

# Savannah River Site Subcontractor Safety Handbook



Subcontractor Safety Handbook

**Savannah River Site,**

*A reference tool for working at the Savannah River Site*

**Safety**

**Is**

**A**

**Way**

**Of**

**Life**



## SRS Workplace Safety, Health and Security Policy September 2008

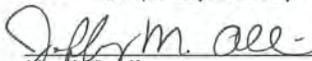
### OBJECTIVE

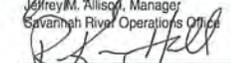
Operations on the Savannah River Site (SRS) shall be conducted in a manner that protects workers, the public, the environment and security assets and related materials. The objective of this policy is to establish a consistent sitewide approach to worker protection and security by incorporating safety, health and security into daily activities.

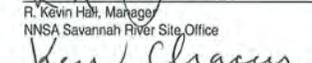
### DIRECTIVE

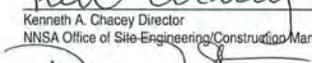
The hallmark and highest priority of work activities shall be the protection of all workers and the integrity of the safeguards and security systems in place at SRS. This can best be achieved by implementing the principles of Integrated Safety and Security Management (ISSM) into work and planning activities. Fundamental to ISSM is the premise that all accidents and security incidents are avoidable through the identification and control of work hazards and security vulnerabilities. Management of work activities must begin with an analysis of all potentially hazardous situations and/or security risks. The recognition and correction of hazards and security risks as they arise must be a prerequisite of operations. Employees at all levels are responsible for workplace safety, health, and security. They must be involved in the structure and operation of the safety and health program as well as all aspects of security as it applies to their position. A tailored approach must be taken to effectively apply and gain maximum benefit and leverage from available safety, health and security resources. Accordingly, the following general guidelines shall be followed to facilitate the protection of workers and SRS security assets:

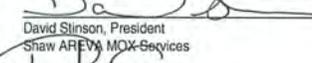
1. Formally define the work and identify and implement appropriate standards and requirements.
2. Analyze the hazards and security risks, and integrate safety, health and security planning with work planning to ensure that inherent safety and health hazards and security risks are identified and controlled during the planning phase, and as work progresses.
3. Tailor safety, health and security resources and control measures to the nature, complexity, and hazards or security risks of the work, taking into consideration the experience and expertise of the organization and personnel performing the work.
4. Involve workers with work planners, engineers, safety and security professionals, and others in the planning and development of work activities.
5. Share lessons learned in order to enhance safety and security integrity through improved work planning and controls.
6. Any worker who reasonably believes that his or her personal safety or the security posture of SRS is or has been jeopardized has a right to raise issues and refuse unsafe work without reprisal, harassment, or retaliation. Safety and security concerns should be raised first with one's supervisor, and then through established programs (e.g., Employee Concerns Program) should a satisfactory resolution not be achieved. Therefore, employers must ensure that employees understand and are permitted to exercise the following rights and responsibilities:
  - The right to quick resolution of unsafe work conditions and follow-up of security concerns;
  - The right and responsibility to participate in or be informed of hazard evaluation and control;
  - The responsibility to report concerns or violations;
  - The right to appropriate personal protective equipment (PPE) in accordance with established company/agency policies and procedures, and the responsibility to utilize appropriate PPE when necessary;
  - The right to safety and health information, as well as the security information required and permitted by their position;
  - The right to freely express concerns regarding safety, health and security issues without fear of reprisal;
  - The right to talk about safety and health issues with inspectors, attorneys, physicians, or the media without retaliation;
  - The right to talk about security risks and issues with management, inspectors, and security professionals without retaliation;
  - The right to participate in safety and health investigations and inspections;
  - The right to participate in security investigations within the scope of their position, their need to know and security clearance;
  - The responsibility to adhere to established health, safety and security standards, regulations and procedures, and;
  - The responsibility and authority to stop work to address identified safety concerns, changing conditions or security risks.

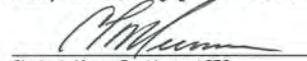
  
 Jeffrey M. Allison, Manager  
 Savannah River Operations Office

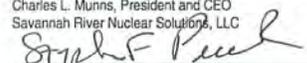
  
 R. Kevin Hall, Manager  
 NNSA Savannah River Site Office

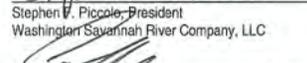
  
 Kenneth A. Chacey Director  
 NNSA Office of Site Engineering/Construction Management

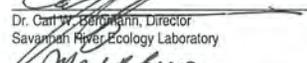
  
 David Stinson, President  
 Shaw AREVA MOX Services

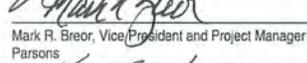
  
 Randy Garver, Senior Vice President and General Manager  
 Wackenhut Services Incorporated-SRS

  
 Charles L. Munns, President and CEO  
 Savannah River Nuclear Solutions, LLC

  
 Stephen V. Piccolo, President  
 Washington Savannah River Company, LLC

  
 Dr. Carl W. Bergmann, Director  
 Savannah River Ecology Laboratory

  
 Mark R. Breor, Vice President and Project Manager  
 Parsons

  
 Keith Lawrence, Forest Manager  
 USDA Forest Service - Savannah River

## Table of Contents

- About this Book
- General Information
- General Safety Rules
- Personal Protective Equipment
- Tools and Equipment
- Operation of Mobile Equipment
- Material Handling
- Hazardous Materials
- Special Work Activities
- Off-the-job Safety
- Training Requirements
- Emergency Reference

### **About this Book**

In the following pages, you'll find general safety rules that apply to all workers at the Savannah River Site (SRS), so keep your copy as a ready reference. The rules are condensed from federal, state, and SRS regulations and/or procedures. Although this handbook is not intended to replace SRS procedures or change the intent or content of any subcontract provisions, it does refer to specific SRS requirements and procedures, which are available upon request by contacting your Subcontract Technical Representative (STR).

Subcontractors and their employees who have questions concerning any safety issue should refer to their company's Worker Protection Plan and applicable OSHA regulations, and/or contact their STR or Industrial Safety Department.

### **General Information**

- Introduction
- DOE's Occupational Safety and Health Protection Policy
- Policy
- DOE Contractors
- Remote Worker Program
- Employees
- Inspections
- Concerns
- Imminent Danger
- Nondiscrimination
- Subcontractor Management Responsibilities
- Personal Responsibility

## **Introduction**

The SRS Management Team firmly believes that sound safety practices are essential to our everyday working environment. As evidence of that belief, the Site pursued and achieved the DOE Voluntary Protection Program (VPP) Star status; a designation reserved for facilities that have excellent safety and health programs. As a subcontract employee at SRS, your active role significantly contributes to our safe workplace.

This book will help you understand and comply with some of the basic safety rules at SRS. It is not the purpose of this book to provide comprehensive and complete details of all safe work practices and procedures that you may need to do your job. This book is general in nature, and it will be reviewed and revised when necessary.

It is important that all workers perform their jobs safely so that accidents, injuries, and damage to company property are avoided. If you don't know the safety requirements of a job, STOP and ASK before you begin work. Your safety and your coworkers' safety are ensured by recognizing and correcting any unsafe acts and conditions you may observe. Merely talking about safety will not ensure a safe workplace.

Please read this book carefully and become familiar with your safety responsibilities. If you have any questions, contact your supervisor or STR.

### **DOE's Occupational Safety and Health Protection Policy**

The Department of Energy's (DOE) Occupational Safety and Health Protection Policy is contained on the DOE Poster "You Have a Right to a Safe and Healthful Workplace," which is posted on all main service area bulletin boards. Any questions should be addressed to the Contractor or the local DOE office as indicated on the poster. In addition, DOE-SR has established the SRS Workplace Safety, Health, and Security Policy, which is posted on bulletin boards across the Site. This policy has been signed by senior management signifying a commitment to worker protection and to strong security programs.

### **Policy**

U.S. DOE Contractor employees shall be provided with safe and healthful working conditions in accordance with the standards prescribed pursuant to the Atomic Energy Act 1954, as amended, the Energy Reorganization Act of 1974 and the Department of Energy Organization Act of 1977.

### **DOE Contractors**

Per DOE 10 CFR 851, the DOE contractor and its subcontractors are required to:

- Furnish to employees employment and a place of employment, which are--as much as possible--free from occupational safety and health hazards.
- Establish and implement programs and procedures to comply with DOE 10 CFR 851. These shall include programs and procedures to monitor the workplace for known toxic materials and harmful physical agents, which are used or produced at the facility and maintain records of the data. As part of these programs and procedures, do the following:
  - Advise employees or designated representative that they are to be provided with an opportunity to observe monitoring or measuring of toxic materials or harmful physical agents and have access to the results.
  - Provide to each employee, former employee, or designated representative, within 15 days of the receipt of written request, access to or copies of any monitoring or bioassay records relevant to the employee's potential exposure to toxic materials or harmful physical agents during employment.
  - Notify employees promptly of any information indicating that an exposure to toxic materials or harmful physical agents may have exceeded the limits specified by the DOE -prescribed Occupational Safety and Health Administration (OSHA) standards.
  - Provide to each employee, former employee, or designated representative, within 15 days of the receipt of a written request, access to or copies of the employee's cumulative recorded occupational radiation dose during employment.
  - Notify employees promptly of any information indicating that a radiation dose may have exceeded the limits specified by the DOE-prescribed OSHA standards.

- For purposes of access to an employee's monitoring, bioassay, or radiation exposure records, if the representative is not the recognized/certified collective bargaining agent, then he or she must have the employee's written authorization for such access.

### **Remote Worker Program**

This program provides guidance to all personnel who may be engaged in work in a remote area within the boundaries of Savannah River Site (SRS). Manual 1B, Procedure MRP 4.03, Savannah River Site Remote Worker Notification, ensures that all personnel working in remote areas are accounted for and can be immediately notified of radiological and/or toxic chemical releases, severe weather, and other dangers or natural disasters affecting personnel safety. This procedure also provides guidance for remote workers to request emergency response from the Savannah River Site Operations Center (SRSOC) in case of injury or some other emergency occurring at their work site. This information will be covered in detail by your Site contact person.

### **Employees**

All employees are required to:

- Observe the DOE-prescribed 10 CFR 851 and OSHA standards applicable to their work.
- Report promptly to the Contractor any condition which may lead to a violation of these standards.
- Respond to warning signals which may be activated in the event of fire, radiation, or other possible emergencies.
- Report emergencies using established procedures.

### **Inspections**

All activities under this contract are subject to inspection by DOE. When an inspection under the DOE 10 CFR 851 is conducted, a Contractor management representative and a representative authorized by the employees will be given an opportunity to accompany the DOE inspector.

Where there is no representative authorized by the employees, the DOE inspector will consult with a reasonable number of employees concerning safety and health conditions in the workplace.

### **Concerns**

Employees or former employees may file a concern with the Contractor management or with the local DOE office using the DOE-SR Form SR 230 to request an inspection of the workplace. Complaints also may be filed by letter, telegram, or oral means. DOE-SR Form SR 230 is available from the Contractor. When an employee requests anonymity from the Contractor, DOE shall honor this request.

### **Imminent Danger**

For any condition or practice which presents an immediate hazard that could be reasonably expected to cause death or serious physical harm (permanent or prolonged impairment of the body or temporary disablement requiring hospitalization), the Contractor and/or DOE shall take immediate and effective remedial actions to remove employees from hazard and/or eliminate the hazard. As soon as possible, an inspection shall be conducted by the Contractor and/or DOE to assure that appropriate actions have been taken to preclude recurrence of the hazard.

### **Nondiscrimination**

No Contractor shall discharge or in any manner discriminate against any employee by virtue of the filing of a complaint or in any other fashion exercising on behalf of himself, herself, or others by any action set forth in DOE 10 CFR 851 or DOE-SR Form SR 230.

All SRS operations activities are subject to inspection by DOE and review by the U.S. Department of Labor. When an inspection under DOE 10 CFR 851 is conducted, the DOE inspector will consult with a reasonable number of employees concerning safety and health conditions in the workplace.

All DOE Contractor employees or former employees are provided access to their personal safety, health, and medical records consistent with the provisions of the Freedom of Information Act and the Privacy Act.

### **Subcontractor Management Responsibilities**

- Conduct and document daily safety surveys of all work activities.
- Conduct, document, and require attendance at regularly scheduled safety meetings.
- Use qualified worker safety and health staff, (e.g. a certified industrial hygienist or safety professional) to direct and manage the program.
- Investigate all accidents and unusual occurrences regardless of injury or property damage.
- Investigate all injuries and illnesses no matter how slight. Do not neglect minor injuries. Complete a DOE form 5484.3, "Individual accident/incident Report," for all recordable injuries (all entries on the OSHA 300 log). This form is not required on first aid cases. Contact your STR for assistance.
- Maintain the OSHA 300 Form "Log of Occupational Injuries and Illnesses" at the project for at least five years.
- Post the OSHA 300 A Form, "Summary of Occupational Injuries Illnesses" for the previous year at the job site from February 1 – April 30.
- Maintain a log of first aid cases for each of your contracts at SRS.
- Correct substandard safety conditions or acts immediately.
- Comply with applicable DOE-prescribed 10 CFR 851 and OSHA regulations.
- Maintain all equipment in a serviceable condition and according to the manufacturer's recommendations.
- Ensure that housekeeping standards are maintained daily, and materials are properly stored and secured from accidental movement.

- Ensure employees are trained concerning the chemical hazards of their jobs and the protective measures to prevent and reduce an exposure to hazardous chemicals. Ensure Material Safety Data Sheets (MSDS) are readily available to workers.
- Ensure that lower-tier subcontractors, visitors, and vendors receive appropriate training, and they are properly protected with required personal protective equipment (PPE).

### **Personal Responsibility**

- Be alert and attentive to your work activities and those of your coworker.
- Do only the specific work you have received instructions to do.
- Correct safety hazards when observed. Contact your supervision if necessary.
- Be alert to changing work conditions and notify supervision.
- Call a Time Out if you encountered unexpected work conditions or hazards.
- Ask if any special training is required for your current job assignment.
- Know the emergency alarms, evacuation routes, and assembly points for the specific work areas.
- Read, understand, and comply with all requirements specified on each work permit.
- Verify that system(s), circuit(s), or equipment are safe to work on before the job begins.
- Report and unexpected or unusual liquids, gases, or vapors that may be present.
- Be familiar with emergency safety equipment that may be required to evacuate the area. Make sure you are adequately trained to use the equipment.

### **General Safety Rules**

- Minimum Safe Work Requirements
- Reporting Injuries and Illnesses on Time
- Housekeeping
- Sanitation
- Pedestrian Safety
- Radiological Safety
- Fire Protection
- Safety Showers and Eyewash Facilities
- Barricades
- Permits
- Danger, Caution, and Warning Tags
- Office Safety Rules

### **Minimum Safe Work Requirements**

- Contact your STR for verification of appropriate permits before beginning work on or within 20 feet of permanent plant facilities, railroads, roadways, utilities, or process piping.
- Contact your STR before operating any mobile equipment within three feet of a power pole or guy wires supporting the pole.
- Promptly correct unsafe conditions, or report them to your supervisor. If a situation is observed that may cause death or serious injury, stop work, and contact your supervisor.
- Keep walkways and stairways clear, ladders unblocked, and emergency exits identified.
- Make sure that work and walk areas are properly illuminated.
- Walk with care on uneven terrain or walkways.
- Do not engage in horseplay or fighting
- Do not pull sharp items, such as knives, screwdrivers, etc. toward your body.
- Do not possess or use alcohol or unauthorized drugs.
- Do not smoke in any Site facility or government vehicle.

### **Reporting injuries and illnesses**

- Report all injuries/illnesses and incidents - no matter how slight - immediately to your supervisor and first aid designee. Do not neglect reporting minor injuries.

### **Housekeeping**

- Properly store tools and work materials.
- Place extension cords that are not in use in storage to prevent a tripping hazard.
- Discard trash and scrap in approved containers.
- Keep the ground or floor clear of tools, welding rods, tie wires, banding material and metal shavings.
- Do not store or leave items on stairways or steps.
- Cleanup up spilled liquids immediately and properly dispose of them.
- Protect or remove protruding nails, screws, staples, and similar objects to prevent a hazard.

### **Sanitation**

- Discard food scraps, soft drink containers, drinking cups, sandwich wrappings, paper bags, newspapers / magazines, and other trash in approved trash or recycling receptacles.
- Use only potable water to wash hands and eating utensils.
- Make sure potable water containers are sealed.
- Never store items inside containers.
- Properly clean and maintain toilet facilities.
- Do not store or consume food or beverages in toilet facilities or any area exposed to toxic materials.
- Personal hygiene showers and change rooms are required for asbestos, lead abatement, and other specified operations. Contact your STR for guidance.

### **Pedestrian Safety**

- Use sidewalks, where provided. Do not take shortcuts across uneven ground or where conditions are unknown.
- Cross roadways at designated crosswalks or use the most direct route if crosswalks are not provided.

### **Radiological Safety**

- Observe posted, written, and oral radiological control instructions and procedures, including instructions on Radiological Work Permits (RWPs).
- Keep clear of all radiological areas, where work is being performed with radioactive material unless authorized. These areas will be barricaded and posted with radiation hazards signs.
- Do not enter Radiological Buffer Areas (RBA), unless you have received Radiological Worker Training (RWT).
- Contact your STR and ensure compliance with the 5Q Radiological Control Manual and DOE Rule 10 CFR 835, if your job involves work in radiologically controlled areas.

### **Fire Protection**

- Know where the nearest fire alarm box is located.
- Know how to activate an alarm.
- Know the alarm, evacuation, and disaster signals for your area.
- Know the proper exit route and the evacuation rally point in the event of an emergency.
- Remember to report any emergency by dialing 3-3911 on Site or 803-725-3911 on a cellular phone.

### **Fire Extinguishers**

- Know the location of the nearest fire extinguisher, how it operates, and the type of fire it extinguishes. Be aware that a fire can produce toxic fumes.
- Keep the proper type and size of the fire extinguisher immediately available for each open-flame operation performed.
- Inspect all fire extinguishers monthly and annually.
- Keep machine and equipment areas clean. Oil rags and hot slag may present the potential for a fire.

### **Hot Work**

- Obtain a “Hot Work Permit” and fire watch requirements from your STR before beginning any hot work.
- Your fire watch plan must include a check 30 minutes after work stops to verify no fire potential and to implement corrections, if needed.

### **Safety Showers and Eyewash Facilities**

Safety showers and eyewash facilities will be provided for employees who are potentially exposed to radioactive, corrosive, toxic, or flammable materials. Permanent and / or portable safety showers and eyewash facilities will be provided / installed and inspected in accordance with the American National Standards Institute (ANSI) Z358.1 requirement.

- Know the purpose and location of the safety shower and eyewash facility. Maintain safety showers and eyewash facilities in accordance with the manufacturer's recommendations.

### **Barricades**

- Do not violate barricades. You must have authorization from the barricade installer to enter a barricade area.
- Erect an appropriate barricade and attach an identification tag before work is started.
- You must obtain STR approval before blocking roadways or access to buildings.
- Install barricades so that they are 42 inches in height, square, level, and properly maintained.
- Place barricades at least three feet from the danger point of a hazard.
- Use blinking lights on barricades near roadways to warn vehicle and equipment operators and pedestrians after dark.
- Barricades will be removed when no longer required.

### **Permits**

Contact your supervisor or STR for clarification on the appropriate permit. All permits must be maintained at a designated location at the work site. Read the applicable permit(s), and follow all instructions. The following permits may be required BEFORE you begin work. Check with your supervisor for verification.

- Confined Space Entry Permit
- Radiological Work Permit (RWP)
- Asbestos Work Permit
- Hot Work Permit

### **Danger, Caution and Warning Tags**

- "Danger – Hazardous Energy Control – Do Not Operate" (DNO) tags are used for the protection of personnel, to prevent damage to equipment and to prevent unauthorized releases to the environment.
- "Warning – Grounding" tags are used for tagging grounding cables or shorting devices when hazardous energy control (lockout / tagout) is in effect.
- "Caution" tags are used in situations where a component or system is functional, but some precaution or pertinent information is necessary before operation.
- "Danger – Unsafe Condition – Do Not Use" tags are used to prevent use, entry or other specified conditions for protection of personnel against a hazard.
- "Warning – No Entry Without Permission" tags are used when erecting barricades.

### **Office Safety Rules**

- Open and close doors cautiously.
- Do not tilt back in a straight chair, and do not lean back in a swivel chair.
- Open only one file drawer at a time.
- Load file drawers from the bottom up with the heaviest load in the lower drawer.
- Anchor or weight file cabinets to maintain stability.
- Inspect electrical cords for damage and remove from service if defective.
- Do not remove guards or safety devices from office equipment.
- Check office furniture regularly for sharp edges, splinters, and loose casters or bolts.
- Do not adjust or clean power – driven office machines when they are in operation.

### **Personal Protective Equipment**

- Personal Protective Equipment
- Protective clothing
- Head Protection
- Eye and Face Protection
- Hearing Protection
- Hand Protection
- Foot Protection
- Respiratory Protection

### **Personal Protective Equipment**

- Modification or alteration of any personal protective equipment is strictly prohibited. Defective or damaged personal protective equipment must be replaced.
- Refer to ANSI CA-1981 and NFPA 70E for PPE requirements applicable to installing electrical wiring or working on electrical circuits or equipment.

### **Protective Clothing**

- Protect your skin from chemicals and extreme heat or cold conditions by wearing appropriate clothing, such as long-sleeve shirts, gloves, chemical resistant coveralls and welding leathers.
- Employee work clothes will consist of full-length pants or trousers and a shirt or blouse with sleeves that extend at least three inches below shoulders and does not expose any portion of the torso from the neck to the waist.
- When performing open flame welding work in radiological controlled areas, you must wear yellow “Nomex III” (or equivalent) flame retardant coveralls to minimize the potential fire hazard associated with clothing containing polyester. Open flame activities include: oxyacetylene welding, burning and heating, metal-arc welding, and arc air or plasma-arc cutting.

### **Head Protection**

- All employees, visitors, and vendors must wear approved hard hats that meet ANSI standards when there is a potential for injury to the head. “Bump” caps and metal hard hats are not permitted.
- Wear hard hats when operating manlifts and all earth- moving equipment.
- Do not alter suspension or punch holes in hard hats.

### **Eye and Face Protection**

- Wear industrial prescription and non-prescription safety glasses with side shields in all construction and shop areas, posted areas, and anytime you may be exposed to a potential eye injury.
- Employees and visitors must wear safety goggles over their glasses, if the glasses do not meet ANSI standards.
- Do not wear tinted eye glasses inside buildings or when working at night.
- Wear goggles and / or a face shield when there is a potential for a chemical splash.

### **Hearing/Ear Protection**

- Wear ear plugs or muffs in posted operating areas and when using tools and equipment that produce noise greater than 85 dBA.
- If a noisy work area or operation is not identified for hearing protection and you must shout to be heard, contact your supervisor to have the noise level evaluated before starting work.
- Keep hearing protectors in a sanitary condition.

### **Hand Protection**

- Wear gloves when handling objects or substances that could cut, tear, burn, or otherwise injure your hands.
- Inspect all types of gloves before use.
- Wear appropriate gloves when handling solvents, acids, or chemically-treated material.
- Wear di-electrically-tested rubber gloves when working on power lines and when there may be a potential for contact with energized circuits. Visually inspect the gloves before each use. Ensure that the gloves have been semi-annually inspected. Check with your supervisor for proper storage requirements and verification of inspection.
- Consult the operating instructions and your supervisor before using gloves around operating tools and machinery.
- Protect your hands and fingers from pinch or nip points.
- Use a tool holder when driving stakes, spikes and wedges, or holding star drills, bushing tools, etc.

### **Foot Protection**

- Wear serviceable, sturdy work shoes at all times. Steel-toe safety shoes or toe protection must be worn to prevent or reduce the potential for a severe injury to the toes.
- Wear metatarsal guards when using compactors or jackhammers, or when there is a potential for injury to the upper foot from handling heavy material or working in a shop.
- Wear rubber boots when working in chemically hazardous conditions, such as concrete work, or when required by operations process area activities.
- Lightweight street shoes and sandals will not be allowed in construction or laydown areas, or where toes or feet may be exposed to a potential injury.

### **Respiratory Protection**

- Wear National Institute for Occupational Safety and Health (NIOSH) or DOE-approved respirators as directed by your supervisor. When working in an airborne radioactivity area, radiological control operations (RCO) personnel will specify the type of respirator.
- Compressors supplying air to respirators must produce Grade D air.
- You must be trained and qualified to use respirators. Contact your supervisor for respirator qualification information.
- Use and handle respirators according to OSHA and ANSI Z88.2 standards.

### **General Safety Guidelines**

- Inspect each tool before use. Use tools only for their intended purpose.
- Keep your tools in serviceable condition – sharp, clean, oiled, dressed, and not abused.
- Do not carry pointed tools in your pockets. A canvas or leather sheath hung from the belt, with all points down is required.
- Remove a damaged or defective tool from service by placing a “Danger – Unsafe Condition” tag on it. Repair damaged tools or remove them from the jobsite.
- Do not remove tools used in radiological Buffer Areas (RBAs) without clearance from RCO. Do not take tools into a RBA if they are available in that area.
- Do not wear loose clothing, gloves, rings, and other jewelry around operating machines. Keep sleeves buttoned or rolled up.
- Make sure proper guards or shields are installed on all power tools before use. Do not use improper tools or tools without guards in place. “Homemade” handles or extensions (“cheaters”) are prohibited.
- Do not store, raise, or lower electrical tools by their power cord.

### **Portable Power Tools**

- Know the manufacturer's safe use requirements before operating any power tool.
- Keep moving parts, such as drills, chucks, blades and bits, directed away from your body.
- Examine each power tool for damaged parts, loose fittings, and frayed or cut electrical power cords before use. Tag defective tools and remove them from service.
- Unplug electrical and pneumatic tools before performing maintenance or blade / bit changes. The air pressure must be depressurized before disconnecting air-powered tools.
- Ground portable electrical equipment and tools with a three-prong plug, unless they are clearly marked "double insulated".
- Use permanent or portable ground-fault circuit-interrupter (GFCI) protection or an assured grounding program.
- Shut down all fuel-powered tools inside a building or excavation without adequate ventilation or a vented exhaust.
- Properly secure material when using power tools.
- Do not use a control lock on a hand-held power tool.

### **Powder-Actuated Tools**

- You must have a valid qualification card in your possession when operating a powder-actuated tool.
- Post appropriate warning signs of noise, face, and eye protection when using powder-actuated tools.
- Follow the manufacturer's instructions concerning service, inspection, and the safe operation of power-actuated tools.
- Lock tools and powder loads in a container and store them in a safe place when not in use.
- Never leave a loaded powder-actuated tool unattended.
- Segregate misfired cartridges from fired cartridges and dispose of them according to manufacturer's recommendations. Do not allow fired cartridges to accumulate on the floor or in the work area.

### **Fall Protection**

- Wear and properly secure fall protection equipment when working on any elevation where a potential fall of six feet or more exists without the protection of a completely enclosed scaffold or platform with approved guardrails (to include a top rail, mid rail, and toe board).
- Visually inspect fall protection equipment for defects daily and before each use. Immediately return defective equipment to your supervisor.
- A Safety harness must be used for fall protection. Safety belts may be used only for positioning. Never modify fall protection equipment.
- Ensure each lanyard snap hook is equipped with a "double lock" that requires a documented fall protection plan. Check with your supervisor for clarification.

## **Ladders**

### **General Information**

- Inspect ladders before each use.
- Job-made ladders must be constructed to conform to established OSHA standards.
- Manufactured ladders must be rated for industrial or heavy-duty work.
- All types of portable ladders (over eight feet in height) must be tied off or held by another person while in use. Ladders must be held in place by another person while being tied or untied.
- Do not use ladders for skids, braces, workbenches, or any purpose other than climbing.
- Do not carry anything in your hands while ascending or descending a ladder. Use a handline to raise or lower materials or tools.
- Keep the top, base, and steps of a ladder free of tripping hazards, such as loose materials, trash, cords, etc.
- Keep both feet on the ladder rungs. Change the position of the ladder as often as necessary.
- Face a ladder when working from it.
- Only one person is allowed on a ladder, unless “two-man” stepladders are in use.
- Do not place ladders against moveable objects.
- Do not use broken or damaged ladders. Defective ladders must be reported to your supervisor, tagged out, and removed from service.

### **Straight and Extension Ladders**

- Keep the base of a straight or extension ladder one-fourth of the ladder’s length out from its upper point of support when in use.
- Keep the top of the ladder extended at least three feet beyond the supporting object or make sure a grab rail is provided.
- Make sure safety dogs or latches are engaged and extension rope is secured to a rung on the base section of the ladder after the extension section has been raised to the desired height.
- Extension ladders must overlap a minimum of three rungs.

### **Stepladders**

- Make sure step ladders are open, leveled on all four feet and spreaders locked in place before use.
- Do not use a stepladder as a substitute for a straight ladder.
- Never stand on the platform or top of a stepladder.

## **Scaffolding**

### **General Information**

- The erection, moving, dismantling or alteration of a scaffold must be performed by a “competent person”.
- Your STR and a Fire Protection Coordinator must approve all non-fire retardant scaffolding material before placing in a facility.
- A scaffold’s footing or anchorage must be sound, rigid and capable of carrying the maximum intended load. Scaffolds must be able to support at least four times the maximum intended load.
- Install approximately 42-inch guardrails and 21-inch midrails and toeboards on all open sides and ends of platforms where fall exposure is 6 feet or greater. Scaffolds 4 feet or more in height, with the narrowest base dimensions of 45 inches or less, must be equipped with standard guardrails, midrails, and toeboards.
- Use appropriate fall protection on any scaffold platform not equipped with standard guardrails, midrails, and toeboards or complete decking.
- Do not climb on or work from scaffold guardrails, midrails, or x-brace members.
- Do not use a scaffold unless it has a status tag indicating the unit is complete. If the scaffold is incomplete, user safety precautions must be identified.
- Never alter scaffold members by welding, burning, cutting, drilling, or bending.
- Keep scaffold platforms clear of accumulations of material, debris, and excess tools.
- Erect tube and coupler scaffolds in accordance with manufacturer’s and engineering guidelines. Check with your supervisor for more information.

### **Aerial Work Platform Operation**

- Aerial work platform operators must be trained and qualified to the manufacturer’s requirements before operating the equipment.
- Check the tires, hydraulic system, booms, baskets, upper and lower controls, brakes, drive chain, and safety equipment daily before use.
- Post warning signs or barricades at the work area. The counterweight swing radius must be barricaded.
- A maximum of two people are permitted in the basket at one time. At least one person must be a qualified operator. The total weight of personnel, material, and tools in an aerial platform must not exceed the load limit specified by the manufacturer.
- The aerial lift operator and passenger must wear a full body harness and lanyard attached to the basket or platform, and stand on the floor of the basket or platform. They are prohibited from sitting or climbing on the guardrail or enclosure. Do not use planks, ladders, or other devices for work platforms.
- Do not use an aerial lift as a substitute for a material hoist.
- Do not rig from the boom or platform of an aerial lift.
- Do not use aerial work platforms in high winds.

## **Operation of Mobile Equipment**

- Motor Vehicles
- Power Equipment
- Refueling
- Crane and Derrick Operation
- Hoisting and Rigging

### **Motor Vehicles**

- Make sure the motor vehicle is in safe operating condition before use.
- Comply with all South Carolina vehicle operating regulations to include wearing a seat belt at all times.
- Drivers entering SRS must possess a valid state driver's license, current vehicle registration, and proof of insurance as required by the state of SC. Drivers will be denied access to SRS without the proper documentation as listed above.
- Look to the rear and sound the horn twice before backing a motor vehicle and be alert to other vehicles pulling out or backing.
- Watch and yield for pedestrians.
- Drivers are responsible for the safety of all passengers and the stability of material being transported.
- Keep arms, feet, and bodies inside your vehicle. All passengers must be seated and wearing seatbelts.
- Limit speed to 10 miles per hour (MPH) in parking lots, unless otherwise posted.
- Park in designated parking spaces only.
- Enter and exit your vehicle only when stopped.
- Shut off engine, place the gear shift in park, and set the brakes before leaving your vehicle (except when the vehicle is required to support self contained equipment). In this case, the operator must set the parking brake, chock the wheels, and attach a "Danger – Unsafe Condition" tag to the steering wheel. Exceptions must be approved by your STR and subcontractor management.
- Report, investigate, and document government-owned vehicle and equipment accidents and incidents to your STR. Accidents involving government-owned vehicles (GOV) must be reported immediately. Appropriate forms must be submitted to WSI Law Enforcement (5-2310) within 24 hours of the occurrence.

### **Power Equipment**

- Only authorized personnel are permitted to operate vehicles and mobile equipment.
- Truck drivers shall dismount from the cab and remain clear while the truck is being loaded by power equipment, unless the vehicle is equipped with an approved cab shield.
- Lower equipment blades, buckets, forks, or like parts to the ground before leaving the equipment.
- Contact your STR before operating any mobile equipment within 20 feet of an overhead power line or process piping.

- Contact the STR before making repairs on any power equipment while working at SRS.
- Chock the wheels of one and one-half ton capacity or larger trucks when parked.
- Secure materials on trucks and trailers to prevent movement, and when appropriate, cover the load to prevent the material from becoming airborne.
- Position operating generators and mobile equipment in a location that will prevent exhaust vapors from entering facility HVAC systems, excavations, confined spaces, building openings, or any location that may present a hazard.
- Know the weight of the object to be handled by power equipment.
- Know the capacity of the handling device, such as a crane, fork lift, chain fall, come-long, etc., that you intend to use.
- Use tag lines to control loads.
- Decide on accepted rigging methods before beginning work.

### **Refueling**

- Do not refuel equipment while the engine running.
- Must use an approved safety container with a flex spout/funnel when refueling.
- Do not smoke during the refueling of any fuel operated or fuel-driven vehicle or equipment.
- Keep all nearby sources of ignition, such as burning or welding equipment, at least 75 feet from any refueling operations or shut the equipment off during refueling.

## **Crane and Derrick Operations**

### **Operator Pre-lift Safety Requirements**

- Only NCCCO qualified personnel are permitted to operate cranes at SRS.
- Check machinery and equipment before each use to make sure it is in safe operating condition. Make repairs before use and according to the manufacturer's recommendations.
- Fully extend and set outriggers on cranes before all lifts. Follow the manufacturer's recommendations for any exceptions.
- The crane operator must be in constant visual or dedicated radio channel contact with a qualified signal person before and during every lift. If visual or radio contact is interrupted for any reason, the operator must stop the lift until full contact is restored.
- Barricade the swing radius of the rotating counterweight of motor and crawler cranes.
- Contact your STR before operating any mobile equipment within 20 feet of an overhead power line or process piping.
- Lower booms on cranes after completing the work day. Cranes whose highest portion remains 50 feet or more above ground level must be provided with obstruction lighting during the hours of darkness. Cranes in the vicinity of tall

structures may be excluded from the obstruction lighting requirement under the following conditions:

- The crane is located within a distance from the structure equal to the height of the structure, and the highest portion of the crane does not break the plane of an imaginary line from the top of the structure to the ground at a distance equal to the height of the structure.
  - The crane is less than 50 feet in height above the ground.
- Existing structures (including antennae or other protrusions) taller than 150 feet above the ground must be provided with obstruction lighting if the existing structures intrude into a 12-degree or steeper glide path approach to a helicopter landing zone. Existing structures do not need flashing lights if they have general area lighting at their top, and it lights the structure during darkness. The location of landing zones may be coordinated with the WSI-SRS Site Aviation Manager or the WSI-SRS Aviation Safety Officer.
  - Obstruction lighting must be red, white, or yellow in color and visible for at least one-half mile. The lighting must be attached to the top of the crane and flash a minimum of 40 times per minute.
  - Report aircraft obstructions to the SRS Operations Center at 5-1911 on Site phones and 803-725-1911 on cell phones. The report should include the obstruction's location, estimated height, how long it will remain in place, and the color of the obstruction light.

### **Crane Suspended Personnel Platforms**

- Suspended Personnel platforms should be used only when they are the least hazardous way to perform the work.
- Suspended personnel platforms must be designed and any repairs or alterations approved by a professional or registered engineer.
- Check the platform before each use.
- Check the platform rigging before each use.
- Check the crane or derrick before each use.
- Perform a platform trial lift at each new set-up location.
- Use safe operating practices when the platform is in use.
- Refer to your company's Worker Protection Plan (WPP) and applicable OSHA Standards for additional requirements.

### **Hoisting and Rigging**

#### **Hooks, Shackles, and Beam Clamps**

- Visually inspect all rigging equipment before use and make sure the capacity is marked on the equipment.
- Use only one eye in a hook. Use a shackle to hold two or more eyes.
- All hooks must have a safety latch or be temporarily moused until the latch can be replaced. Shake out hooks are exceptions and must be used only for unloading materials from a vehicle to ground level.

- Never rig from any structure member until the rated capacity is verified, and you are sure it will support the load being raised.
- Do not load rigging systems or components beyond their rated capacity.
- Christmas tree rigging is prohibited.

### **Chain Falls and hoists**

- Visually inspect every chain hoist before performing a lift.
- Use a chain hoist within its rated capacity.
- Do not leave an unsecured and unattended load hanging on a hoist or chain fall.
- Do not stand or have any part of the body under a load suspended on a chain hoist.
- Do not wrap the load chain around the load to be lifted.
- Do not wrap a material hoist tag line around your hands or body.
- Check for current equipment inspections in accordance with your safety program and the manufacturer's inspection requirements.

### **Wire Rope**

- Inspect wire ropes and slings before use and take them out of service if damaged.
- Never exceed the safe working capacity of a wire rope.

### **Nylon Slings**

- Inspect slings for any damage before use.
- Store and protect nylon slings when not in use.
- Use nylon slings where a smooth surface requires protection or where a slippage problem exists.
- Do not knot or connect nylon slings together through the eyes. Knotting reduces the strength of a sling by over 50 percent.
- The sling identification / load rating tag must be legible and attached to the sling before use. If the tag is illegible or missing, do not use the sling and return it to your supervisor.

## **Material Handling**

### **General Practices**

- Immediately report all chemical spills to your supervisor and STR for appropriate cleanup and disposal.
- Check all material and equipment, including pipes, drums, tanks, reels, trailers and wagons, as necessary, to prevent rolling.
- Tie down all light, large surface-area material that can be moved by the wind.
- Secure tools, equipment, and wrenches against falling when working from heights.
- Do not store materials or tools on wall girts, ducts, lighting fixtures, beam flanges, false ceilings, or similar elevated locations.

- File jagged metal edges and pull all protruding nails and wires (or bend them flush) to prevent a potential injury.
- Use material storage dunnage for ease of handling, if feasible.
- Do not block any emergency equipment or electrical disconnect switches.
- Stack or store material so it can be easily reached by employees and material handling equipment.

### **Manual Lifting**

- Stand close to the load with your feet spread.
- Squat with your head and back in line.
- Grip with your whole hand, not just your fingers.
- Lift with your legs – do not jerk load.
- Hold the load centered and close to your body.
- Turn with your feet; do not twist your body.

### **Hazardous Materials**

#### **Hazard Communication (HazCom)**

- All chemicals brought on SRS must be approved for use and have a MSDS on file.
- Attend and successfully complete your company's hazard communication training program before working with hazardous chemicals.
- Obey all warning signs when hazardous chemicals are in use or storage.
- Limit the amount of combustibles brought into buildings temporarily.
- Read product labels and follow the manufacturer's instructions when handling chemicals.
- Properly store and label all chemicals. Limit the amount of chemicals in the work area.
- Label secondary containers of chemicals.
- Review the product's MSDS before starting work.

#### **Flammables and Combustibles**

- Before bringing any flammable or combustible liquids or compressed gases on Site, you must advise your STR of the quantity and their primary use.
- Keep flammable and combustible materials away from steam lines, radiators, heaters, and hot process and service lines.
- Make sure flammable and combustible materials under or near welding and burning operations are moved to a safe distance or protected with a retardant material.
- Open fires are prohibited.
- Consult your supervisor and STR regarding the proper location, storage, and handling of flammable and combustible liquids.
- Ensure bonding and grounding to eliminate static discharge when transferring flammable/combustible liquids.

- Use proper respiratory protection, local ventilation, and protective clothing when spraying any flammable or combustible liquids to reduce vapor exposure, fire, and explosion hazards.
- Do not use highly flammable substances, such as gasoline, for cleaning purposes.

### **Hazard Analysis**

Hazard assessment is the process (required by law) of identifying the hazards associated with a given task, and implementing control measures to reduce or eliminate the exposure to the hazards utilizing the following:

- Elimination or substitution of the hazards where feasible and appropriate.
- Engineering controls where feasible and appropriate.
- Work practices and administrative controls that limit worker exposures.
- Personal protective equipment.

### **Personal Hygiene Practices**

Personal hygiene practices are essential for protecting workers from gases, vapors, fumes, dusts, and mists. The same is true for respirable crystalline silica and other contaminants during abrasive-blasting operations. Here are some suggested practices for protecting workers from crystalline silica during these operations:

- Do not eat, drink, or use tobacco products in dusty areas.
- Wash your hands and face before eating, drinking, or smoking outside dusty areas.
- Park cars where you will not be contaminated with silica and other substances such as lead.
- Practice good personal hygiene to avoid unnecessary exposure to other work site contaminants such as lead.
- Shower (if possible) and change into clean clothes before leaving the work site to prevent contamination of cars, homes, and other work areas.

### **Protective Clothing**

The following steps should be taken to assure that gases, vapors, fumes, dust, and mist work clothing do not contaminate cars, homes, or work sites outside the dusty area:

For example, to assure that dusty clothes do not contaminate cars, homes, or work sites outside a dusty area, you might have employees:

- Change into disposable or washable work clothes at the work site.
- Shower and change into clean clothes before leaving the work site.

### **Special Work Activities**

#### **Floor and Wall Openings**

- All holes or openings through temporary or permanent secured floors, decking, or roofs must be provided with covers or barricades. Do not store material or equipment on a hole or opening cover.

- Floor holes must be posted with a “Warning – Floor Hole Cover – Do Not Remove Unless Authorized” sign.
- Cleat, wire, or otherwise secured floor hole covers so they cannot slip sideways or horizontally beyond the hole or opening.
- Floor hole covers must extend adequately beyond the edge of the hole or opening.
- Floor hole covers must be constructed from ¾-inch plywood, if one dimension of the opening is less than 18 inches; otherwise, 2-inch lumber or doubled ¾ -inch plywood is required.

### **Excavations**

- Barricade excavations to alert pedestrians and vehicles to the opening and to control access.
- Check with your supervisor for a safe access and egress route into and out of excavations.
- Keep excavation soil, other material, or equipment at least two feet from the edge of the excavation.
- Excavations must be sloped or shored as directed by the “competent person” or as indicated on the work permit.
- Make sure a “competent person” thoroughly inspects the excavation after a heavy rain or thaw.
- Ladders must be used for access and spaced within 25 feet of any worker in excavations four feet and deeper.

### **Confined Space Entry**

A confined or enclosed space is any space that meets the following three conditions:

- The space is large enough and so configured that an employee can bodily enter and perform work.
- The space has limited or restricted means for entry or exit.
- The space is not designed for continuous employee occupancy.

Confined spaces include, but are not limited to, storage tanks, process vessels, bins, boilers, ventilation or exhaust ducts, sewers, underground utility vaults, tunnels, pipelines, and open-top spaces more than four feet in depth, such as pits, tubs, vaults, and vessels. A confined space may be a permit-required confined space or may be worked as a nonpermitted confined space, depending on the hazards within.

- All entrants, supervisors, attendants, and rescue and monitoring personnel must be properly trained on confined space procedures.
- Do not enter a confined space until a valid “Confined Space Entry Permit” is posted at the work site and all permit requirements are met.
- Make sure atmospheric testing is completed before entering a confined space.
- Use safety harness and retrieval devices when working in a vertical access confined space.
- Refer to your employer’s Worker Protection Plan (WPP) and applicable OSHA Standards for additional information.

Note: The SRS Confined Space Entry Program (refer to the 8Q Employee Safety Manual, Procedure 33) applies to all work in existing operational Site facilities and new facilities

(after turnover to Operation). Check with your supervisor and / or STR for appropriate training and compliance requirements.

### **Welding and Burning**

- Check with your supervisor before striking an arc or lighting a torch.
- Keep welding leads and hoses clear of walkways, floors, and stairways.
- Inspect all leads, grounds, clamps, welding machines, hoses, gauges, torches, and cylinders daily before use.
- Make sure all fittings, couplings, and connections are tight.
- Use the shop exhaust system, a blower, or a respirator to avoid breathing welding fumes. Contact your STR for welding and burning requirements in operations areas.
- Do not weld or burn on a closed vessel or tank or on any vessel or tank that has not been decontaminated (cleaned). Check with your supervisor and STR for requirements.
- Wear yellow “Nomex III” (or equivalent) flame retardant coveralls when welding in radiological controlled areas.
- Contain sparks and slag / or remove combustibles to prevent potential fires.
- Make sure a dry chemical fire extinguisher is immediately available for any welding, burning, or open-flame work.
- Disconnect hoses and leads at the end of each shift.
- Protect your coworkers from a potential eye injury by setting up fireproof screens or noncombustible partitions.
- Take special precautions during TIG or MIG welding operations to ensure inert gases do not collect in adjacent low areas or confined spaces.
- Do not lubricate caps, valves, or gauges on oxygen and gas bottles.
- Use hearing protection for air arcing.
- Make sure a fire watch monitors all open flame work.
- Welder attendants / assistants must wear equivalent eye protection, goggles, or welding hood.

### **Compressed Air**

- Check hoses and couplings daily before each use. Use only hoses designed to handle compressed air. All hose couplings must be provided with a positive locking device.
- Never crimp, couple, or uncouple a pressurized hose. Shut off the valve and bleed down the hose after use.
- Do not exceed 30 psi of compressed air for cleaning purposes. Never use compressed air for cleaning your clothing or skin.
- Never use compressed air to clean in asbestos or lead contaminated workplace.
- Keep hoses off the ground or floor and protected from damage when extended over walkways, roads, etc.
- Use a safety device at the source of the supply or branch line to reduce pressure in all hoses exceeding ½-inch in diameter.

## Heat Stress

- Know the signs and symptoms and steps to prevent heat related illness.
  - Heat Rash: Symptoms of heat rash include a red, itchy area on the skin that can be treated by washing the affected area and drying it thoroughly. Loose clothing should be worn to prevent heat rash.
  - Heat Cramps: Symptoms of heat cramps include painful spasms of muscles, such as arms, legs, and abdomen, during work activities. Treatment methods include drinking lightly salted fluids or a commercial sports drink and resting in a cool area.
  - Heat Exhaustion: Symptoms of heat exhaustion include fatigue, nausea, headache, pale complexion, and clammy, moist skin. Treatment methods include promptly moving the victim to a cooler area and administering water, if the victim is conscious. If plain water does not improve the victim's condition within 20 minutes, provide electrolytes (lightly salted water or a commercial sports drink). Raise the victim's legs 8 to 12 inches (keep the legs straight). Remove excess clothing and sponge the victim with cool water. Also, fan the victim and seek medical attention.
  - Heat Stroke: Heat stroke is considered a medical emergency requiring immediate attention. It is a catastrophic illness and has a high death rate. Symptoms of a heat stroke include hot, dry skin, confusion, convulsion and coma. Treatment methods include moving the victim to a cooler area and contacting medical personnel immediately. Do not leave the victim alone. Remove excess clothing and keep the victim's head and shoulders slightly elevated. Cool the victim quickly by any means possible (e.g., forearm submersion in cool water, sponging the victim, and fanning, etc.)
- Take the following precautions to prevent a heat related illness:
  - Drink water every 15-20 minutes, even if you don't feel thirsty. You can lose as much as 1.6 quarts of fluids hourly by sweating.
  - Allow time to acclimatize, especially if you are returning from vacation, changing job duties, or have been in an air-conditioned environment for more than 3-4 days.
  - Perform work as early in the day as possible and take frequent breaks in a shaded or air conditioned environment.
  - Be aware of early signs and symptoms of heat illness.
  - Use the buddy system to keep a close watch on each other for signs and symptoms of a heat related illness.
  - Inform your supervisor of any illness or medications you are taking. Both can affect the body's tolerance to heat stress.
- If you have access to a Site computer, you can obtain the Wet Bulb Globe Temperature (WBGT) through SRINE by clicking on "Weather", "Current Conditions at SRS" and "Current Condition" or contact your STR to obtain the information.

### **Asbestos, Lead, and Other OSHA Health Standards**

Special precautions are required when working with asbestos, lead, and other materials identified in OSHA health standards. Refer to your employer's Worker Protection Plan and applicable OSHA standards for additional information.

### **Lasers**

- 3B or higher classification requires the need for a Laser Safety Officer (refer to subcontract requirements).
- Install, adjust, and operate laser equipment only if you have received the appropriate training and qualification. Training and qualification must be documented.
- Post laser warning signs when a laser is in use.
- Operate, inspect, and maintain laser equipment in accordance with manufacturer's recommendations.

### **Bloodborne pathogens**

Employees, who are likely to have contact with blood or other potentially infectious material (OPIM) as part of their job duties, must be trained concerning bloodborne pathogens and methods to control contact. These employees must be provided protective clothing and equipment to reduce exposure to blood or OPIM.

### **Occupational Noise Exposure**

- Written hearing conservation programs require guidance from Industrial Hygienist/Safety Professional.
- Use Engineering controls (preferred method) or administrative controls to keep noise exposure below 85 dBA when possible. American Conference of Governmental Industrial Hygienist (ACGIH) drives the 85dBA at SRS.
- Post or label areas and equipment when noise levels exceed 85 dBA.
- Attend hearing conservation training and wear the appropriate personal protective equipment (PPE) when using tools and equipment that produce noise greater than 85 dBA.

### **Electrical**

Your worker protection plan (WPP) and/or Task Specific Plan (TSP) should reflect the following requirements as applicable to your work:

All energized electrical work must be performed utilizing an energized electrical work procedure and an approved electrical work permit, authorized by the STR and area Electrical Engineer.

- All electrical work will be performed by qualified, trained personnel. Only trained personnel shall be authorized to make field repairs and/or examine electrical equipment.

- All personnel performing electrical work will be trained to the NFPA 70E standard for electrical safety in the work place, the use of personnel protection equipment (PPE) rated equipment, and personal FR clothing worn.
- Electrical workers shall understand all information on the equipment label data as it relates to the NFPA 70E table(s) to determine the hazard category and PPE requirements. If you should find or come across a non-labeled piece of electrical equipment – STOP WORK and notify the STR.
- All electrical tools shall be insulated according to the NFPA 70E standard. Electrical lines/equipment no matter how low the voltage should be de-energized, locked-out, tagged, and tested prior to work/repairs being performed.
- All portable electrical equipment must be visually inspected by the user daily and before each use.
- Temporary electrical cords shall be covered or elevated to protect them from damage by personnel or equipment and to eliminate tripping hazards.
- Keep adequate clearance between electrical lines and objects being moved or handled.
- Portable GFCI must be tested prior to each use.
- GFCI protection shall be used whenever portable electrical equipments/tools are used with temporary wiring methods, in damp locations, or with extension cord sets.
- All portable electrical tools/equipment shall be double insulated or be of the three wire grounding type and protected by a ground fault circuit interrupter, and assured grounding system.

#### **Hazardous Energy Control (Lockout / Tagout)**

- Attend and successfully complete hazardous energy training if you will be working under a lockout. Check with your supervisor or STR for clarification.
- To prevent potential injuries, do not:
  - Remove a coworker's tag, or operate a valve, switch, or device that has another worker's "Danger – Hazardous Energy Control – Do Not Operate" tag attached without authorization.
  - Lock and tag a device unless specially instructed to do so.
  - Place "Danger – Hazardous Energy Control – Do Not Operate" tags on defective tools or equipment, gang box doors, or any similar places.
  - Remove pieces of equipment with tags attached.
- Refer to your employer's Worker Protection Plan (WPP) and applicable OSHA standards for additional information.

**Note:** 8Q, Procedure 32, "Hazardous Energy Control", requirements apply when it is necessary to establish isolation points that will be required to protect exposed subcontractor employees from hazardous energy sources from existing Site facilities, Site utilities, or new facilities after turn over to operations.

## **Off the Job Safety**

The Savannah River Site is equally concerned with off-the-job safety of our workers. More injuries and fatalities happen off the job than at work. Please take home the rules of safety that you have learned while working in our facilities.

## **Training Requirements:**

### Employee Training

Upon request, the subcontractor must provide documentation of employee training, i.e., confine space, fall protection, hazardous energy control, etc. On-the-job training, experience, computer based training, or class-room training are all acceptable means for demonstrating the appropriate level of knowledge needed to perform job.

## **Emergency Signals and Actions**

Signal: Voice (Only)

Meaning: Important Bulletin

Action: 1. Listen for essential information  
2. Follow instruction

Signal: Alarm Bell

Meaning: Nuclear Incident

Action: 1. Immediately evacuate the area, walk briskly and proceed to designated rally point.

Signal: Horn

Meaning: Fire

Action: 1. Evacuate building, walk briskly to nearest exit and to designated rally point.

Signal: Warble

Meaning: Emergency Alarm

Action: 1. Listen to public address announcement.  
2. If you cannot hear, go to a location where you can hear the announcement.

## **SRS Emergency Numbers**

**3-3911 – For and emergency**

**803-725-3911 – on cellular phones for fire, medical, ambulance and security notification**