

*Business  
Integrity*

*Corporate  
Responsibility*

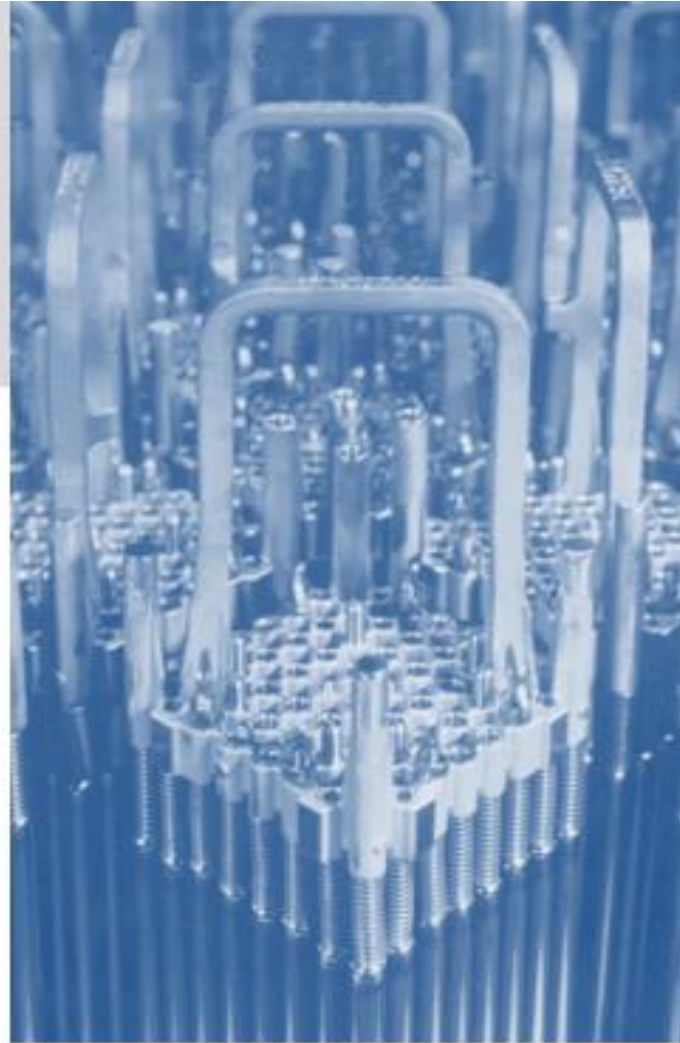
*Employee  
Resources*

# Safety Manual



**NUCLEAR**  
UNIVERSITY

2009



## Introduction

This Employee Safety Handbook provides an overview of Nuclear University's (the Company) safety program; its policies, procedures and programs. Read this Handbook and retain it for reference. It was prepared to enhance employee awareness of safety policies, procedures and programs, and to provide focus on the importance of workplace safety. It does not address every situation that will arise and, therefore, is not intended to serve as an exhaustive set of rules.

This Employee Handbook and its related policies, practices and procedures as well as future updates are not intended as a contractual commitment or obligation of Nuclear University to its employees. As in all matters, the Company will use its discretion to take action that it believes is appropriate in the particular circumstances based on legal provisions, interpretations of law and employee relations principles.

From time to time, the company may change or discontinue certain policies and practices. At the start of work at a new jobsite obtain the latest revision number of the Handbook from your Nuclear University Site Manager/Designee. You are responsible for having the most current revision. It is our expectation that employees will give their best effort, however failure to abide by Nuclear University, Client or government implemented policies, rules, regulations or guidelines may be subject to disciplinary actions up to and including termination.

We expect that you are committed to upholding the policies and procedures of Nuclear University. All of us at Nuclear University view safety as our primary concern. Not only is safety a concern in the workplace but also in our daily lives away from work. This Handbook has been designed to provide you the fundamentals to help maintain good safety awareness at work and play. Please use the safety guidance in this Handbook and share the ideas and safety tips with your families, friends and co-workers.

Nuclear University has coupled general personnel policies and guidelines with our safety handbook. This information provides answers to questions commonly asked about Nuclear University policies. It obviously cannot answer every question and is not intended to do so. Contract Specific Requirements, site policies and procedures, and, if applicable, local labor agreements, should also be referenced anytime questions arise.

Our goal is to make our people aware of our policies and to make safety not just a set of rules, but a way of life. We are proud of the way in which we run our company with our focus on safety first, and expect you to share that sense of pride.

## Handbook Acknowledgement Form

This Employee Safety Handbook has been prepared for your information and understanding of the policies, philosophies, practices and benefits of our company. PLEASE READ IT CAREFULLY. Upon completion of your review of this Handbook, please sign the statement at the back of the book and return it to your Nuclear University Site Manager/Designee. For your records a reproduction of that statement appears below.

I have received a copy of Revision 0, dated 01/26/2009, of Nuclear University's (the Company's) Employee Safety Handbook, and I understand that I am responsible for reading the policies and practices described within it. I understand that this Employee Safety Handbook replaces any and all prior Employee Safety Handbooks, policies and practices of the Company.

I understand that the policies contained in this Employee Safety Handbook may be added to, deleted or changed by the Company at any time. I understand that neither this Employee Safety Handbook nor any other written or verbal communication is intended to, in any way, create a contract of employment.

I understand I am an employee-at-will.

If I have any questions regarding the content or interpretation of this Employee Safety Handbook, I will bring them to the attention of my Nuclear University Site Manager/Designee.

Name (please Print): \_\_\_\_\_

Signature: \_\_\_\_\_

Last 4 digits of SS#: \_\_\_\_\_ Date: \_\_\_\_\_

**You are required to sign and return the acknowledgment statement  
at the end of this book.**

## Section I

### Who We Are *Building Our Future*

*Our Goal:* Nuclear University's goal is to be the leader in providing quality personnel and innovative services and technology that contribute to the success, health and safety of our people and our Clients.

*Our Values:* Nuclear University's core values are built on a strong foundation of safety, quality and commitment to our employees. Our belief is that honesty and integrity, coupled with innovation, tenacity and focus will provide our customers the service they deserve.

#### **Nuclear University Core Values**

- + SAFETY  
Event Free Human Performance Tools:
  1. Training & Qualifications
  2. Pre-Job Briefings
  3. Self Checking (STAR)
  4. Peer Checking
  5. Coaching
  6. Questioning Attitude
  7. Procedure Compliance
  8. Clear Communication
  9. Situation Awareness
  10. Stop When Unsure
- + FOCUS ON CUSTOMERS
- + QUALITY
- + COMMITMENT TO EMPLOYEES
- + HONESTY and INTEGRITY
- + INNOVATION
- + TENACITY

*Our Vision:* Nuclear University will continue to be a valuable resource to our customers, a leader of training, operations and engineering services and products. Nuclear University's workforce will continue to be empowered, energized, well trained and increasingly diverse. Nuclear University will continue to be a successful premiere service company with a winning attitude that takes pride in being the best.

## Section II

### Safety

#### *Nuclear University General Safety Rules*

Nuclear University is committed to complying with OSHA's safety standards and rules at all times. Safety is a joint responsibility and cooperative undertaking that requires ever-present safety awareness on the part of every worker. The following General Safety Rules apply to all job locations where Nuclear University personnel work.

No one shall be assigned or permitted to work while their ability or alertness is impaired by fatigue, illness, intoxicating liquor, illegal drugs, prescription drugs, etc. such that impairment of motor skills or other faculties might expose the individual or his or her coworkers to injury. Each individual is responsible to use safe work practices and follow the rules contained in our Client's Safety Program, the Nuclear University Safety Manual, and such other rules and practices communicated on the job via training or direction. These general safety rules are to protect you and your co-worker from harm and apply to all Nuclear University employees:

- + Report immediately all injuries, near misses, unsafe conditions or work practices to your supervisor.
- + Maintain good housekeeping at all times in the work area.
- + Wear suitable clothing and footwear at all times.
- + Properly wear Personal Protective Equipment (PPE) whenever needed and where posted.
- + Participate in the safety awareness training sessions conducted by the Nuclear University Site Manager/Designee.
- + No horseplay.
- + Plan work carefully to avoid injuries.
- + Visually inspect machinery and equipment to ensure that all guards and other protective devices are properly placed and adjusted. Report deficiencies promptly to your supervisor. Do not use defective tools and equipment.
- + Do not throw or toss objects. Dispose of all waste properly and carefully.
- + Use proper body mechanics when lifting heavy objects. Ask for assistance or use mechanical devices to move heavy objects.
- + Stop work whenever you feel the job is unsafe and immediately contact your supervisor.

The Nuclear University Site Manager/Designee, supervisors, and lead workers are responsible for enforcing these rules; YOU are responsible for adherence to safety rules.

## 1.0 Purpose

This section of the Handbook highlights safety guidelines and rules and is intended to supplement the provisions of the Occupational Safety and Health Act of 1970 and any regulations issued there under, the Nuclear University Safety Manual, and similar manuals our Client may have. ***It does not take the place of required OSHA training and does not meet the intent of that training.*** The intent of this Handbook is to enhance employee awareness regarding Nuclear University and Client safety policies and to provide focus on safety. It obviously cannot cover every situation and it is not intended to do so. Each job, regardless of the type of work involved, presents hazards that require special alertness, awareness, and good judgment on everyone's part. In addition, the requirements established by the particular site where the work is being performed must be complied with. **S T O P** and familiarize yourself with the Nuclear University and/or Client Safety Manual if there are any questions, doubt, or if it is the first time working in the environment. The Nuclear University Site Manager/Designee, your supervisor and the home office will help. **YOU** are obligated to ask for help and guidance when there is any doubt.

The safety and health of each employee of Nuclear University is of primary importance. One of our goals is to develop a Safety Program conforming to OSHA requirements. To be successful, such a program must embody the proper attitude towards accident prevention on the part of both supervisors and employees. It also requires cooperation in all safety and health matters between supervisors and employees, as well as between each employee and his/her fellow workers.

All accidents in the workplace are preventable. In an effort to protect our most important resource ...**YOU**... our ultimate goal is to reduce the number of injuries to zero. Please do your part to assist us in making Nuclear University an even safer and better environment.

### 1.1 Nuclear University Safety Manual

The Safety Manual is available to Nuclear University employees and contains detailed information that will help maintain a safe work environment for employees. The Safety Manual is to be used in parallel with our customer's safety manual when there is one used at the site. Any differences that are identified between the Nuclear University Safety Manual and our customer's manual shall be brought to the attention of your Site Supervisor and Nuclear University's Safety Coordinator. The manual identified for use at the site where the work is being performed should be the one used until resolved. The Nuclear University Safety Manual complies with OSHA 29CFR1910, General Industry, and applicable parts of 29CFR1926 Construction standards.

## 2.0 Responsibility

### 2.1 Chief Executive Officer

The Chief Executive Officer is responsible for providing the entire Nuclear University organization independent oversight and support in technical related areas, including Safety, Quality Assurance, and Training.

### 2.2 Company Executive Levels

The highest organizational level of each company (e.g., President) is responsible for establishing the specific requirements concerning safety orientation and training at each respective Nuclear University work site and is responsible for the overall implementation of this program.

### 2.3 Nuclear University Site Manager/Designee

The Nuclear University Site Manager/Designee at each job location is responsible for implementing this program, to the level required, at the job location. At the discretion of the Manager, elements of the program (e.g. training) can be designated to other individuals. The Nuclear University Site Manager/Designee:

- + Is responsible for conducting and documenting New Employee Safety Orientation.
- + Should establish when and how Safety Meetings are conducted in conjunction.
- + Should ensure Accident Investigations are conducted in accordance with corporate procedures and that corrective actions are implemented.
- + Shall report results of investigations to Client representatives if requested.

### 2.4 Site Safety Representative (collateral duty)

The Site Safety Representative will assist the Nuclear University Site Manager/Designee in assigned safety related matters.

### 2.5 Supervisor/Foreman (Craft Contracts Only)

The Supervisor/Foreman is responsible for the safety of workers under his or her supervision. The Supervisor should ensure that all employees under their supervision have the personal protective equipment for the job. The Supervisor will:

- + Take immediate steps to correct any violation of Nuclear University or Client safety rules. Notification to the Client representative will be made immediately of unsafe work conditions and occasion of work stoppage.
- + Work will continue when the corrective action has eliminated or controlled the hazard or violation.

- + Not perform or direct the performance of any work that he or she feels is unsafe.
- + Only assign employees to jobs that they are capable of accomplishing safely.
- + Ensure defective tools and equipment are tagged and/or removed from service.
- + Conduct a prompt investigation of every injury, exposure to occupational illness, or “near miss” involving Nuclear University personnel under their supervision.

Supervisory personnel/designee placed in charge of any work will be held accountable for the enforcement of all safety rules and regulations for that project. Notify the Nuclear University Site Manager/Designee when an employee has physical conditions requiring accommodation.

## **2.6 Individuals**

All Nuclear University employees are responsible for complying with this program, as well as customer safety programs, in order to assure their own safety and the safety of their co-workers.

Employees:

- + Are required to immediately report all injuries, exposures to occupational illnesses, and “near misses” to their supervisor.
- + Should immediately report to their supervisor any unsafe condition, tool, equipment, material, or act.
- + Should request instructions from their supervisor whenever they are in doubt as to the proper procedures for a task. No employee should undertake any job for which they have not received adequate or required training or for which they are not fully qualified to do.
- + Should properly wear and use all personal protective equipment (PPE) for a given job.
- + Should coach fellow employees who are using questionable or unsafe work practices.
- + Inform Site Manager/Designee of any physical conditions, impairments or injuries (regardless of where the injury occurred, e.g. onsite or offsite) requiring accommodation, medication or that may affect ability to perform required duties.

Should an employee feel the work being performed is in violation of any OSHA regulation; that he or she is not properly protected; or that the work is being performed in an unsafe manner, the employee should immediately bring the matter to the attention of his or her supervisor or Nuclear University Site Manager/Designee.

Any employee who deliberately violates a safety rule, procedure or standard, whether it be OSHA's, Nuclear University's, or the customers, or acts in such a manner as to endanger his or her own or another person's personal safety shall be subject to disciplinary action, up to and including termination.

### **3.0 New Employee Safety Orientation**

#### **3.1 Requirements**

All employees will be given a copy of the Nuclear University Employee Safety Handbook. New employees at some locations will participate in a New Employee Safety Orientation session. At other sites employees will be given a copy of the Handbook, and will be given an overview of the Handbook by the Nuclear University Site Manager/Designee. All employees will have the opportunity to ask questions of the Nuclear University Site Manager/Designee or the Home Office.

Any unique hazards that exist at an individual work location will also be discussed during the safety orientation.

No work should be performed until the employee has received a safety briefing and has read & signed this handbook

#### **3.2 Documentation**

All Nuclear University employees are required to sign the acknowledgement page, give it to their Nuclear University Site Manager/Designee, and maintain the Employee Safety Handbook for future use.

### **4.0 Safety Meetings**

Requirements will be established by the Site Manager and the Corporate Safety Coordinator.

#### **4.1 Safety Meetings**

The Safety Meeting should be used to inform workers about the findings of recent accident investigations, safety self-inspections, and any other pertinent safety topics. Individual employees are frequently our best source of information in learning how to work more safely, and the monthly meeting enables individuals to offer their input.

Performance goals and trends identified by the Nuclear University Site Manager/Designee, should be discussed during this meeting.

(Client safety meetings can be used to meet this goal if Nuclear University personnel attend these Client meetings.)

## Monthly Safety Meetings/Pre-job Briefs

The Monthly Safety Meeting may be used to discuss safety topics. Safety topics may be selected based on the trending data. The Monthly Safety Meeting also provides the Nuclear University Site Manager/Designee an opportunity to promptly discuss important safety matters. The focus will be on work activity specific to safety, quality, and employee responsibility of each job.

### 4.2 Documentation

An attendance roster and notes should be maintained on file to document all Safety Meetings.

## 5.0 Accidents, Injuries and Near Misses

***It is the employee's responsibility to report ALL accidents, injuries and near misses to their Nuclear University Site Manager/Designee and, where applicable, to the Client designated contact.***

It is an employee's responsibility to report and the supervisor's responsibility to document each incident and forward the report to the Nuclear University Site Manager/Designee.

Many sites make doctors, practitioner assistants or EMTs available at the work location. If off-site medical attention is required, employees shall be transported, accompanied by a supervisor or Nuclear University Site Manager/Designee, to the office of approved doctors/clinics during normal working hours and to the hospital during requirements. Any subsequent visits will be on the employee's time unless authorized by the company.

Accident investigations, if the responsibility of Nuclear University per client agreements, will be performed in accordance with sections 5.1, 5.2 and 5.3.

**FAILURE TO REPORT AN INCIDENT WITHIN TWO HOURS MAY LEAD TO DISCIPLINARY ACTION.**

### 5.1 Supervisor Accident Investigations Requirements

All incidents where a Nuclear University employee is injured, exposed to an occupational illness, or involved in a "Near Miss" will be investigated by the employee's immediate supervisor. In incidents where the supervisor is involved or a non-work related relationship (e.g. family member) exists a third party investigation will take place. A "Near Miss" is defined as an incident that did not cause an injury or exposure to an occupational illness but had the potential to do so.

## **Supervisor Accident Investigation Report**

The investigation will be completed using the Nuclear University Supervisor Accident Investigation Report. The investigation should be completed within 24 hours of the accident. The supervisor should conduct the investigation in such a way as to determine the root causes of the incident. Unsafe acts, unsafe conditions, and contributing factors should be the focus. Employee and witness statements should be included with the investigation. The supervisor should devote an equal amount of time in considering and recommending corrective action to prevent a re-occurrence as is used to determine the root causes.

### **5.2 Documentation**

A copy of the Supervisor Accident Investigation Report should be kept on file. The original should be forwarded to the Site Manager in the next scheduled overnight delivery for OSHA reporting, workers' compensation, and trend analysis purposes.

## **6.0 Housekeeping / Orderliness**

Prior to entering a work location, employees should take a time out to observe the work area and make note of any hazards, or conditions that may have changed since their last entry.

- + Scrap, trash and other wastes shall be placed in the appropriate designated containers.
- + Hazardous Waste shall be placed in containers specifically designated for that material. Areas shall be cleaned up as the work progresses.
- + Cords and hoses will not be routed in electrical cable trays. They should be routed, preferably overhead, in a manner that will not present a tripping hazard.
- + Tools and equipment shall be properly stored in a stable position (tied, stacked or choked) to prevent rolling or falling.
- + Cleaning materials and consumables will be kept in approved containers and stored properly.
- + Safe access to all work areas and emergency exits shall be maintained.
- + Do not block emergency equipment, electrical disconnect switches, breaker panels, or safety showers. Cables, ropes, barricade tape, hoses, or shielding shall not be attached to such equipment.
- + Work areas shall be checked at the beginning and end of each shift to ensure safe conditions.
- + Work areas should have adequate lighting.

Personnel must take responsibility for identifying deficiencies by reporting them promptly to their immediate supervisor or by fixing the deficiency. Simply stating the problem that exists is unsatisfactory. Be part of the solution!

## **7.0 Permits / Authorization (See site-specific requirements)**

Written and properly authorized current permits are required before work may begin. Permits shall be posted at the work site when required.

## **8.0 Personal Protective Equipment**

Personal protective equipment (PPE) such as safety glasses, hard hats, earplugs, etc., cannot in themselves protect you from all harm. However, accompanied by a good safety conscious attitude, good housekeeping, and good supervision, the probability of an injury is greatly reduced. The proper equipment and good supervision will be provided.

### **YOU MUST PROVIDE THE SAFETY CONSCIOUS ATTITUDE.**

All Personal Protective Equipment (PPE) shall be maintained in a sanitary and reliable condition. Damaged or otherwise unserviceable PPE will be properly disposed of and replaced. Contact your supervisor or Nuclear University Site Manager/Designee immediately for replacement of defective or damaged items.

Personnel will be trained and must demonstrate that they understand the following:

- + When PPE is necessary;
- + What PPE is necessary;
- + How to properly adjust, wear and use PPE;
- + The limitations of the PPE;
- + Care, maintenance, useful life and disposal of PPE.

### **8.1 Nuclear University Provided Equipment**

Nuclear University PPE typically includes hard hats, safety eyeglasses, hearing protection, and work gloves, unless specified elsewhere. These items may be obtained by contacting your supervisor or Nuclear University Site Manager/Designee.

### **8.2 Reimbursement**

At some sites Nuclear University will reimburse employees up to a certain amount on the purchase of ANSI approved protective footwear, and prescription safety eyeglasses. Please refer to the specific site policy for the correct reimbursement guidelines.

### **8.3 Clothing**

Loose clothing or jewelry is not permitted in work areas with machines or equipment with moving parts.

A shirt covering the shoulders and trousers covering the legs and ankles shall be worn at all times.

Arms - When working in the vicinity of energized lines or equipment (both high and low voltage), on high temperature lines, grinding, welding, or other high exposure hazards to the arm, full-length sleeves should be worn.

Legs - Workers should not have cuffs on trousers when welding or performing any job that produces sparks.

Protective clothing appropriate to the hazard shall be worn over normal clothes when handling or working with acids, caustics, asbestos, PCB's fiberglass, cal-sil, kao-wool, insulation or any other hazardous material.

### **8.4 Head**

Hard hats (ANSI Z89.1-1986), in good condition and worn properly, shall be worn under the following conditions:

- + Any area posted as a hard hat area
- + Beneath any overhead work (e.g. below ladders, scaffolds, open gratings, or any other openings)
- + In any other area where head-bumping hazards exist

Protective headgear shall be worn following the manufacturer's guidelines. Headgear should not be reversed with the brim in the neck. (For welding operations obtain headgear designed for that purpose)

Users should periodically clean hard hats with soap and water and inspect them daily, prior to use, for cracks/penetrations and that the suspension system is in good condition.

Company name and employee name should be on the hard hat.

- + Do not mark up or deface hard hats
- + Only company provided stickers can be placed on the shell of the hat

Utilization of face shields, flashlights, or hearing protection is acceptable using standard fastening devices, following the manufactures guidelines and instructions.

Any employee who normally works where head protection is not required shall comply with these rules when entering an area where protective headgear is required.

## **8.5 Eyes**

Safety glasses (ANSI Z87.1) with side shields, goggles, full-face shields, and burning goggles shall be worn as necessary for the work being performed. Before beginning work, every employee should determine the location of the nearest eye wash station and/or safety shower.

- + All safety eyewear shall be inspected prior to use for damage and scratches that could impair vision.
- + Glasses - each affected employee who wears prescription lenses should wear safety eyeglasses that incorporates the prescription in its design or should wear safety eyeglasses that can be worn over eye prescription lenses without disturbing the proper position of the prescription lenses.
- + Contact lenses do not provide eye protection, and safety glasses shall be worn with them when eye protection is required.
- + Safety Glasses with dark lenses shall not be worn indoors or in poorly lit areas. Consult local site requirements for additional clarification.
- + Only non-vented safety goggles shall be used while working with chemicals.

## **8.6 Hands**

Wear gloves when performing work that could result in cuts or slivers to the hand or pinching hazards exist. In all cases gloves appropriate to the job being performed will be worn unless the task cannot be completed wearing gloves or they pose a greater hazard (i.e., while operating rotating equipment).

Note: If you have allergies to latex, notify your supervisor for a substitute

## **8.7 Foot**

Employees shall wear suitable industrial grade work shoes in good condition while working.

The following will apply in the absence of an individual site shoe policy.

- + Shoes with hard soles and leather uppers will be worn for field and shop work.
- + ANSI Z41 approved steel toed shoes will be worn in areas where mechanical, electrical, or construction work is being performed or areas where there is an increased risk of foot injury. Your site supervisor will advise if your work area applies.

To help support ankles, high top shoes with laces should be worn by employees whose normal work requires climbing of poles and steel structures.

Footwear such as sneakers, loafers, moccasins, and canvas top shoes are not suitable work shoes for physical work environments.

## **8.8 Ears / Noise Exposure**

Hearing protection shall be worn in areas where noise levels exceed an 8 hour time weighted average of 85 decibels, or where posted.

Note: If you or someone else needs to raise their voice level to be heard you should be wearing hearing protection. (Normal conversation is 50-60 decibels)

Use Manufacturer's instructions for inspection, care and proper usage of hearing protection.

Hearing protection will be worn:

- + In all posted areas.
- + When operating equipment or tools that produce a sound exceeding 85 dBA, even if the work area does not require it.
- + When in doubt of noise exposure.

Double hearing protection is required where noise levels have the potential to exceed 100 dBA.

There are almost 300 different makes of hearing protectors, the right one for you depends on the amount of protection you need.

## **8.9 Respiratory Protection**

The respirator should be suitable for its intended use.

Respirator qualified employees are expected to report to work clean shaven or otherwise be prepared to shave at a moment's notice so as not to interrupt work activities.

Respirators, including all disposable styles, shall be approved by the National Institute for Occupational Safety and Health (NIOSH) or the Mine Safety and Health Administration (MSHA).

Respirator users shall have a physician's approval, be fit tested, and trained per OSHA 1910.134/1926.103. Facial hair in the area of the respirator sealing surface or which interferes with the functioning of valves is prohibited.

Respiratory Protection at our Client's work location is provided by the Client unless specifically stated elsewhere.

## **9.0 Heat Stress**

### ***Precautions include:***

- + Hydration - drink plenty of water or sport drinks before and during work in high temperature areas (note radiological precautions when applicable). Avoid caffeine.
- + Awareness - be aware of your mental and physical condition at all times. If you begin to suffer symptoms of heat stress (e.g. light headedness, muscle cramps, nausea, dizziness) leave the area immediately. Observe your coworkers and be aware of any signs they may exhibit of heat stress also. Seek relief in cool shaded areas, hydrate and obtain medical assistance if symptoms are severe or persistent.

Utilize safety devices and procedures, including fans, barriers to block radiant heat, cool suits and designated cool zones, where temperatures are lower.

## **10.0 Material Handling and Storage**

Material shall be stacked, stored, or positioned so it does not create a falling hazard and can be reached safely by personnel and material-handling equipment. All protruding nails, wires and ragged metal edges shall be removed or hammered flush before handling.

### **10.1 Lifting**

Never try to lift something that is too heavy. Check for stability by testing the weight carefully either by pushing or lifting at one of the corners.

Proper lifting techniques shall be observed at all times.

- + Make sure you have a clear path to carry the load, and a place to set it down.
- + Bend the knees, place your feet close to the object and center yourself over the load.
- + Get a good hand-hold.
- + Lift straight up, smoothly, and let your legs do the work, not your back!
- + Exhale as you make the lift.
- + Do not twist or turn your body while carrying the load.
- + Set the load down slow and controlled.
- + Always push a load on a cart or dolly, do not pull it.
- + If it's a long load or awkward, get additional help.
- + Split the load into several smaller ones when you can.

## **11.0 Asbestos**

Asbestos-Containing Material (ACM) is defined as any material containing 1% or more asbestos. All applicable national, state and site regulations for removal, handling and disposal shall be followed.

- + Employees shall not handle or disturb any material that they suspect to contain asbestos.
- + Working with ACMs requires special training, precautions and medical screening.
- + See your supervisor if you have any questions regarding potential ACMs.

## **12.0 Blood-borne Pathogens**

Human blood and bodily fluids contain micro-organisms that can transmit serious diseases such as AIDS and Hepatitis B. The seriousness of these diseases requires that we take special precautions and have training prior to being involved in the handling or clean up of these fluids.

Clean up and removal of blood and other body fluids will be done by trained personnel only.

Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids will be considered potentially infectious materials and handled by trained personnel only.

Notify your supervisor and medical personnel of an exposure incident as soon as possible.

## **13.0 Hazardous Energy Control**

Lock Out and Tag Out are two different methods used by our Clients to protect you and co-workers from potential dangers in the workplace. This is accomplished by establishing a safe work boundary. This isolated boundary allows you to perform your work activity safely while controlling hazards that can be in the form of electricity, compressed or pressurized gases, steam or harmful liquids. It also protects you from inadvertent start-up of rotating equipment and mechanical force.

The Lock Out method utilizes a physical and mechanical means, an assigned numbered lock that physically controls the isolation device position and a key held by the individuals performing the work activity.

The Tag Out method utilizes color-coded tags that give instructions. This is considered an administrative means to control hazards that requires procedures and must offer the same level of protection as the Lock Out method. Some plant equipment does not have a physical means to be locked out in a safe position.

This is when the Tag Out method is utilized. In some cases, because of the complexity of the systems and to maintain control, the Client will use the Tag Out method.

- + Always ensure that tagging has been verified prior to starting a work activity.
- + Never tamper or change the position of a Locked Out or Tagged Out device without proper authority.
- + Never remove a component or piece of equipment that has a Lock Out or Tag Out device attached.
- + Systems, equipment and electric circuits shall be de-energized and rendered safe whether utilizing Lock Out or Tag Out, prior to commencement of work activity.
- + All employees working on rotating equipment or Electrical equipment shall be trained in Lock Out and Tag Out procedures.
- + The Client will have Lock Out and Tag Out procedures in place at their facilities. Nuclear University personnel working under Client Lock Out and Tag Out must be trained in the Client's hazardous energy control procedure.

#### **14.0 Confined Spaces**

Non-Permitted Confined Space is a space with minimal risk or hazard without restricted access or exit point.

Permitted Confined Space is a confined space that has the potential to contain greater hazards with limited or restricted means of entry or exit and is large enough for an employee to enter and perform assigned work, but is not designed for continuous employee occupancy.

Confined space entrants, attendants, and entry supervisors are required to be trained in their respective responsibilities, in accordance with OSHA 1910.146, before performing activities related to a confined space entry.

#### **15.0 Scaffolds**

Only competent and trained personnel shall direct the construction, modification and removal of scaffolding.

Scaffolding built above walkways and passageways shall be constructed in a manner that prevents falling object hazards to people below.

Workers shall not be exposed to a fall hazard while constructing scaffolding.

Scaffolds must be tagged indicating it is safe to use. Scaffolds that are incomplete or unsafe for use shall be red tagged accordingly and shall **NOT** be used.

Ladders or makeshift devices shall not be used on a scaffold to increase the height of the work area.

Tools and materials shall be lowered and raised in tool bags. **NO** material shall be dropped or thrown from one worker to another.

When erecting or dismantling scaffold near an energized source, the source shall be de-energized, tagged and locked out prior to the start of work. Personnel and material should be refrained from being within 10' of an energized source.

Guardrails, midrails, toe-boards or equivalent (i.e. safety netting) shall be installed on all open sides and ends of scaffolds which are 4 feet or greater in height (midrails and toe-boards are not required at the entrance to the scaffold).

When the distance from the ground to the lower platform of a scaffold is more than 4 feet, access to the platform via a ladder shall be provided. Ladders shall extend a minimum of 3 feet above the platform.

Cross braces as a means of access are prohibited.

Do not overload the designed weight load of the scaffold. If there is a question, contact the competent qualified individual responsible for the scaffold.

Scaffolds shall be kept cleared of all tools, materials and rubbish. The work area should be clean and orderly at all times.

## **16.0 Powered Platforms and Vehicle Mounted Platforms**

Only trained personnel are authorized to operate powered platforms and vehicle mounted platforms and must comply with OSHA requirements.

A full body harness and non-shock absorbing lanyard shall be utilized for fall prevention attached to an approved tie off point on the boom or basket and adjusted to prevent an employee from fall exposure outside the basket when working from an aerial lift.

Prior to using an elevated platform (scissors lift or MX-19) the user shall check the area in which the platform will operate for possible hazards such as:

- + Drop offs or holes
- + Bumps or floor obstructions
- + Debris
- + Overhead obstructions
- + Hazardous locations
- + Inadequate surface and support to withstand all load forces imposed by the elevating platform in all operating configurations

- + Wind and weather conditions
- + Exposed electrical conductors
- + Presence of unauthorized personnel.

Fall protection shall be worn when required as defined by OSHA standard subpart L.

## **17.0 Hazard Communication**

All personnel shall be familiar with the hazards of all chemicals in the work place per OSHA 1926, Subpart D, Hazard Communication.

All chemicals shall have appropriate labeling. At a minimum labels will:

- + Contain the identity of the hazardous chemical(s)
- + Have appropriate hazard warning, or alternative words, pictures, symbols, or combination thereof, which provides at least general information regarding the hazards of the chemicals, in conjunction with the Hazard Communication Program
- + Provide employees with the specific information regarding the physical and health hazards of the chemical
- + Have a corresponding number that matches the MSDS number

Materials transferred from the original container into another container should have a label immediately affixed to the new container by the person making the transfer. If a material is unknown due to a missing label, the employee should contact their supervisor and/or the site safety representative to have the material identified. If the material cannot be identified it should be properly disposed of.

Water should be labeled as either potable or non-potable.

### **17.1 Material Safety Data Sheets (MSDS)**

Material Safety Data Sheets shall contain:

- + Identification of the product
- + Trade Name
- + Chemical Name
- + Chemical Formula
- + Hazardous Ingredients
- + Physical Data
- + Fire and Explosion Hazard Data
- + Health Hazards
- + Reactivity Data

- + Spill and Disposal Procedures
- + Personal Protection Information
- + Handling and Storage Precautions
- + Emergency and First Aid Procedures

There is no specific MSDS format. MSDS information at your work location may be available in log books, by computer or by phone. Your site supervisor will provide the location and the means to access MSDS information. The MSDS for each chemical to be used in particular job should be reviewed as part of the pre-job briefing paying particular attention to the hazards and safety precautions.

## **17.2 General Rating Summary**

### *Health (BLUE)*

4 - Danger - May be fatal on short exposure, Specialized protective equipment required.

3 - Warning - Corrosive or toxic. Avoid skin contact or inhalation

2 - Warning - May be harmful if inhaled or absorbed

1 - Caution - May be irritating

0 - No unusual hazard

### *Flammability/Fire (RED)*

4 - Danger - Flammable gas or extremely flammable liquid

3 - Warning - Flammable liquid flash point below 100 °F

2 - Caution - Combustible liquid flash point of 100 - 200 °F

1 - Combustible if heated

0 - Not combustible

### *Reactivity (YELLOW)*

4 - Danger - Explosive material at room temperature

3 - Danger - May be explosive if shocked, heated under confinement or mixed with water

2 - Warning - Unstable or may react violently if mixed with water

1 - Caution - May react if heated or mixed with water but not violently

0 - Stable - Not reactive when mixed with water

*Special Notice (WHITE)*

W - Water Reactive

OX - Oxidizing Agent

All spills shall be contained, immediately reported to the Contract Administrator, and then promptly cleaned up. Only properly trained employees using appropriate PPE are authorized to clean up any spill.

## 18.0 Signs and Tags

Observe, read and obey all signs and postings. If it becomes apparent that a situation or area warrants the need for a sign or posting, notify your supervisor immediately. Hazard warning (e.g., Safety) signs must conform to the following color-coding systems:

### 18.1 Color Codes

- + Safety red identifies **FIRE, DANGER, or STOP**. It is most commonly used in flammable liquid identification, emergency stop switches, and fire protection equipment. Danger indicates an immediately hazardous situation that could cause death or serious injury.
- + Safety orange indicates **WARNING**. Orange identifies hazardous equipment or situations. Common uses include marking machine hazards that pose cut crush, or pinch injuries, and for marking the insides of movable guards that allow access to gears, chains, and the like. Warning indicates a potentially hazardous situation that could result in death or serious injury.
- + Safety yellow denotes **CAUTION**. Used with black lettering, yellow identifies hazards such as conditions that might result in tripping or falling or flammable material storage. Caution indicates a potentially hazardous situation that may result in moderate injury.
- + Safety green denotes **SAFETY**. Green identifies the locations of safety equipment material safety data sheets, and first-aid equipment.

- + Safety blue indicates **NOTICE**. It is the color that identifies safety information signs such as personal protective equipment requirements.
- + It also has some specific uses in the railroad industry.

## **18.2 Tags**

Compliance in all situations where tags are utilized requires stopping and reading specific instructions on the tag. Any questions about the wording on the tag should be directed to your Site Supervisor.

## **19.0 Equipment / Tools**

All necessary tools and equipment, including PPE, shall be properly maintained and shall be appropriate for the safe accomplishment of the task. Employees shall be properly trained or otherwise qualified to use tools and equipment.

All tool, equipment and PPE shall be used for the purpose they are intended. Modifications shall not be made without written approval from the manufacturer and the Contract Administrator.

All tools and equipment shall be kept in good operating condition; sharp, clean, oiled, dressed, etc. Tools must be returned to the designated area when no longer needed or if they are in need of repair.

### **19.1 Hand Tools**

Do not force tools beyond their capacity. Know the limitations of the equipment and do not exceed them.

Do **NOT** use tools or equipment for anything other than its intended purpose.

Do not carry pointed tools in pockets.

Always use safe equipment. It is the responsibility of the user to inspect equipment before using it. If the equipment becomes defective in any way, place a "Defective - Do Not Use" tag on it and take it out of service.

### **19.2 Power Tools**

Loose clothing, long hair that is not secured, gloves, rings, and other jewelry shall not be worn around rotating equipment. Sleeves shall either be kept buttoned or rolled up.

Power tools shall not be operated without proper training and instructions.

Each power tool shall be inspected before use for damaged parts, loose fittings, and frayed or cut electrical cords. Defective tools must be tagged and taken out of service.

Interlocking devices shall be in good working order and never bypassed.

All tools shall be used with the correct shield, guard, or attachment recommended by the manufacturer.

Machines shall be shut off and brought to a complete stop before removing waste.

Personnel are expected to return all tools and equipment to the appropriate tool room upon completion of use. Anyone failing to do so may be required to pay for missing items. Personnel removing Nuclear University or Client tools or equipment from site without proper approvals shall be terminated.

### **19.3 Knives**

Pocket knives will not be used at the work site.

Razor knives are rarely the appropriate tool for completing an assigned task. Tools such as scissors, side-cutters, snaps or scrapers are normally more appropriate and present less risk to the individual using them.

Razor knives, box cutters, etc. require the prior approval of your Nuclear University Site Manager/Designee before use.

Leather or cut resistant gloves must be worn when the use of a razor style knife has been approved

## **20.0 Walking / Working Surfaces**

Good housekeeping is fundamental and essential for the prevention of accidents due to slips, trips or falls, and fires. All work areas, passageways, storerooms, and service rooms should be kept clean, dry, orderly and in a sanitary condition.

**DO NOT** block exit doors, access to fire extinguishers, automatic sprinkler risers or emergency lights.

## **21.0 Guarding Floor and Wall Openings and Holes**

All holes or openings through floors or decking at all elevations shall immediately be provided with hole covers or barricades.

Material and equipment shall not be stored on a hole cover.

### **21.1 Hole Covers**

Shall have an attached sign or labeling indicating it is a temporary cover and not to remove it unless authorized.

Shall be cleared, wired, or otherwise secured so it cannot slip off of the hole.

Shall extend adequately beyond the edge of the hole.

### **21.2 Barricades**

Anyone who creates a hazard is responsible for having it barricaded.

Types of barricades:

Warning barricades - Warning barricades call attention to a hazard but offer no physical protections. Example: caution tape, plastic fencing, saw horse type barricade.

Protective barricades - Protective barricades warn as well as provide physical protection and shall be able to withstand 200 lbs of force in any direction with minimal deflection. Examples: wooden post and rail, cable, wooden post and metal chain.

Barricades are required around excavation, holes, openings in floors, roofs, elevated platforms, overhead work, and wherever necessary to warn people of falling or tripping hazards.

- + Barricades shall be 42 inches high and maintained square and level.
- + Warning barricades may be placed 5-6 feet or more from the hazard.
- + Protective barricades may be placed closer but when used around a fall hazard they must have a mid-rail as well as the top rail.
- + Barricade signs shall be fully informative, legible and visibly displayed.

### 21.3 Addressing Fall Hazards

When performing any task that would allow you to fall six feet or more, or any distance where a likelihood of serious injury or death exists, the following will be utilized:

Fall Prevention - proper fall prevention utilizes alternatives that eliminate a hazardous situation and therefore removes the chance of an employee's exposure to a fall such as:

- + Use of a harness, non-shock absorbing lanyard and approved tie off point that prevents an employee from getting to within six feet of drop off fall hazard.
- + Physical barriers that prevent exposure to fall hazards.
- + Use of scaffolding to perform work activity.

Fall Protection - is required when a hazardous condition cannot be fully or adequately eliminated. Fall arrest equipment and procedures are then needed. **Training must be obtained before fall arrest equipment can be used.** See site-specific requirements.

- + Fall arrest equipment minimizes the detrimental effects of a fall should it occur. Fall arrest equipment should consist of a full body harness, shock

absorbing lanyard, self-locking snap hooks, and adequate anchorage points. Training must be provided before fall arrest equipment can be used.

- + If there are any questions about the adequacy of an anchor-point, obtain an engineering opinion.

## **22.0 Ladders**

### **22.1 Portable Ladders**

Never exceed the rated capacity of the ladder.

The user shall inspect the ladder before using it. Any ladder found to be defective will be removed from service.

While ascending and descending a ladder your face will be toward the ladder, hold on with both hands.

Use a hand-line to raise and lower materials.

While working on a ladder, do not extend your reach, your beltline should be within the side rails of the ladder.

- + Change the position of the ladder as often as necessary to stay within the reach of your work.
- + If both hands are required to perform a task, fall protection should be worn and properly anchored.
- + Keep your feet on the rungs; do not put your feet on surrounding material.

Under no circumstances should chairs, furniture or any other item with a different intended use be utilized as a ladder.

If it is necessary to place a ladder in or behind a doorway, barricade the work area and post warning signs on both sides of the door.

### **22.2 Straight or Extension Ladders**

Every ladder shall be equipped with a tie-off rope and non-skid safety feet.

Every ladder shall be adequately tied-off or footed by another employee.

If a ladder is used to access an elevated work area, the top of the ladders shall extend at least three (3) feet above the supporting object.

Once an extension section of a ladder has been raised to the desired height, ensure the safety latches are engaged and the extension rope is secured to a rung on the base section of the ladder.

The extension section of the ladder shall overlap the base section by a minimum of three (3) rungs.

### **22.3 Step Ladders**

Step ladders should be set on a level surface with all four legs on the ground, with spreaders locked in place.

A step ladder will never be used as a straight ladder.

Do not sit or stand on the top of a stepladder.

On standard design step ladders over three feet high do not stand on the step below the top step.

Tie off a step ladder when using it close to the edge of a platform.

### **23.0 Welding, Cutting and Brazing**

Employees must be trained in the safe operation of the equipment, comply with hot work procedures and have appropriate permits.

Inspect work area for combustible material prior to the start of work. Welding shields are to be used to prevent other workers in the area from flash or from being burned from welding slag and grinding.

If fire watch is necessary per site requirements, the fire watch must remain on duty for 30 minutes after the completion of the job.

### **24.0 Electrical**

Work on exposed energized lines or equipment may be performed only by qualified individuals. Live parts of electrical equipment operating at 50 volts or more must be guarded against accidental contact.

Employees working on energized electrical equipment where the danger of flash or arc is present must wear appropriate fire-retardant clothing. Check with Client safety before starting work.

Always treat electrical equipment as energized until approved testing methods prove that it is de-energized.

Electrical tools should not be used in wet conditions. As an alternative, use battery operated or pneumatic driven equipment.

#### **24.1 Extension Cords**

Extension cords are for **TEMPORARY** use only.

Inspect cords prior to use, if visible damage is present, remove it from service. Place cords so they are not damaged by doors, sharp corners, pinch points, etc.

Extension cords should be routed overhead, under grating or along the edges of wall and secured so they cannot move. When it is necessary to route a cord across a traffic area it shall be, enclosed in a cord protector or taped to the floor the full length of the section crossing the traffic area.

- + Never overload an extension cord.
- + Avoid 'ganging' or stringing multiple cords together to make a longer cord.
- + Do not alter plugs or receptacles.
- + Do not remove ground poles.
- + Should not be used in wet conditions.

## **25.0 Lead**

Lead is a toxic heavy metal that can be hazardous when exposed and can be found in a variety of materials such as paints, solder, radiological shielding, and batteries. Working with lead requires precautions and training along with special equipment to prevent airborne exposure.

Treat all materials, if suspected of containing lead, as lead until determined to be lead free. See your supervisor for further direction.

## **26.0 Fire Prevention / Protection**

Know your exit route to be used in case of an emergency.

Good housekeeping is one of the most effective aids to fire prevention.

All passageways to exits should be clear without slip, trip and fall hazards.

Waste paper, rags and other combustible material~; should not be allowed to accumulate.

All employees shall be alert for fire hazards. They shall eliminate such hazards if possible and in all cases report them to supervision.

## 26.1 Fire Extinguishers

Fire extinguishers may be used by trained personnel only.

Employees shall become familiar with the location, type and use of fire extinguishers in their work area.

Class A - Identified with a green triangle. For use on wood combustibles, wood, paper, textiles, and rubbish.

Class B - Identified with a red square. For use on liquid fires, oil, gasoline, paints, lacquers, thinners, grease, etc.

Class C - Identified with a blue circle. For use on electrical fires.

Class D - Identified with a yellow star. For use on combustible metals such as magnesium.

Firefighting equipment such as fire hoses, extinguishers, etc., shall not be used for purposes other than intended purpose - fighting fires.

Exit routes and access to fire equipment **MUST** be unobstructed.

Fire extinguishers shall be recharged after use. **NEVER** replace an empty fire extinguisher to its assigned location.

## 27.0 Cranes, Forklifts

Only trained and licensed personnel who have been authorized may operate cranes and forklifts.

- + Inspect equipment prior to use to ensure it is in safe operating condition.
- + Forklift forks shall be lowered to the ground before the operator may leave the equipment.
- + Raise the load only as high as necessary to safely clear the road surface when in motion.
- + Travel at safe speeds for surface conditions.
- + Ensure that a mobile crane is properly grounded when working around power lines.
- + Seatbelt shall be used if available.

## 28.0 Human Performance

Communication should be clear and concise. Keep slang to a minimum; make sure the message conveyed is the message understood. Use three way communications. Ask questions if you are unsure. Assume Nothing!

Be aware of your surroundings; take a time out to observe your work area. Be conscious of any changes.

Avoid complacency. Perform each task with awareness and a constructive attitude.

### **28.1 STAR - Human Performance Error Reduction**

The "STAR" program has been instituted for the purpose of reducing the number of human performance related errors. The basic principles of the program are to help focus individuals attention on the task at hand and self-check that the steps of the task are executed as planned.

The STAR principal is as follows:

**STOP** - Ensure you are prepared for the task or job assignment. Proper tools, PPE, have read the procedures, qualified/trained to perform, etc.

**THINK** - Review (Procedures, RWP, Guidelines, OE's, Lessons Learned, etc.) What will be the results of your actions?

**ACT** - Perform Task.

**REVIEW** - Review results, document successes and lessons learned.

## **29.0 Bonuses, Awards and Promotions**

The company may grant bonuses and promotion at the discretion of the Vice President of the respective division based upon excellence in the following areas:

- + Ideas that promote safety
- + Ideas that generate new business
- + Ideas that reduce costs

### **29.1 Safety Suggestions**

Nuclear University employees have firsthand experience and knowledge of the equipment and work environments used on a daily basis. These factors frequently make our employees our best source of ideas on how to work more safely. Nuclear University personnel are strongly encouraged to submit their ideas to their Nuclear University Site Manager/Designee.

## **30.0 Newsletter**

A Safety Newsletter should be published by the Nuclear University Home Office on a quarterly basis. The Safety Newsletter will provide information on current safety issues within the company. Each employee at a site should receive a copy of the Safety Newsletter.

### **31.0 Reporting of Safety Concerns**

Nuclear University takes great pride in providing the highest quality support services to our Clients. A vital part of performing quality work includes an ongoing responsibility for each worker to evaluate working conditions for themselves and their coworkers and to promptly report to the Client or Nuclear University Site Supervision any unsafe conditions or any condition which may lead to or cause a safety violation. The initial verbal report should be followed up in writing. Nuclear University will not fire, discipline, or otherwise discriminate against any employee for bringing safety concerns to the attention of our supervision or utility personnel. Please also refer to the Equal Employment Opportunity Policy regarding this issue.

In addition to communications with either Nuclear University Supervision or the Client's Safety Concerns Program, Nuclear University employees may contact the Nuclear Regulatory Commission (NRC), OSHA or the DOE Inspector General at any time.

Our home office houses many members of management with past NRC/DOE and Private Industrial/ (OSHA) experience. All who are available to answer technical questions or discuss safety concerns? All questions and inquiries are kept confidential and may be made either in writing or orally.

All Nuclear University personnel have an obligation to cooperate in any Company or Client review or investigation of an identified concern or issue, even if they did not raise the concern or issue under investigation.

An injured Nuclear University employee will immediately and directly notify the Nuclear University Site Manager/Designee of an injury or illness. In addition, the Nuclear University Site Manager/Designee will request to be notified immediately and directly, by any Client manager who is knowledgeable and made aware of the injury or illness to a Nuclear University employee.

It is Nuclear University's policy to encourage workers to bring their concerns to Nuclear University Supervision on site, Nuclear University Home Office management, Client supervision, the Nuclear Safety Concerns Program, the NRC, or DOE Inspector General without fear of discrimination, harassment, intimidation or retaliation.

## RECEIPT AND ACKNOWLEDGMENT

I have receive a copy of Revision 0, dated 01/26/2009, of Nuclear University's (the Company's) Employee Safety Handbook, and I understand that I am responsible for reading the policies and practices described within it. I understand that this Employee Safety handbook replaces any and all prior Employee Safety Handbooks, policies and practices of the company.

I understand that the policies contained in this Employee Safety Handbook may be added to, deleted or changed by the Company at any time. I understand that neither this Employee Safety Handbook nor any other written or verbal communication is intended to, in any way, create a contract of employment.

I Understand I am an employee-at-will.

If I have any questions regarding the content or interpretation of this Employee Safety Handbook, I will bring them to the attention of my Nuclear University Site Manager/Designee.

Name (please Print): \_\_\_\_\_

Signature: \_\_\_\_\_

Last 4 digits of SS#: \_\_\_\_\_ Date: \_\_\_\_\_