBZone)

Respondent certifies that this firm is an HUBZone Yes No

List certifying agency: _____

6. Other

Respondent certifies that this firm is a recognized diversity certificate holder Yes No

List certifying agency: _____

STATE OF NEW MEXICO

TAXATION AND REVENUE DEPARTMENT

RESIDENT CONTRACTOR CERTIFICATE

Issued to: **HEI, INC**

DBA: **HEI, INC**
PO BOX 31310
ALBUQUERQUE, NM 87190-1310

Expires: **18-Dec-2023**

Certificate Number:

L2048295344



Stephanie Schardin Clarke
Cabinet Secretary

THIS CERTIFICATE IS NOT TRANSFERABLE

EXHIBIT B

SMALL AND SMALL DISADVANTAGED BUSINESS CERTIFICATION

The University of New Mexico participates in the Government's Small and Small Disadvantaged Business programs. This requires written certification from our suppliers and contractors as to their business status. Please furnish the information requested below.

1.0 Small Business – An enterprise independently owned and operated, not dominant in its field and meets employment and/or sales standards developed by the Small Business Administration. See 13 CFR 121.201

1.a Small Disadvantaged Business – a Small Business Concern owned and controlled by socially and economically disadvantaged individuals; and

- (1) Which is at least 51% owned by one or more socially and economically disadvantaged individuals; or in the case of any publicly owned business, at least 51% of the stock of which is owned by one or more socially and economically disadvantaged individuals and
- (2) Whose management of daily operations is controlled by one or more such individuals. The contractor shall presume Black Americans, Hispanic Americans, Native Americans (such as American Indians, Eskimos, Aleuts and Native Hawaiians), Asian-Pacific Americans and other minorities or any other individual found to be disadvantaged by the Administration pursuant to Section 8 (a) of the Small Business Act and
- (3) Is certified by the SBA as a Small Disadvantaged Business.

1.b Women-Owned Business Concern – A business that is at least 51% owned by a woman or women who also control and operate it. Control in this context means exercising the power to make policy decisions. Operate in this context means being actively involved in the day-to-day management.

1.c HUBZone Small Business Concern – A business that is located in historically underutilized business zones, in an effort to increase employment opportunities, investment and economic development in those areas as determined by the Small Business Administration's (SBA) List of Qualified HUBZone Small Business Concerns.

1.d Veteran-Owned Small Business Concern – A business that is at least 51% owned by one or more veterans; or in the case of any publicly owned business, at least 51% of the stock of which is owned and controlled by one or more veterans and the management and daily business operations of which are controlled by one or more veterans.

1.e Service Disabled Veteran-Owned Small Business – A business that is at least 51% owned by one or more service disabled veterans; or in the case of any publicly owned business, at least 51% of the stock of which is owned and controlled by one or more service disabled veterans and the management and daily business operations of which are controlled by one or more service disabled veterans. Service disabled veteran means a veteran as defined in 38 U.S.C. 101(2) with a disability that is service connected as defined in 13 U.S.C. 101(16).

Company Name: HEI, Inc. Telephone: 505-880-1819
Street Address: 3800 Vassar Dr NE County: Bernalillo
City: Albuquerque State & Zip: New Mexico 87107
Is this firm a (please check): Division Subsidiary Affiliated? Primary NAICS Code: 238210
If an item above is checked, please provide the name and address of the Parent Company below:

Check All Categories That Apply:

- 1. Small Business
- 2. Small Disadvantaged Business (Must be SBA Certified)
- 3. Woman Owned Small Business
- 4. HUBZone Small Business Concern (Must be SBA Certified)
- 5. Veteran Owned Small Business
- 6. Disabled Veteran Owned Small Business
- 7. Historically Black College/University or Minority Institution
- 8. Large Business

Signature and Title of Individual Completing Form:

Kelly Adams, Director 28OCT2022

Date

Please return this form to:

The University of New Mexico
Purchasing Department
MSC01 1240
Albuquerque, NM 87131
505-277-2036 (voice)
505-277-7774 (fax)

NOTE:

This certification is valid for a one year period. It is your responsibility to notify us if your size or ownership status changes during this period. After one year, you are required to re-certify with us.

THANK YOU FOR YOUR COOPERATION

Notice: In accordance with U.S.C. 645(d), any person who misrepresents a firm's proper size classification shall (1) be punished by imposition of a fine, imprisonment, or both; (2) be subject to administrative remedies; and (3) be ineligible for participation in programs conducted under the authority of the Small Business Act.

If you have difficulty determining your size status, you may contact the Small Business Administration at 1-800-U-ASK-SBA or 202-205-6618. You may also access the SBA website at www.sba.gov/size or you may contact the SBA Government Contracting Office at 817-684-5301. (Rev. 6/2002)