

General Employee Training



Savannah River Site

TREGGETASTGD000109

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I. VISION, MISSION, FACILITIES, and COURSE DESCRIPTION

DOE Order 426.2 requires that all new employees receive initial and continuing training in several specific areas. To fulfill this requirement, new employees receive General Employee Training (GET) at the time of their employment at Savannah River Site (SRS). There are numerous other mandated training requirements for all employees that must be satisfied on an annual or biennial basis. To ensure compliance with these requirements, all employees are required to complete Consolidated Annual Training (CAT) each year. All hosts of visitors are responsible for ensuring that necessary training is complete for site access.

This study guide contains more information than is presented in the classroom and is intended to be a reference book and study guide. Employees are responsible for reviewing and being familiar with the material in this study guide.

This study guide does not contain classified information or Unclassified Controlled Information (UCI).



SRS Vision

The Savannah River Site vision is to be a long term national asset; to be effectively employed in the service of the nation in the areas of national security, energy independence, innovative technology and environmental stewardship; and be viewed with confidence by the public.

Site Missions and Capabilities

There are presently four primary missions at SRS:

- 1.** Environmental Management (EM) responsibilities for cleaning up the Cold War legacy.
- 2.** Preparing for long-term stewardship.
- 3.** National Nuclear Safety Administration (NNSA) Defense Programs.
- 4.** NNSA Nuclear Nonproliferation Programs and SRNL.

Description of the Savannah River Site and Facilities

Dedicated to maintaining the highest possible safety standards, the Savannah River Site (SRS) is a key Department of Energy industrial complex responsible for stewardship of the environment, the enduring nuclear weapons stockpile and nuclear materials.

More specifically, SRS processes and stores nuclear materials in support of the national defense and U.S. nuclear non-proliferation efforts. The site also develops and deploys technologies to improve the environment and treat nuclear and hazardous wastes left from the Cold War.

The SRS complex covers 198,344 acres, or 310 square miles encompassing parts of Aiken, Barnwell and Allendale counties in South Carolina, bordering the Savannah River.

EO 1.01 IDENTIFY the function associated with each SRS Organization and Facility Area.

A. SRS Organizations

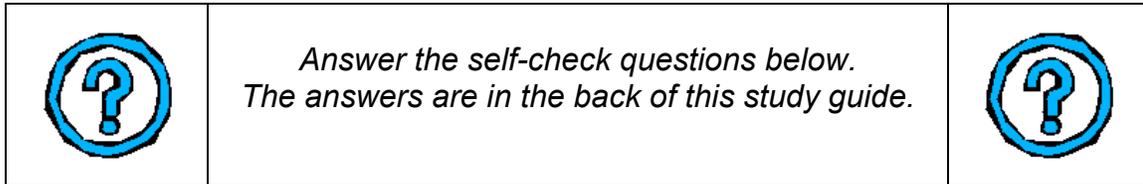
1. The **Department of Energy (DOE)** headquarters, Washington, D.C., establishes Federal Energy Policy and directs the implementation of programs that relate to energy use and resources.
2. The **DOE-SR Operations Office** is responsible for the overall operation of SRS.
3. The **National Nuclear Security Administration (NNSA)** is a semi-autonomous agency within the Department of Energy that maintains and enhances the safety, security, reliability and performance of the U.S. nuclear weapons stockpile without nuclear testing and responds to nuclear and radiological emergencies in the U.S. and abroad.
4. **Savannah River Nuclear Solutions (SRNS)** is responsible for the operations and management of the facilities.
5. **Savannah River Remediation (SRR)** is responsible for managing the liquid waste program.
6. **Savannah River Ecology Lab (SREL)** provides ecological studies to the DOE, but retains its independence regarding academics.
7. **Wackenhut Services, Inc. (WSI)** provides security (protective) services for the site.
8. The **U.S.D.A. Forest Service** manages the natural resources on the 310 square mile site.
9. **Savannah River National Laboratory (SRNL)** does research and development in waste processing, environmental remediation, nonproliferation technologies, and national security projects.

10. **Mixed Oxide Fuel Fabrication Facility (MOX)**, still under construction, will process used weapons grade plutonium and depleted uranium to fuel commercial power reactors to generate electricity.
11. **Subcontractors** supply necessary manpower and services as needed.

B. Facilities

1. SRS facility areas are identified by letters. The letter denotes the physical location on the site. Three digit numbers associated with buildings located in various areas are related to their functional area. For example, the 700 series is indicative of Administrative functions.
 - a) **A-Area:** This area, accessible from Highway 1 between Whiskey Road (Hwy 19) and Highway 125 in Jackson, serves as the location for the Badging Office, and other administrative offices.
 - b) **B-Area:** This area houses the DOE and SRS Contractors' main administrative offices, several engineering buildings, SRP Federal Credit Union, and Wackenhut Security's headquarters.
 - c) **C-Area:** The Respirator Equipment Facility in this location is responsible for: Assembling (as necessary), inspecting, testing, cleaning and supplying respiratory protection equipment to each facility.
 - d) **D-Area:** In this area, production of steam and electrical power is accomplished.
 - e) **E-Area:** The **Solid Waste Complex** (Burial Ground) is located here and provides storage for low-level and intermediate-level radioactive waste in concrete vaults.
 - f) **F-Area:** The **Mixed Oxide (MOX) Fuel Fabrication** Facility located in this area will make fuel assemblies from weapons-grade plutonium and depleted uranium and transfer the fuel to commercial nuclear power reactors to generate electricity. After "down-blending," the plutonium can no longer be used in nuclear weapons.
 - g) **H-Area:** The **Tritium Facilities** are located in this and some facilities process tritium and service reservoirs. Tritium is a radioactive form of hydrogen gas that is a vital component of nuclear weapons. The **Tritium Extraction Facility (TEF)** in H-Area provides the means to extract tritium from tritium-bearing targets irradiated in commercial light water reactors. TEF gives the nation the ability to replenish tritium supplies in nuclear weapons.
 - h) **N-Area:** These areas contain maintenance support facilities (Central Shops), Substance Abuse Program (SAP) testing and Medical Services.
 - i) **S-Area:** The Defense Waste Processing Facility (DWPF), located in this area, immobilizes high-level radioactive waste material from the tank farms in glass for permanent storage.

- j) **Z-Area:** The Saltstone Facility located in this area takes low-level radioactive waste and immobilizes it in saltstone for storage in cement vaults.



1. What organization provides security services to the site?

- A. Bechtel Savannah River, Inc.
- B. Wackenhut Services, Inc.
- C. Washington Savannah River Company
- D. Aiken Sheriff's Office

2. What organization is responsible for the overall operation of SRS?

- A. Department of Energy – SR (DOE-SR)
- B. Department of Energy – HQ (DOE-HQ)
- C. Washington Savannah River Company (WSRC)
- D. Nuclear Regulatory Commission (NRC)

3. What organization does research and development in waste processing and nonproliferation technologies?

- A. British Nuclear Fuels, Limited (BNFL)
- B. Department of Energy – SR (DOE-SR)
- C. Washington Savannah River Company (WSRC)
- D. Savannah River National Laboratory (SRNL)



II. Health and Safety Program

Enabling Objectives:

- EO 2.01 STATE the SRS Safety Policy and Philosophy.**
- EO 2.02 IDENTIFY the SRS Worker Safety Hierarchy of Controls.**
- EO 2.03 IDENTIFY the SRS Safety Worker and Health Program.**
- EO 2.04 STATE the SRS safety restrictions on practices and conditions.**
- EO 2.05 IDENTIFY the function of the ISMS, BBS VPP and HPI.**
- EO 2.06 STATE when and how to call a Time Out.**
- EO 2.07 STATE the restrictions on motorists and pedestrians at SRS.**
- EO 2.08 State the requirements of the SRS Hazardous Energy Control Program.**
- EO 2.09 LIST the types of Personal Protection Equipment available at SRS and the sources of their requirement.**
- EO 2.10 IDENTIFY safe practices for using ladders.**
- EO 2.11 STATE the definition of and requirements for Confined Spaces at SRS.**
- EO 2.12 STATE the methods for mitigating worker exposure to chemicals, noise and heat.**

The success of the Savannah River Site depends on the safety of all employees and the protection of the public and the environment. To achieve this success, SRS uses Integrated Safety Management to ensure a safe and clean working environment for employees, visitors, vendors, subcontractors and the public.

Every employee has the responsibility to correct any unsafe act or condition and/or notify their supervision. All employees are expected to accept responsibility for their personal safety, safe job performance, and the safety of others.

Each individual at SRS must strive to make safety the first priority in all activities. As always, the site safety program is based on the belief that all injuries can be prevented. The SRS Health and Safety Program outlines the employee's rights, defines responsibilities, and identifies safety regulations.

EO 2.01 STATE the SRS Safety Policy and Safety Philosophy.

A. SRS Safety Policy

The cornerstone of the SRS safety program is the individual right of every employee, including subcontractors, to call a Time Out if they observe employee safety being compromised. This principle is the most powerful means of guaranteeing safety at SRS.

- **The first priority of SRS is the safety and protection of employees and the general public.** Work will stop if it cannot be performed in a safe manner.
 - **Safety Begins With Me:** This is the slogan that all SRS companies have adopted to emphasize the importance each person had in support of our Safety Program.
 - **Time Out Authority:** Every worker has the responsibility and authority to call Time Out if he/she believes that the work being performed is not safe.
 - Materials, equipment, and facilities will not be procured, fabricated, modified, built, or utilized until compliance with all relevant procedures has been verified.
 - Immediately report any injuries, illnesses, incidents, near-misses, or unsafe conditions to your escort, supervisor, or the person responsible for your visit or work scope.
 - SRNS and SRR will send their employees to the Medical Department.
- NOTE:** Subcontractors are responsible for providing medical treatment and first aid to their employees, unless it is an emergency.
- Report unsafe acts, unsafe conditions, and near misses to supervision.



Safety begins with me.

- Do not become involved in a work activity that could compromise your safety or the safety of others as a result of not being properly trained, qualified, or for which you are not authorized to assist.
- Do not attempt to operate special tools or equipment unless you are trained, qualified, and authorized to operate the specific tool or equipment.
- In all cases, if something out of the ordinary happens or a particular work activity does not go as expected, call a Time Out, **STOP** and reassess the situation.
- Do not proceed with any task until you are certain the job can be completed with everyone's safety, including your own, maintained.
- Ask for help or clarification if unsure about your safety or the safety of others, regardless of the situation.
- Obey all warning signs, barricades and other safety notices. Obtain permission before entry.
- Be sure the equipment, material and tools you bring or use on the site are in safe operable condition. Do not bring defective equipment on site. Ask yourself if your equipment, materials, and tools are in good working order and in a serviceable condition to be used safely for all work you will be doing.
- You may encounter heavy equipment in some areas of the site. Use caution and do not enter areas where heavy equipment is being operated unless you are authorized. No self-propelled equipment (backhoes, trackhoes, bulldozers, etc.) may be loaded or off-loaded from trucks, trailers or similar equipment without employees having first completed a Self-Propelled Equipment Loading Checklist. Notify your on-site contact for the checklist.
- Do not perform maintenance on, service, or operate any heavy equipment unless you are qualified and authorized to do so.

B. The SRS Safety Philosophy

1. The SRS Safety Philosophy states:

- a) All injuries can be prevented.**
- b) Working safely and obeying safety rules are conditions of employment.**
- c) Follow General Site Safety Rules:**
 - Walk; Do not run.
 - Maintain good housekeeping.
 - Use the handrail when ascending or descending stairs.
 - Observe and properly respond to all safety warnings, including lights, alarms, horns, sirens, signs and barricades.



EO 2.02 IDENTIFY the SRS worker Safety Hierarchy of Controls.

A. General Requirements

In order to protect you the worker, SRS has several layers of protection to protect you from unsafe or hazardous conditions:

- 1. Eliminate the Hazard:** First and foremost when a hazard is identified, report it and eliminate it.
- 2. Engineering Controls to mitigate the hazard:** It is always best to design equipment with necessary safety equipment to eliminate any potential hazardous conditions.
- 3. Administrative Controls to mitigate the hazard:** SRS procedures are written to incorporate safety steps to help mitigate hazardous conditions.
- 4. Personal Protective Equipment (PPE):** You the worker wearing the proper Personal Protective Equipment is the last line of defense when a hazardous condition arises.
This further emphasizes the need for each worker to wear their PPE.



EO 2.03 IDENTIFY the SRS worker Safety and Health program.



The handout you were given includes important information in the poster below and is relative to your worker rights and responsibility. Please review these rights and responsibilities.

In summary:

- You do not have to work in unsafe conditions.
- You can stop work at any time.
- You have access to key personal safety and health reports.
- There are several methods to report safety and health concerns.

Job Safety and Health

It's the law!

EMPLOYEES:

Must have access to:

- DOE safety and health publications;
- The worker safety and health program for their location;
- This safety and health poster;
- Copies of their medical records and records of their exposures to toxic and harmful substances or conditions; and
- Results of inspections and accident investigations.

Must be able to:

- Express concerns related to worker safety and health;
- Decline to perform an assigned task because of a belief that the task poses an imminent risk of death or serious physical harm;
- Stop work in imminently dangerous conditions; and
- Anonymously request an investigation.

EMPLOYERS must:

- Establish a written Worker Safety and Health Program;
- Use qualified worker safety and health staff;
- Provide mechanisms to involve workers and their elected representatives in developing the safety and health program;
- Establish procedures for workers to report without reprisal job-related hazards and for prompt response to such reports;
- Provide for regular communication with workers about workplace safety and health matters; and
- Display this poster in the workplace where it is accessible to all workers.

Request an Investigation:

www.hss.doe.gov/enforce/Request_investigation.html

This poster is available at:

www.hss.doe.gov/healthsafety/wshp/rule851/2012_Safety_Health_Job_poster.pdf

10 CFR 851, Worker Safety and Health Program is available at:

www.hss.doe.gov/healthsafety/wshp/rule851/851final.html

For More Information Contact:

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EO 2.04 STATE the SRS safety restrictions on practices and conditions.

A. Unsafe Practices

1. Unsafe practices (at-risk behaviors) are actions which people do or fail to do which may contribute to an accident or injury. Over 96% of occupational injuries are the result of at-risk behaviors.

A. At-Risk Behaviors

The causes of unsafe practices are failure to follow:

1. Safety rules
2. Specific instructions
3. Safety practices of the job

B. Unsafe Conditions

1. Unsafe conditions are physical or mechanical hazards that could contribute to personal injury or illness to employees while performing their duties.
2. The causes of unsafe conditions are:
 - a) Oversight
 - b) Carelessness
 - c) Improper lighting and obstructions
 - d) Equipment failures



EO 2.05 IDENTIFY the function of the ISMS, BBS, VPP and HPI.

A. Integrated Safety Management System (ISMS)

1. The Integrated Safety Management System is a common sense approach to doing work safely. The five core ISMS functions are:

- A. Define scope of work
- B. Analyze the hazards
- C. Develop and implement hazard controls
- D. Perform work within controls
- E. Provide feedback and continuous improvement



2. Examples of the ISMS process include:

- A. Issue a work request and discuss the materials needed.
- B. Perform a job walk-down and discuss the hazards associated with the proposed job.
- C. Eliminate or control hazards through the use of procedures/work documents.
- D. Execute the work within the established controls.
- E. Ask the question, “Can we do the job safer/better?”

B. Behavior-Based Safety (BBS)

- 1. Studies have shown that 96+ percent of injuries occur because of unsafe behavior. Behavior-Based Safety is a process that encourages all employees to focus on increasing safe behaviors and minimizing at-risk behaviors in the workplace.
- 2. BBS Observers request individuals’ permission to observe them performing their jobs so they can identify “best practices”, to emphasize good safe practices, and identify improvement areas.
- 3. Employees are encouraged to become BBS Observers and to request to be observed.



Remember:



Safety begins with me.

C. Voluntary Protection Program (VPP)



1. The Voluntary Protection Program (VPP) is a joint Department of Energy and Occupational Safety and Health Administration (OSHA) program designed to promote excellence in safety and health management systems by recognizing facilities that have implemented outstanding health and safety programs. It provides an opportunity to develop a cooperative relationship between management, labor and government.
2. VPP STAR is an award that validates that the site's Integrated Management System (ISMS) is in place and is effective. It includes a continuous improvement process toward achieving safety excellence. It is a highly selective award. As a STAR site, SRS is on the leading edge of hazard prevention methods and technology and shows continuous improvement in safety and health programs.
3. Savannah River Site's commitment to VPP means that each of us is involved in the decisions that affect our safety and health.

Remember to **MAKE, TAKE,** and **WATCH:**

- ✓ **MAKE** a personal commitment to live and work safely.
- ✓ **TAKE** an active role in your safety activities.
- ✓ **WATCH** out for yourself and your coworker.

D. Human Performance Improvement (HPI)



1. The Institute of Nuclear Power Operators (INPO) developed Human Performance Improvement program and training beginning in the mid-1980's as a way to produce the number of reactor events caused by human error. In 2007, SRS embraced the achievement of excellence in Human Performance Improvement as a key strategy for reducing the number of events caused by human error and achieving significant and overall work performance.
2. HPI is a set of practices intended to promote behaviors throughout an organization that support safe and reliable operation and is based on these principles:
 - People are fallible, and even the best people make mistakes.
 - Error-likely situations are predictable, manageable, and preventable.
 - Individual behavior is influenced by organizational processes and values.
 - People achieve high levels of performance largely because of the encouragement and reinforcement from leaders, peers, and subordinates.
 - Events can be avoided through an understanding of the reasons mistakes occur and application of the lesson learned from past events (or errors).

E. Ten HPI Error Reduction Tools

1. **SAFER** - A way to identify what to avoid related to specific actions during the job. The process helps the supervisor and worker to methodically recognize and address the risk of human error to safety and reliability.
2. **Self-Checking** - Stop, Think, Act, Review (S.T.A.R.) – Boosts attention and eliminates distraction just before a risk-important action is to be performed. This *pause* allows the worker time to think about the intended action, understand the expected outcome before acting, and verify the results after the action. Particularly useful in guarding against complacency associated with repetitive tasks, where attention must peak when the risk is greatest.
3. **Peer-Checking** – Have a second knowledgeable individual verify that the action planned by the performer is appropriate **before** execution and occurs according to plan. Other more formal checks include Second Person Verification and Independent Verification.
4. **Three-Way Communication** – The sender speaks the message to the intended receiver, the receiver repeats the message in a paraphrased form, and the sender acknowledges the receiver understands the message.

Phonetic Alphabet

A	Alpha	N	November
B	Bravo	O	Oscar
C	Charlie	P	Papa
D	Delta	Q	Quebec
E	Echo	R	Romeo
F	Foxtrot	S	Sierra
G	Golf	T	Tango
H	Hotel	U	Uniform
I	India	V	Victor
J	Juliet	W	Whiskey
K	Kilo	X	X-ray
L	Lima	Y	Yankee
M	Mike	Z	Zulu

EO 2.06 STATE when and how to call a Time Out.

A. Time Out is an informal way to stop work before it is done unsafely. Anyone can call a time out.

1. When to Call a Time Out

Time Out can be called for any of these reasons (not an all-inclusive list):

- Unexpected condition
- Change in scope
- Unclear/inadequate instructions
- Issue not covered in pre-job briefing
- Additional assistance needed (Radiological Control Personnel, Industrial Hygiene, Quality Assurance, etc.)
- Mistakes
- Incorrect Personal Protective Equipment (PPE), special tools needed
- New hazard
- Unsure if you can continue safely, for any reason: fatigue, heat, illness, etc.
- Bad feeling about the job



- Other items identified as specific to the facility or function

2. How to Call a Time Out

- Make sure all team members are aware that a time out has been called.
- Leave the job site in a safe condition, prior to stopping work, if possible.
- Inform your supervisor or the person in charge (PIC) that a condition requiring a Time Out has been encountered.
- Determine what is needed to resolve the situation. The formality, nature and duration of the resolution will be agreed upon by supervision.
- Resume work ONLY if the team agrees that the issue has been resolved and work can safely proceed.

EO 2.07 STATE the restrictions on motorists and pedestrians at SRS.

A. General Safety Rules for Site Motor Vehicles

1. The General Safety Rules for Site Motor Vehicles, Procedure 11, 8Q Manual, describes the following mandate, which are applicable to all personnel at SRS.
 - a) Hand-held electronic devices such as cell phones, PDA's, Blackberry's Palm Pilots, GPS devices, pagers, two-way radios, etc. and installed electronic devices requiring manual data input such as GPS devices shall not be used while driving a personally-owned vehicle, government vehicle or government leased vehicle.



Note: If use of such device is required, when it is safe to do so, pull onto the shoulder of the road, stop and shift the vehicle into park before using the device. Use of "hands-free devices" such as Bluetooth phones may be used but should be minimized to avoid distracted driving.



B. Safety Rules for Government Vehicles

- Obey posted highway and site speed limits.
- Fasten seat belts.
- Perform a 360 degree walk around and visually inspect before driving.
- Look behind and sound the horn twice before backing.
- Turn off ignition, set brake and lock vehicle

C. Site Road and Parking Lot Safety Requirements

1. Site road and parking lot safety requirements include the following:
 - a) Speed limit in parking lots is 10 miles per hour
2. Pedestrians should use only sidewalks or designated crosswalks.
 - a) Walk single file facing traffic if no sidewalk.
 - b) Travel only on established roadways; that is, paved roads. **DO NOT** drive down dirt, gravel, or other side roads unless you have a business reason to do so.
 - c) When in a parking lot, drive in lanes provided, not across parking spaces.
 - d) Always park in designated parking spaces. **NEVER** park in spaces that are not designated for parking.



D. Barricades

1. Barricades are physical obstructions (e.g., rope, metal pipes or rails, metal chains, plastic chains, traffic cones, etc.) intended to:
 - a) Warn personnel of a hazard.
 - b) Control or limit personnel or vehicle access to a specific area.
2. Do not enter a barricaded area. Entry is limited to personnel specifically assigned to the area or to personnel who have permission to pass through from the work group that erected the barricade.

3. Three Types of Barricades

a) Warning Barricade



- Calls attention to a hazard, but offers no physical protection
- Indicates a location having a hidden hazard (slippery floor, overhead leak, overhead work, etc.)
- Posting lists entry requirements
- Erected around areas where construction or maintenance work is in progress and control of pedestrian traffic is necessary
- Designated by a red and white safety rope.

b) Protective Barricade

- Calls attention to a hazard and provides physical protection from the hazard
- Posting lists entry requirements
- Areas where personnel could fall into a pit or hole in the ground, through a hole in the floor or wall, or off a roof or structure

- Are constructed from wood, pipe railing, wire rope, steel chains.

c) Radiation Barricade 

- Warns personnel of radiation or radioactive contamination hazards
- Designated by magenta and yellow colors.

EO 2.08 STATE the requirements of the SRS Hazardous Energy Control Program.

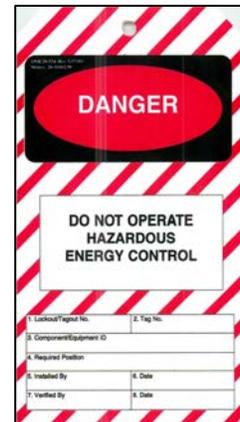
A. Hazardous Energy Control Program

The purpose of the Hazardous Energy Control Program is to provide the primary means of controlling the position of energy isolating devices such as valves and circuit breakers in order to protect personnel, equipment, and the environment from inadvertent release of energy or hazardous material.

Hazardous Energy Control (HEC) is the term used at SRS for Lockout/Tagout. At SRS, hazardous energy is controlled via:

1. Long shank Master brand locks or special approved lockout devices, and Do Not Operate (DNO) tags.
2. Only trained and qualified employees are authorized to install or remove locks or lockout out devices and Do Not Operate (DNO) tags.
3. This includes employees, subcontractors and vendors whose work scope involves lockouts for controlling hazardous energy.

A single design Lockout/Tagout (L/T) device, a Danger- Do Not Operate (DNO)-Hazardous Energy Control tag and a lock are used to apply a L/T. A laminated long-shank Master® safety padlock is the only lock allowed for L/T. These long-shank locks shall not be used for any other purpose at SRS.



B. Basic Electrical Safety Rules

1. These basic electrical safety rules comply with the OSHA Standards:
 - Do NOT work on or near electrical conductors unless trained and authorized.
 - Do NOT remove receptacle covers unless trained and authorized.

- Treat all electrical wires or equipment as if energized.
- Stay at least ten feet away from overhead power lines.
- Heed all warning signs regarding dangerous voltages.
- Use Lockout/Tagout when working on electrical equipment, if trained and authorized.
- Avoid contact with metal objects or water sources when handling energized conductors.
- Have adequate lighting when using electrical equipment.
- Do NOT wear conductive accessories.
- Visually inspect the electrical equipment before each use.

EO 2.09 LIST the types of Personal Protection Equipment available at SRS and the sources of their requirements.

A. Types of Personal Protective Equipment

Because of the nature of our work here at SRS, workers can be exposed to hazardous environments. Because of that, we have several types of Personal Protective Equipment that you may be required to use.

Refer to your student handout for details.



Requirements:

- Inspect all PPE prior to use.
- Discard any damaged garment from further use according to program requirements in 8Q 61 (PPE) and 5Q (Radiological Controls) Manuals.
- Clean all commonly used PPE, such as face shields, following use and return to proper storage.

B. Ladder Safety

- Ladders can be an effective tool to access elevated work, HOWEVER, they are not as stable as many work platforms.
- Before using a ladder, one must analyze the task to determine if a ladder is the most appropriate tool for that task.
- Before using a ladder here are a few things to consider:
 - ✓ Is the user taking medication or do they have a health condition that could affect the users balance?



- ✓ Will the user be able to perform all work within the plane of the ladder (between the side rails)?
- ✓ Will the planned task involve physical force that could cause the ladder to move?
- ✓ Will the task allow proper setup of the ladder?

Ladder users must read and be familiar with 8Q-Procedure 16. Users must visually inspect ladders before each use to ensure that they are safe to use. Defective ladders must be tagged out immediately with a “Danger- Unsafe Condition Tag” (OSR 7-200C). Notify management of the defective ladder.

EO 2.10 STATE the definition of and restrictions on Confined Spaces at SRS.

A. Confined Space and Entry

1. A confined space is a space that is large enough that an employee can bodily enter and perform work. It is **not** designed for continued employee occupancy and has a limited means of entry or exit.
2. It is then considered an entry into the confined space as soon as any part of the body breaks the plane of entry.
3. Examples of confined spaces include tanks, vessels, storage bins, hoppers, vaults, etc.
4. Not all confined spaces will necessarily be posted.
Per the Employee Safety Manual, 8Q, Procedure 33, manholes, modular-office crawl space areas, and false/suspended ceiling areas are confined spaces if they are large enough to bodily enter; however, posting “Danger” signs is not required for these spaces if the access port (i.e., manhole covers/access doors to crawl space/attic areas) is locked into place, requires a special tool or additional manpower is needed to open.



AT NO TIME SHALL ANYONE ATTEMPT ENTRY INTO THESE AREAS WITHOUT PROPER TRAINING AND WORK AUTHORIZATION.

B. Confined Space Posting

1. Confined Spaces which are easily accessed without special tools or keys to locks shall be posted with a sign reading, "Danger – Confined Space Enter by Permit Only."
2. Confined Spaces that pose a challenge to access (require special tools, keys, additional manpower or other special means for entry) may not be posted until access to the space is required.



Examples include access ports that are pad locked or may require special hand tools to remove the fastening devices. See the 8Q Manual, Procedure 33, for confined space posting requirements.

3. ***Under no circumstances shall an untrained or unqualified person attempt entry into a permit-required confined space.*** Only personnel receiving formal Confined Space Training and work authorization are allowed to enter a confined space. If entry into a confined space becomes necessary, follow 8Q Manual, Procedure 33, for Confined Space requirements.

Under NO circumstances should any site employee ever attempt to rescue another employee by entering a confined space. Only Fire Department personnel are trained and equipped to perform entry rescue and are available 24/7 to assist if needed.

EO 2.11 STATE the methods for mitigating worker exposure to chemicals, noise and heat.

A. Safety Shower and Eyewash Facilities

1. There are permanent and portable safety showers and eyewash stations available for employees who work in areas where their eyes and body may be exposed to injurious, corrosive, toxic, or flammable materials.
2. These facilities provide domestic water for rinsing toxic materials or chemicals from the body, clothing, or eyes.
3. Operator use:
 - a) Know the location of the safety shower and eyewash facilities in your work area.
 - b) Understand the operation of the safety shower and eyewash facilities.
 - c) After contact with hazardous materials, move immediately to the shower and begin flushing the affected area of the body.

- d) Remove all affected clothing as quickly as possible while showering.
 - e) Flush for a minimum of 15 minutes.
 - f) If the eyes are affected, hold the eyelids open while flushing at the eyewash facility or safety shower.
 - g) Summon medical assistance.
4. The area around safety showers and eyewash facilities must be well-lighted and highly visible.
5. Safety shower lights must be green and lighted at all times.



B. Hearing Conservation Program

1. The purpose of the SRS Hearing Conservation Program is to protect employees against workplace noise-induced hearing loss.
2. The amount of hearing loss depends on the period of time an individual is exposed to high levels of noise.
3. The effects of noise on hearing are:
 - a) Short-term exposure to high noise levels will produce a temporary hearing loss called “auditory fatigue.” Hearing will return after a short time away from the noise.
 - b) Long-term exposure (over a period of years) to high noise levels can produce a permanent hearing loss.
 - c) Employees exposed to occupational noise are required to wear hearing protection and are provided annual training.
4. Hearing protection, such as ear plugs and ear muffs, is required for work areas characterized by noise levels of 85 decibels (dB), and above, regardless of time spent in the high noise area. Transit through a high noise area without hearing protection is allowed, provided no work is being performed.
5. Signs and markings are used to indicate where hearing protection must be worn. The signs are yellow background and black letters that read “Hearing Protection Required.”



C. Heat Stress

1. Exposure to heat can make you ill. It can also kill. There are four common types of heat injuries:

- 1) **Fainting** (Heat Syncope) – dizziness, lightheadedness, and unsteadiness when walking
 - 2) **Heat Cramps** – painful cramping and spasms in abdomen and arms and legs
 - 3) **Heat Exhaustion** – sudden tiredness, dizziness, nausea
 - 4) **Heat Stroke** – extremely high oral temperatures (103°F or higher)
 - 5) **Get Medical help immediately for any of these conditions.**
2. Some heart stress prevention techniques:
- a) Drink plenty of water in small quantities
 - b) Allow your body to gradually get used to the heat
 - c) Work with a buddy who knows the signs of heat stress
 - d) Eat light foods during the summer
 - e) Avoid excessive amounts of coffee and tea
3. SRS monitors the Wet Bulb Globe Temperature (WBGT) and designates heat stress categories. Guidelines minimize risk of heat injury. WBGT forecast is available on InSite, under Weather.
4. Other references: Industrial Hygiene homepage/Hazards/Thermal Stress; 4Q Manual, Procedure 502; and SRS Heat Index Card.
5. To review the in-depth SRS Heat Stress Awareness Briefing, go to InSite and type “heat stress” in the search box or ask your supervisor/manager to get you a copy.



*Answer the self-check questions below.
The answers are in the back of this study guide.*



1. Which is a true statement about employees and safety?

- A. Employees are required to notify security of any safety-related issues
- B. Employees have the right to carry a concealed weapon on site
- C. Employees must participate in the Annual Safety Conference
- D. Employees have the right to express concerns about worker safety and health

2. Select the activity prohibited as SRS.

- A.** Taking shortcuts through constructions areas
- B.** Running on designated jogging trails
- C.** Carrying a pocketknife with a locking blade
- D.** Reporting spills and leaks to supervision

3. Identify an unsafe condition.

- A.** Standing on a table
- B.** Running across the road
- C.** A pool of water spilled on the floor
- D.** Cookies stored on top to the microwave

4. What are the functions of the Integrated Safety Management System (ISMS)?

- A.** Complete the scope of work under all circumstances, and do not call a time out unless your supervisor advise you to
- B.** Develop a scope of work, define the correct procedure and list the standard
- C.** Define the standard, develop the work scope, ensure compliance
- D.** Define the scope of work, identify the hazards, and develop controls to mitigate the hazards, perform work within the boundary of the controls and provide feedback for continuous improvement

5. What should you do if you hear someone in a confined space calling for help?

- A.** Get another employee to help you rescue the employee
- B.** Call 725-3911 and the Rescue Team will rescue the employee
- C.** Contact the area Safety Engineer
- D.** Contact your supervisor for a Confined Space Entry Permit

6. Select the tag you must be trained and authorized to hang.

- A.** Danger-Do Not Operate (DNO) – Hazardous Energy Control
- B.** Caution Tag
- C.** Danger-Unsafe Condition Tag
- D.** Warning Tag

7. Select the electrical safe practice you should take when working on or around electrical equipment.

- A.** Have your supervisor watch what you're doing
- B.** Visually inspect all equipment before each use
- C.** Remove receptacle covers after regular work hours
- D.** Place a "Caution" tag on the equipment

8. Which situation requires a time out?

- A.** It's time for lunch
- B.** You're not ready for your performance review
- C.** The work scope has changed
- D.** To warn employees of a random vehicle inspections

9. Where can you find the requirements for personal protective equipment?

- A.** Employee Safety Manual 8Q
- B.** The DOE handbook titled "Good Working Procedures"
- C.** The SRNS Time-Out Manual
- D.** The SRS Compliance Manual



III. GENERAL RADIOLOGICAL TRAINING (GERT)

Enabling Objectives:

- EO 3.01 DEFINE radiation, radioactive material, radioactive contamination and the ALARA principle.**
- EO 3.02 STATE the biological effects, risks and sources of radiation.**
- EO 3.03 STATE the SRS radiation dose limits and how radiation doses are tracked.**
- EO 3.04 STATE the types of radiological signs and barriers in use at SRS and the Radiological Area Access Restrictions placed on General Employees.**
- EO 3.05 IDENTIFY the proper techniques for using the PCM-1B.**
- EO 3.06 LIST the employee's responsibilities for the SRS Radiological Protection Program.**

In addition to the hazards usually associated with an industrial work site, such as working around electricity, flammable material or ignition sources, chemicals, heights or confined spaces, Savannah River Site Employees must face an additional hazard not commonly found in such industrial work sites.

Exposure to radiation, radioactive material and radioactive contamination are all possible for employees working at the Savannah River Site. These types of hazards may be found in numerous locations throughout the Savannah River Site and are dealt with similarly to the commonly found industrial hazards.



That is to say, through identification of the materials emitting radiation, training of the Savannah River Site personnel to work around these materials safely, and ensuring that there are procedures and protective equipment available to employees doing this work, all such work is conducted in a safe manner.

EO 3.01 Define radiation, radioactive material, radioactive contamination and the ALARA principle.

A. Definitions

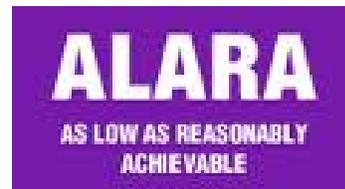
1. It is important for you to know that as a general employee, you will probably **NOT** be exposed to radiation, radioactive materials, or radioactive contamination.



- a) **Radiation** is energy from unstable atoms emitted through space and matter.
- b) **Radioactive material** is material that contains unstable atoms.
- c) **Radioactive contamination** is radioactive material where you don't want it to be.

B. Maintain Radiation Exposures ALARA

1. Even though the mission at SRS has changed from production to waste management and environmental restoration, the SRS policy for protecting employees, visitors, the general public, and the environment has not changed.
2. It is and always has been SRS's policy to maintain personnel exposure to radiation and radioactive materials at a level that is As Low As Reasonably Achievable (ALARA). Radiation exposure of the work force and public shall be controlled such that exposures are well below regulatory limits and that there is no radiation exposure without an overall benefit.



3. Additional Training

Additional training beyond GET is required for the employees who are identified as radiological workers. Every employee, both radiological worker and non-radiological worker, must play an active part in maintaining exposures to radiation and radioactive materials within DOE limits and As Low As Reasonably Achievable (ALARA).

EO 3.02 STATE the biological effects, risks and sources of radiation.

A. Biological Effects

1. Biological effects from chronic radiation doses may occur, although the risks are very small. These effects may show up in the exposed individual or in the future children of the exposed individual.
2. "Exposed individuals" have a slight risk that cancer may develop due to chronic radiation doses. This risk is small when compared to the natural occurrence of cancer. The high cancer incidence rate in the population makes it difficult to measure the additional risk of fatal cancers due to low-level radiation exposure.
3. Using data furnished by the National Academy of Sciences, a single whole body dose of 10,000 millirem delivered to a large population of persons of all ages could result in an increased risk of fatal cancers of less than 1 percent. The **millirem** is a unit used to express how much radiation we receive.
4. As for future children of the exposed individual, genetic effects have been extensively studied in plants and animals, but there have been no genetic effects clearly caused by radiation observed in human populations.

B. Risks in Perspective

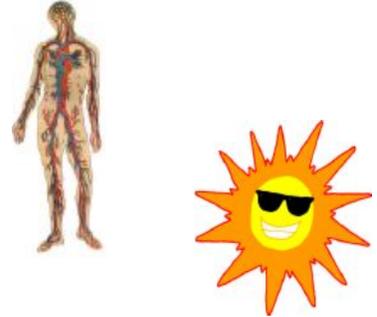
1. Even though we know that there are many benefits associated with radiation and radioactive materials, accepting a risk of any kind, such as smoking, driving a car, working at a nuclear facility, or playing football, is a highly personal matter. The Site's policy that no radiation exposure will be permitted without an overall benefit is important to minimizing any risk associated with working at SRS.
2. Risks associated with occupational exposures **are low when compared to other risks from normal day-to-day activities**. Occupational radiation doses are considered to be chronic doses. A chronic radiation dose refers to small amounts of radiation received over a long period of time.

C. Sources of Radiation

1. Our occupational exposure is not the only example of a chronic radiation dose. Another example of a chronic radiation dose is what we receive from natural background sources of radiation. We are also exposed to manmade sources of radiation.

a) Natural Background

- Cosmic radiation – the sun and outer space
- Radon – a naturally occurring gas
- Earth's crust – rocks and soil
- Human body

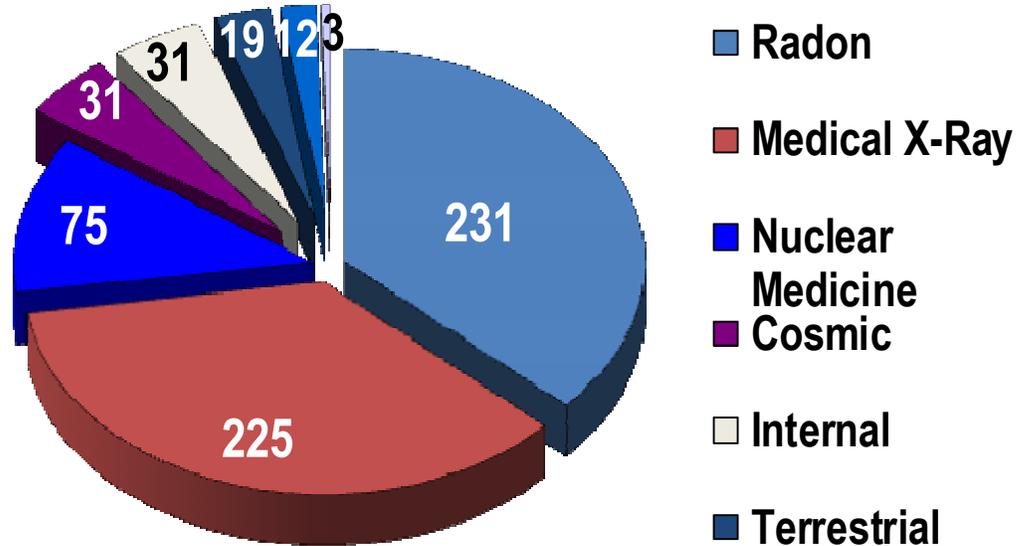


b) Manmade Sources

- Medical uses – x-rays and nuclear medicine
- Consumer products, such as smoke detectors, tobacco products and exit signs that glow in the dark



**Natural Background and Manmade
Sources of Radiation**
Expressed in millirem (mrem)



From the
National Council
of Radiation Protection
and Measurements (NCRP)
Report No. 160, March 3 2009.

D. Average Annual Dose

1. The general public receives about 620 millirem a year from natural background and manmade sources of radiation. This is an increase from the previous dose rate of approximately 360 millirem a year, due primarily to the growth in the use of medical imaging procedures.

a) Natural background sources

- Radon in homes 231 mrem/year
- Cosmic 31 mrem/year
- Terrestrial from the earth's crust 19 mrem/year

b) Other sources

- Medical & Nuclear Medicine 300 mrem/year
- Other (domestic round trip flight, 3 mrem/year
(smoke detectors, chest x-ray, cigarette smoking)

EO 3.03 STATE the SRS radiation dose limits and how radiation doses are tracked.

A. Personnel Dose Limits

Since there may be risks involved from chronic doses of radiation, there are limits and special policies put in place as to the amount of radiation workers may potentially receive.

B. General Employee Radiation Dose Level

DOE has established an Administrative Control Level of 2000 mrem per year per person for all its activities. However, the SRS general employee (non-radiological worker) radiation dose limit is administratively controlled to **100 mrem/year**.

C. Embryo/Fetus

Because a developing embryo or fetus is especially sensitive to radiation, a special policy is in place. Radiation doses to the embryo or fetus may increase the chances that the child will have slower mental growth, low birth weight, a small head size, or childhood cancer. This is one of the reasons why routine x-rays are no longer used on pregnant workers. It is also important to note that these effects can be caused by many other hazards or factors in our environment, such as smoking, drinking, or the age of the woman during pregnancy.



D. Special Policy for a Declared Pregnant Worker

After a female radiological worker voluntarily notifies her employer, in writing, that she is pregnant, she is considered a “Declared Pregnant Worker.” The employer then provides the option of a mutually agreeable assignment of work tasks, without loss of pay or promotional opportunity, such that further occupational radiation exposure is unlikely. This declaration is for the purposes of fetal/embryo dose protection. It should be noted that the declaration may be revoked, in writing, at any time by the declared pregnant worker.

E. Tracking Occupational Dose

1. Thermoluminescent Dosimeter (TLD)

Measures the amount of radiation an individual has received. It is worn on the front trunk of the body between the neck and waist and is attached to the security badge. Must obtain TLD and receive instruction on its proper use from Radiological Protection (RP) personnel prior to entry and return TLD after use to Radiological personnel.



2. Criticality Neutron Dosimeter (CND)

Measures dose in event of a criticality accident. CNDs are worn when working around fissile material, such as uranium and plutonium. RP advises not to take CNDs home, because of the hazardous material inside (could cause skin or eye irritation or burns). If taken home, CNDs should be treated as any toxic chemical. Special care should be taken to prevent breakage.



3. PRORAD System

- Electronic sign-in and sign-out of radiological areas
- Documents the person has read, understood and will comply with RWP
- Records time worked in radiological area
- Tracks workers' exposure

F. Access to Exposure Reports

1. Employees who are trained only at the GERT level are not expected to receive occupational dose above the site allowed 100 mrem/year; however, they may be monitored for exposure due to escorted entries into radiological areas. If you are monitored for exposure, you have the right to request reports of that exposure.
2. If you have a computer account, you can look up your dose history on InSite by going to your name and then clicking on "View Radiological Status."
3. Upon request, an employee may receive a current radiation exposure report by contacting Radiological Protection personnel.
4. Monitored personnel will receive an annual report of their exposure.
5. Upon termination, a report of radiation received will be available within 90 days.

NOTE: Individuals who have received radiation exposure at facilities away from SRS should arrange for those dose records to be sent to the SRS Dosimetry Records Coordinator.

EO 3.04 STATE the types of radiological signs and barriers in use at SRS and the Radiological Area Access Restrictions placed on General Employees.

A. Methods Used to Control Radiological Material

Just as there are signs that we see in our daily lives that help control access to areas or regulate our driving habits, SRS uses signs and specific barriers to control access to various areas controlled for radiological purposes.

1. Radiological Signs and Barriers

Signs that have the standard radiation symbol colored magenta or black on a yellow background are used to identify radiological areas and radioactive material. Yellow and magenta rope, tape, chains or other barriers also designate the boundaries of these areas.

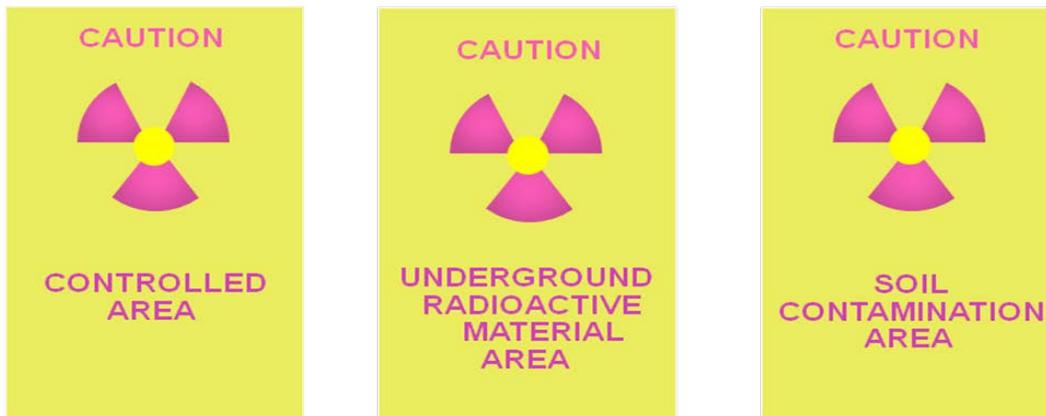
2. Special Packaging

Yellow plastic wrapping or a labeled container is used to package radioactive material. **Yellow plastic sheets cannot be used for non-radiological purposes.**

3. Designated Storage Areas

We use designated areas to store radioactive material. In areas that have radioactive contamination, protective clothing and equipment are used to prevent personnel contamination. Each type of radiological area will be posted as to whether the area has a radiation hazard and/or a contamination hazard.

B. Areas a General Employee CAN Enter Unescorted



**These areas must be outside
of Radiological Buffer Areas.**

As a general employee, you can enter these three areas without a radiological worker escort or any type of radiological controls.

1. Radiological Buffer Area (RBA)

An area established around radiological areas to manage personnel access to the radiological areas and to provide warning of the existence of radiological hazards in the area.

A Radiological Buffer Area is an intermediate area established to:

- Prevent the spread of contamination.
- Protect personnel from radiation exposure.
- Provide a buffer area between Controlled Areas and radiological areas.

Remember, if the Underground Radioactive Material Area and Soil Contamination Area are located inside the RBA, you must be escorted by someone who can enter the RBA unescorted.

C. Areas a General Employee CANNOT Enter Unescorted

General Employee Radiological Training (GERT) will NOT allow unescorted access to:

- Radiological Buffer Area (RBA)
- Radioactive Material Area (RMA)
- Radiation Area (RA)
- Contamination Area (CA)
- Inactive Contamination Area (ICA)
- High Radiation Area (HRA)
- High Contamination Area (HCA)
- Inactive High Contamination Area (IHCA)
- Airborne Radioactivity Area (ARA)
- Very High Radiation Area (VHRA)
- Radiography Area

EO 3.05 IDENTIFY the proper techniques for using the PCM-1B.

A. Personnel Contamination Monitor (PCM-1B)

PCM-1Bs provide a quick, reliable, and superior level of external alpha and beta-gamma contamination detection on personnel. Personnel performs 2 counts: a right side and left side count.

Response to alarm:

- 1) Complete the entire cycle.
- 2) Re-monitor two additional times.
- 3) If neither of the two re-monitorings do not cause an alarm, proceed.

- 4) Contact radiological control personnel immediately if either of the monitorings causes an alarm

EO 3.06 LIST the General Employee's Responsibilities for the SRS Radiological Protection Program.

A. Employee Responsibilities

In the unlikely event that a radiological incident should occur, it is important for each employee to know the emergency procedures. This has been addressed in the Emergency Management section.

A positive radiological attitude is not limited to those who perform radiological work. All employees have an impact on maintaining exposures to radiation and radioactive material As Low As Reasonably Achievable (ALARA). Some of our responsibilities are:

- Obey all signs and postings.
- Comply with all radiological and safety rules.
- Do not enter any area controlled for radiological purposes unless escorted or trained. If visiting a radiological area with an escort, obey their instructions.
- Obtain and properly wear dosimeters as instructed by procedure, Radiological personnel, or your escort.
- Use ALARA techniques to minimize your exposure.
- Comply with emergency procedures for your work area.
- Keep exposures to radiation and radioactive materials ALARA.



*Answer the self-check questions below.
The answers are in the back of this study guide.*



1. How do the risks from working in the nuclear industry compare to other risks we accept on a daily basis?
- A. The risks from working in the nuclear industry are lower
 - B. The risks from working in the nuclear industry are higher
 - C. The risks are the same
 - D. The risks from working in the nuclear industry are higher if the person is over 50

- 2. What are sources of man-made radiation?**
 - A. Radon, cosmic, medical x-rays
 - B. Cosmic, nuclear medicine, radon, the human, body
 - C. Earth's crust, radon, cosmic
 - D. X-rays, glow in the dark exit signs, smoke detectors

- 3. What is the SRS administrative control level dose limit for a non radiological worker?**
 - A. 250 mrems per/year
 - B. 500 mrems per/year
 - C. 5 Rems per/year
 - D. 100 mrems per/year

- 4. What method is used to control radiological material?**
 - A. Storing radiological material in clear plastic containers
 - B. Posting radiological signs colored yellow and magenta
 - C. Posting radiological signs colored orange and white
 - D. Storing radiological material in F-Area only

- 5. What are the employee's responsibilities for the SRS Radiological Protection Program?**
 - A. Keep your radiation exposure as low as reasonably achievable (ALARA)
 - B. You do not have any responsibility because you are not a radiological worker
 - C. Complete Radiological Worker I Training
 - D. Complete Radiological Worker II Training

- 6. For the past two months, you have been working unescorted by a radiological worker in an area posted as a "Soil Contamination Area." Today you notice that the posting has been changed. It now reads, "Radiological Buffer Area, Soil Contamination Area." What should you do?**
 - A. Enter the area as usual and continue working on your task
 - B. Request permission to enter from your Environmental Compliance Authority
 - C. Tell your supervisor so he can arrange radiological Worker escort for you
 - D. Contact the Industrial Hygiene office for permission to enter the area

7. Which item is used to detect radioactive material on the outside of your body?

- A. WBC
- B. PCM
- C. TLD
- D. ECA

8. Name four sources of natural background radiation

_____, _____, _____ and _____.



IV. SRS SAFEGUARDS AND SECURITY PROGRAM

Enabling Objectives:

- EO 4.01 STATE the purpose of the SRS Safeguards and Security Program.**
- EO 4.02 LIST the SRS Security Controls on information and property.**
- EO 4.03 IDENTIFY the SRS Security Areas.**
- EO 4.04 STATE the SRS Access Controls and Regulations**
- EO 4.05 STATE the elements of the SRS Security Badge Program.**
- EO 4.05 IDENTIFY the Security Restrictions on items and vehicles.**
- EO 4.07 STATE the SRS Incidents of Security Concerns Program reporting requirements.**
- EO 4.08 STATE the Reporting Requirements for an Employee and Management for the Workplace Violence program**

EO 4.01 STATE the purpose of the SRS Safeguards and Security Program.

A. Safeguards and Security Program

The purpose of the Security Awareness Program is to ensure employees are aware of their safeguards and security responsibilities and to promote continuing awareness of good security practices. The Security Awareness Program is implemented by using a variety of methods including, but not limited to, formal presentations, interactive videos, computer-based instructions, and instructional materials such as monthly security topic slides. A Security Awareness Program Manager is appointed to formulate the security awareness program, to design, develop and deliver security awareness briefings and to serve as a security resource.

Security Program

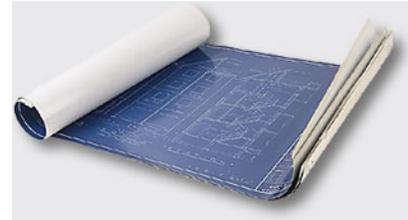
The mission of Savannah River Operations Office is to serve the national interest by providing leadership, direction, and oversight to the Savannah River Site (SRS). SRS's programs, operations, and resources are managed in an open, safe, environmentally sound, and cost-effective manner with a primary focus to:

- Store, treat, stabilize and dispose of waste materials.
- Promote continuing awareness of good security practices.
- Restore the environment and manage natural resources.
- Develop mission-supportive technology partnerships.
- Manage the disposition of nuclear materials and facilities.
- Support current and future national security and nuclear materials

EO 4.02 STATE the SRS Security Controls on information and property.

1. Information Security

The purpose of Information Security is to establish security requirements for the protection and control of information and matter required to be classified or controlled by statutes, regulations, or DOE directives. Information Security consists of Classified Matter Protection and Control, Operations Security (known as OPSEC), Controlled Unclassified Information, and Technical Security Countermeasures.



Examples of classified markings are:

<u>Level</u>	<u>Category</u>
Top Secret	Restricted Data
Secret	Formerly Restricted Data
Confidential	National Security Information

- This information must be protected from unauthorized access.
- If a suspected classified document or electronic media is found, maintain control and notify your manager, security representative or Pro Force.
- Classified documents are identified with a cover sheet. A blue cover sheet indicates a "Confidential" document classification and a red cover sheet indicates a "Secret" classification.

- Under 10 CFR 824, civil penalties for violations by a DOE contractor can be up to \$110,000 per day, per violation. Criminal penalties through other regulations/authorities can range from significant fines to life imprisonment depending on the specifics of the violation.

A. Controlled Unclassified Information (CUI)

- Controlled Unclassified Information (CUI) is unclassified information that may be exempt from public release under the Freedom of Information Act.
- It is important for employees to understand that the protection of information at Savannah River Site includes not only classified information, but also unclassified information that may require controls. UCI includes Unclassified Controlled Nuclear Information (UCNI), Official Use Only (OUO), and Export Controlled Information (ECI). This information must be protected from unauthorized access.
- Access to CUI must be provided only to authorized personnel or someone with the need-to-know in the performance of their job. Authorized personnel must maintain physical control over all CUI documents while in use. CUI must be stored to prevent unauthorized access to the information.
 - ✓ Outside of Limited Areas, CUI must be secured behind a locked door or in a locked container when unattended.
 - ✓ If you are located within a Limited Area, CUI documents only require storage in unlocked desks, file cabinets or a bookshelf, but must be out of sight.
- All CUI transmitted off the site should be by the most secure method available. When transmitting CUI, it is very important to inform the recipient that the information is CUI. This can be accomplished by marking the transmittal cover (fax sheet or transmittal letter) as “Document Transmitted is (OUO).” If the transmittal is UCI, it must contain all applicable markings.
- Per Cyber Security requirements, if CUI (to include Personally Identifiable Information -- PII) is transmitted off the site, it must be encrypted!
- Employees who originate or possess a document that they believe may contain UCNI must send the document to a Reviewing Official for a determination before it is finalized, sent outside their organization, or filed.

B. Operations Security (OPSEC)

- Operations Security, known as OPSEC, is the program designed to implement OPSEC countermeasures. These countermeasures provide reasonable assurance that unclassified controlled information about DOE-SRS operations and activities is protected and secured against inadvertent release or unauthorized disclosure to adversaries.

- Employees are often targeted by these adversaries as being the easiest and most reliable source to obtain current information about DOE-SRS operations. This form of "intelligence gathering" is the most common used by adversaries to obtain information.
- The following are some examples of how adversaries may gather information:
 - ✓ conferences or trade shows
 - ✓ during conversations, either on unsecured communications or at restaurants, airplanes, or other public places
 - ✓ in memos or reports that are disposed of as unclassified waste or distributed to personnel who do not have a legitimate need-to-know
- As an employee, your responsibility is to know how to protect unclassified controlled information from unauthorized disclosure. Start by asking yourself, "If I were the adversary, could this information be useful to me?"

C. Technical Security

The Technical Security Program is intended to detect and defend against technical surveillance threats and neutralize vulnerabilities associated with various communication and data processing technologies. Conducting classified operations in properly approved areas is key to protecting information. Most technical surveillance devices require physical access for effective placement. The first line of defense in preventing such placement is an observant workforce. Any suspicious behavior or unauthorized personnel in your work area should be questioned. The discovery of unattended transmitting or recording equipment in security areas must be immediately reported to Technical Security (803) 725-4133 or 3-3911. If you suspect a surveillance device in your work area contact the Technical Security Team at (803) 725-4133 or 3-3911 from a location other than where the surveillance device is located. Any action related to a technical surveillance attack, actual or suspected, is considered classified and based on a strict need-to-know principle so do not discuss with others.

D. Property Management

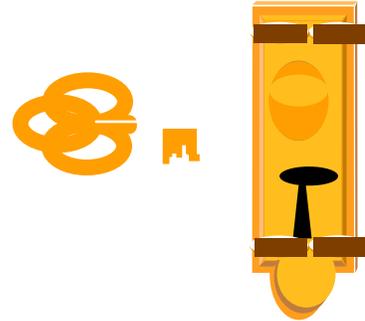
Is responsible for implementing the property protection and loss prevention programs. Protection of government property is enhanced through random security checks, equipment marking, property pass controls, and accountability procedures.

1. Protecting Government Property

Protection of government property from theft is an important security responsibility. All facilities in the Property Protection Area must be locked when unoccupied. WSI-SRS law enforcement personnel conduct routine patrols of the area to ensure the facilities are secured. Facility personnel that are responsible for buildings equipped with cipher locks on outside doors should report the cipher code to the SRSOC to allow emergency entry if needed on an OFF shift. Additionally, repository custodians must complete an SF-700 "Security Container Information" form listing personnel with access

to repositories they are assigned to. If a repository malfunctions, this needs to be reported to your appropriate Lock and Key Control for immediate repair. Remember to:

- Lock building doors that are required to be secure
- Maintain accountability of all keys you are assigned
- Report the loss of any keys to your supervisor or manager
- Turn in any keys you no longer have a need for by returning them to your supervisor, manager or Subcontract Technical Representative (STR)
- Do not transfer keys to someone else. Keys are accountable through the Lock & Key Control office.



2. Property Pass

- A **Property Pass** is required for transporting government-owned or leased property from SRS to off-site facilities and when transporting government-owned or leased property in a privately owned vehicle onsite. It is also required for transporting government property in a personal vehicle on the site.
- Contract employees may obtain a Property Pass electronically from InSite or from their Asset Management Specialist.

NOTE: Subcontractors may not be issued a Property Pass unless their contract contains a clause stating that they will be provided government-furnished equipment.

- Obtain proper authorization prior to transferring, discarding, dismantling, or otherwise disposing of any government property. Employees are required to check with their management to ensure property disposition actions meet the requirements of the organization's asset management procedural guidance. **Unauthorized removal of government property from the site is prohibited.**

NOTE: Subcontractors may use government - furnished equipment only when specified in their contracts and authorized through their Subcontract Technical Representative (STR).

- Disciplinary action could result from taking or receiving, without authorization, property belonging to the company, fellow employees, or the government.

Property Pass No A 0085485		
User Name GOLDEN, JILL S	User ID E5780	
Authorization		
Approver Name/ID/Phone ROTE, DENNIS / Y6236 / 8-1310	Expiration Date 07-09-13	
Property Description and Equipment Identification		
STANDARD LAPTOP, MFG: LENOVO, Model: THINKPAD L420, Serial #: LR9GCBV, ELI #: 00V0050808		
STANDARD LAPTOP, MFG: LENOVO, Model: THINKPAD L420, Serial #: LRC733H, ELI #: 00V0050809		
STANDARD LAPTOP, MFG: LENOVO, Model: THINKPAD L420, Serial #: LRC733Y, ELI #: 00V0050810		
I accept responsibility for the protection of this equipment and will use it only to conduct authorized government business. I will report abuse, damage, theft, loss or misappropriation of these assets to my manager and Asset Management Specialist (AMS). I will also notify Wackenhut within 24 hours, or the next business day, of the discovery that the equipment has been lost or stolen. If the loss or theft occurs off-site, I will report it to local law enforcement and obtain documentation of the report. Prior to the property pass expiration date, I will obtain a new approved property pass, or return the equipment to the site and destroy the pass.		
User Signature		<i>Jill Golden</i>

EO 4.03 IDENTIFY the SRS Security Areas.

1. Security Areas

A Security Area is a physically defined space (area) containing a security interest and is subject to protection and access controls. Security Areas have clearly defined barriers such as fences, walls, and doors. Contraband requirements vary depending on the Security Area designation.

- **General Access Area (GAA)**

GAAs are security areas that are established to allow access to certain areas with minimum security requirements. These areas are accessible to all personnel, including the public, and individuals are subject to GAA security requirements.

- **Property Protection Area (PPA)**

- ✓ PPAs are security areas that are defined by a fenced area, secured building, or manned barricade. These areas are established for the protection of government property against damage, destruction, or theft (regardless of its disposition state).
- ✓ Entry/exit inspections are conducted randomly to prevent the unauthorized introduction of prohibited articles or removal of government property.
- ✓ All employees and badged visitors have unescorted access with a security photo badge.
- ✓ Examples of PPAs are the Central Training Facility (766-H) and the engineering buildings in B-Area as well as SRS off-site facilities.

- **Limited Area (LA)**

- ✓ LAs are security areas defined by permanent barriers that control, impede or deny access to unauthorized individuals and are established for the protection of classified matter and quantities of Category III Special Nuclear Material (SNM).
- ✓ Protective Force personnel or other internal controls are in place to prevent access to classified matter by unauthorized persons.
- ✓ Unescorted entry to LAs requires an "L" or "Q" clearance and for specific facilities, an access limiter on the security badge.
- ✓ Entry/exit inspections are conducted randomly to prevent the unauthorized introduction of prohibited articles and the unauthorized transporting of government property.
- ✓ Examples of LAs include some facilities/locations within the 700-A Administration Area, Savannah River National Laboratory, 200-H Area and Tritium Area.

- **Exclusion Area (EA)**
 - ✓ EAs are defined by physical barriers with access controls where mere presence in the area would result in access to classified matter. EAs must meet all requirements of an LA. Visual barriers must be used if visual access is a factor.
 - ✓ “Q” cleared employees with special access and authorization are allowed unescorted access.
 - ✓ EAs at SRS are located within the Tritium Facilities Limited Area.
- **Protected Area (PA)**
 - ✓ PAs are established for the protection of Category I and II quantities of SNM which are encompassed by physical barriers including perimeter intrusion, explosive detection and assessment systems. Access controls include metal detection on entry/exit and SNM detection on exit. These barriers and controls are designed to impede or deny access to unauthorized individuals.
 - ✓ “Q” cleared employees with additional access codes on their badge are allowed unescorted entry.
 - ✓ “L” cleared employees may require access approval and an escort.
- **Material Access Area (MAA)**
 - ✓ MAAs are located within Protected Areas (PAs) and are used for the protection of Category I SNM or Category II quantities of SNM with credible rollup to a Category I quantity.
 - ✓ MAAs are usually vaults or vault-type rooms located within a PA.
 - ✓ “Q” cleared employees, with special access limiters, are allowed unescorted access.

B. Point of Entry Process

The Integrated Safety Management System (ISMS) is a Safety Management System to systematically integrate safety into management and work practices at all levels as required by DOE Policies. The Point of Entry (POE) process ensures that vendor and visitor activities and work scopes are reviewed from an ISMS perspective, including hazard identification and confirmation that appropriate controls are established before beginning work. All performing entities of SRS use this process. It is also applicable to their subcontractors, visitors, and vendors as well as sub tier subcontractors, and visitors and vendors of subcontractors or sub tier subcontractors.

All visitors and vendors must receive a general visitor/vendor safety and security briefing in the 703-46A Badge Office.

All SRNS vendors making deliveries to the SRNS Procurement Warehouse Operations will also use hazard-specific checklists for high and medium hazard work and will be subject to focused observations, as appropriate.

In summary, the POE process includes:

- A general visitor/vendor safety briefing for all visitors and vendors.
- Hazard determination (high, medium or low) for work accomplished by vendors and visitors.
- Hazard-specific safety checklists used at the job site for high and medium hazard work by visitors and vendors.
- An oversight and feedback process to trend subcontractor, visitor and vendor safety performance and improve as necessary.

EO 4.04 STATE the SRS Access Controls and regulations.

A. Physical Security Programs

Physical Security Programs shall provide graded protection of Safeguards & Security interest from theft, unauthorized destruction, loss, or compromise. This program also protects and controls personnel, Special Material, classified and sensitive unclassified information, and government property from unauthorized access, removal, damage, or destruction through the integration of security equipment, procedures, protective forces, and management

1. Access Controls

- Access Controls for physical security programs provide graded protection for Safeguard & Security interests. The more attractive the security interest, the more robust is the physical protection.
- These controls range from security locks, protective force personnel and electronically controlled locking devices.
- Access controls are used to support the protection of Special Nuclear Material (SNM), classified matter, government property, facilities, employees and the public. Entry Control Facilities (ECF) and vehicles barriers are used to control and direct the flow of personnel and vehicular traffic.
- Different security and access controls are used according to what needs to be protected. WSI-SRS Security Police Officers (SPOs) provide the physical security and protective force at these control points. The controls include, but are not limited to, badge grasping to ensure positive identification, fences, barricades, and monitoring devices. At some time you may be part of a random inspection performed by WSI-SRS SPO's. Your car may be searched at entry and exit points to facilities, areas, and boundaries. When you are involved in these activities, follow the instructions of the WSI-SRS SPO's. Failure to comply can result in denial

of entry. WSI-SRS SPO I Special Constables have warrantless arresting authority, like state law enforcement authorities.

- As security conditions change, our security posture will adjust to the need. Whether security is enhanced or downgraded, employees will be informed of these changes through communication tools such as security bulletins, employee communications (e-mail), Division Digests, toolbox sessions, and staff meetings.

2. Barriers

Are fences, building exteriors or posted geographic boundaries constitute Property Protection Areas and facility barriers. They served as the physical demarcation of areas and are used to facilitate effective and efficient flow of personnel and vehicular traffic through designated portals. Additional barriers include: walls, ceilings, floor, doors, special barriers, and gates

3. Security Systems

Security Systems are physical security systems that ensure the protection of Special Nuclear Material (SNM), vital equipment, classified matter, DOE property, and unclassified facilities through the use of intrusion detection devices and CCTV monitoring.

EO 4.05 STATE the Elements of the SRS Security Badge Program.

A. SRS Security Badge

- The DOE-SR Personnel Security Department is established to ensure the overall objectives and requirements of the Personnel Security Program are implemented.
- A photo ID badge is required for unescorted entrance to SRS. The security badge color/clearance level on the badge identifies the access level the wearer has been approved for through the DOE Personnel Security Program. Clearance approval and need-to-know are components for access to national security information. A light blue badge indicates a "Q" clearance. Light yellow indicates an "L" clearance. A maroon badge is issued to uncleared personnel. A "C" for "Contractor" is located along the right edge of the security badge for any contractor employee. HPSD-12 Badges (white photo badges) will have the clearance level printed on the badge (L or Q). Uncleared HSPD-12 Badges will not have a clearance level designation. A red badge is issued to foreign nationals and is initialed with "FN" on the badge.
- Access to any level of classified matter is restricted to individuals who are authorized or "cleared" through the DOE's Personnel Security Program. The

DOE security badge is used as an indicator of authorized site access and the level of clearance. Follow these rules when you are issued a badge:

- ✓ Badges must be worn at all times while on the site and at off-site DOE facilities.
- ✓ Protect your badge from theft.
- ✓ Badges must be worn in plain view and at chest level.
- ✓ Badges must **not be worn** in public or **used** as personal identification outside of the SRS.
- ✓ The badge you receive is an important credential. Familiarize yourself with the policies listed below.
 - It is against the law to counterfeit, alter, or misuse your badge.
 - If your badge is lost or stolen, report it immediately to the Badge Office (within 24 hours) and complete OSR 10-32 *Lost /Damaged/ Stolen Badge Report*. If your badge is stolen, you are required to file a police report and provide a copy of the report to the SRS Badge Office.
 - Your badge is the property of DOE and must be returned to the Badge Office if it has expired, is no longer required, or upon your termination.
 - If you take an extended leave of absence (90 days or longer), you must return your badge to the Badge Office.
 - Renew your badge when there is a change in name, physical appearance, or the badge becomes faded or damaged.
 - Do not use your badge outside of DOE facilities, other than for government purposes.
 - Do not use your badge off-site for verification of employment or for verification for discounts. Use your Site ID for these functions.

1. Proximity Badge

This badge is a tan proximity badge that contains access authorization information and allows an individual access into certain security areas. Uncleared personnel may be issued a proximity card but are required to be escorted by a cleared individual when entering a Limited Area or higher security area. If you are being escorted, it is required that you remain with your escort at all times.

- SRS does not issue one-day temporary badges. If you forget your badge, you will have to retrieve your badge prior to entry onto the site.
- If you lose your badge, you must complete form OSR 10-32 *Lost/Forgotten/Stolen Badge Report* and submit it to Security (Badge Office). If your badge is stolen, you must produce a police report and submit the proper form to Personnel Security

2. Site ID/ProRad Badge

This badge displays the employee's photo, name and User ID (bar-coded). It is about the size of a credit card and has a magnetic strip on the back. You must wear your Site ID/ProRad badge at all times on the site. The badge has three purposes. It is:



- Scanned at the barricade when an individual is pulled over for a random inspection.
- Used in place of RAD I, RAD II and Non-RAD badges at the nuclear facilities on the site.
- Used to verify employment for government rates at hotels while on government business travel.

3. Badge Inspections at Site Perimeter Barricades

The driver of the vehicle must have:

- a) Valid driver's license
 - b) Current vehicle registration
 - c) Current proof of vehicle insurance, with expiration date
- **Approach with caution.** Vehicles will be required to come to a complete stop. All vehicle occupants of the vehicle will remove their Site security badge and give the badge to WSI-SRS for inspection one at a time. If your badge is in a plastic holder/badge protector, employees are required to remove the badge from the badge holder prior to handing your badge to the protective force member. If the employee has a HSPD-12 security badge, remove the badge from the badge holder, and give the security badge to WSI-SRS. If the employee has the old style badge, the employee will also give the security badge to WSI-SRS. WSI-SRS will keep control of the badge until the entire inspection process is completed. WSI-SRS will conduct a plain view inspection of the vehicle at this time for prohibited and controlled articles. WSI-SRS will provide direction to the driver if the vehicle is selected for a random inspection. After WSI-SRS has completed the plain view vehicle inspection, verified and inspected the security badge, they will return it to the employee. The employee(s) should place the badges back on their lanyards and when instructed, proceed with caution. The badging process will be required for all occupants of the vehicle. In all cases, the employee will give the badge to WSI-SRS.
 - At the Site perimeter barricades it is important for employees to be prepared to stop, present their badge and be alert to the safety of all personnel.

- When approaching the barricade, follow all required posted speed limits, stop signs and direction provided by WSI-SRS.
- Prior to pulling up to the barricade, have the vehicle windows down so WSI-SRS can view the inside of the vehicle. Passengers in the vehicle should be awake. During the security badge inspection process, drivers and passengers should refrain from talking on cell phones, turn the volume down on radios/DVD players and avoid eating/drinking/smoking while processing in at the barricade. Then, give your badge to the WSI Officer.

Note: During shift change the barricade arms will be in the up position. During non-shift change, the barricade arms will be in the down position, and WSI-SRS will raise the arm following the badge inspection process.

4. Random Vehicle Inspection

- As part of the search process for prohibited and controlled articles at the site perimeter barricades, when a personally- or privately-owned vehicle (personally-owned vehicle, subcontractor vehicle, vendor vehicle, etc.) is pulled for a random vehicle inspection at a perimeter barricade, the Protective Force, in addition to checking for required security badges and conducting a search of the vehicle, will also ask for:
 - a) Valid driver's license
 - b) Current vehicle registration
 - c) Current proof of vehicle insurance, with expiration date
- A driver is required to have **all** of these documents in order to drive the vehicle on-site, and is required to have these documents on his/her person or in his/her vehicle.
- It does not matter in which state the vehicle is registered, Site policy requires that you have/provide proof of all three documents when pulled for a search: valid vehicle registration, valid vehicle insurance, and valid driver's license. Therefore, even if SRS employees reside in a state that doesn't require the proof in the car, they need to make a copy of their insurance card showing current insurance dates or a copy of their policy to show they do, in fact, have insurance. Anyone not having these documents will be denied Site access, and, if in violation of a law, will be cited for the violation. Prior to the vehicle being allowed access to the Site, all three required documents must be available. After removing the vehicle from the Site and until such time all required documentation is available, the employee can return to work at the Site, but the vehicle is not authorized on-site (i.e., ride with another employee, etc.).



- Pull over to the safe lane.
- Apply parking brake and shut off your engine.
- Open all inner compartments.
- Open all closed containers, such as briefcases, purses and lunch boxes.
- Exit vehicle.
- Hand Security badge and Site ID \ badge to WSI officer and tell him name of your company.
- Open all doors and trunks.



5. Site Policy Violation Policy (SPV) Notice

A Site Violation Policy notice will be given to individuals who cannot provide the required documentation for Site access such as valid drivers' license, current proof of insurance and vehicle registration and/or if the employee has prohibited and controlled articles in their personally owned vehicle when pulled for inspection at a Site perimeter. The Site Policy Violation Notice is as follows:

- Site access will be denied
- Employee will be issued a Site Policy Violation Notice form
- Employee will sign the Site Policy Violation Notice form and keep a copy
- The signature acknowledges that the employee understands the violation (vehicle is being denied access to the site and the issue must be resolved before bringing the vehicle back onto the Site)
- Employee is required to return with their copy of the form and provide proof of violation resolution at affected barricade within 72 hours of the violation
- WSI-SRS will provide a daily unresolved status report to all Contractor Companies and DOE-SR listing the violators and those who have not returned to the barricades for a re-inspection of their vehicle.
- The applicable Contractor Companies (security groups) will be responsible for contacting the employee's management if resolution of the violation has not occurred within 72 hours of the violation.
- If an intentional re-entry to the site is made prior to resolving the documented violation, the employee may be subject to their company's disciplinary action for violating this site policy



- After removing the vehicle from the Site and until such time all required documentation is available and/or prohibited and controlled articles are removed, the employee can return to work at the Site, but the vehicle is not authorized on-site (i.e., ride with another employee, etc.).



WSI-SRS Team Law Enforcement/Protective Force will also stop individuals observed using hand-held electronic devices such as cell phones, PDAs, BlackBerrys, Palm Pilots, personal computers, hand-held GPS devices, pagers, etc., while driving on Site and issue them a Site Policy Violation Notice. The individual's manager or Subcontract Technical Representative will be notified for appropriate action to be taken.

6. Badge Inspections at Security Area Entry Control Facilities

Employees entering Security Area Entry Control Facilities (ECF) as pedestrians will follow the same Site badge removal and turnover process as the vehicle entry process.

7. Escorting Responsibilities

Escorting individuals who are not cleared for a security area or facility is something you will have to do from time to time. As an escort, you must:

- Ensure personnel you escort are aware of area safety and security rules and regulations.
- Ensure personnel escorted do not bring into a security area any prohibited and controlled articles.
- Maintain continuous visual and voice control of the escorted personnel.
- Ensure escorted personnel do not have access to any classified materials, conversations, and computers.
- Discuss only authorized information with the escorted individuals.
- Notify Security personnel when problems occur with personnel being escorted.
- Report inappropriate questions or discussions to the DOE-SR Counterintelligence Office.

Escortee Responsibilities

- Staying within line of sight and normal voice communications of the assigned escort at all times (communications - unless traveling in separate vehicles to and from perimeter barricades escorting a driver of a delivery vehicle).
- Ensuring the badge (visitor or photo) is properly displayed.

8. The Challenge System

- The purpose of the challenge system is to prevent unauthorized persons from obtaining access to classified work areas or to classified information not officially required in the performance of their assigned duties.
- If you encounter a person who is not cleared for the area they are in or the person is not wearing a security badge, Uncleared person without escort where required or Suspicious acts you should enact the Challenge System. Immediately report suspicious acts to SRS Operations Center (SRSOC): **3-3911**.

EO 4.06 IDENTIFY the security restrictions on items and vehicles.

A. Prohibited and Controlled Articles

1. The following are considered prohibited articles and are prohibited at SRS and its facilities unless in the possession of a person with a valid pass:
 - **Potential Weapons** - cross-bows, bows and arrows, martial arts weapons such as billy clubs or nun chukkas, machetes, butterfly knives, other fixed-blade knives not intended as eating utensils or required in the performance of duty, and folding knives with blades over three inches.
 - **All Firearms** - *Exception: shotguns belonging to hunters who have been issued SRS hunt permits and are participating in authorized hunts.*
 - **Simulated Firearms** - *Exception: obvious children's toys determined by WSI-SRS Protective Force supervisor.*
 - **Ammunition**, gun powder and explosives - *Exception: empty or fired cases.*
 - **Incendiaries** and accelerants such as gasoline/diesel fuel not contained within factory-installed fuel tank, explosive materials and related devices (fireworks, blasting-caps) *Exception - highway safety flares properly stored.*
 - **Alcoholic beverages**
 - Non-prescription narcotics, illegal drugs, controlled substances and drug paraphernalia or articles used in the sale, manufacture, delivery, or possession of illegal drugs. These articles include hypodermic needles and syringes, roach clips, spoons, vials and pipes designed to smoke hashish or marijuana - *Exception: Hypodermic needles used for legitimate medical purposes are exempt from the restriction*



- Tear gas, chemical mace, devices containing chemical agents, or other chemical irritants - *Exception: containers of two ounces or less of pepper or mace sprays carried for personal use are permitted at SRS with the exception of Material Access Areas*
- Stun guns

NOTE: Some items are prohibited and controlled everywhere on-site and in DOE off-site facilities. Other items are prohibited and controlled only in SRS security areas (Limited Areas and above.)

2. If an item is not required in the performance of your job on-site, then the item should be left at home. This would include the following types of items: Garden and yard tools such as garden hoes, shovels, pitchforks, digging tools, pruners, rakes, tools for watering, branch cutters, shredder, chipper, garden tools for weeding, garden trowel, garden tiller/cultivator, hedge cutters, weed-eater, chain saws, pipes, machetes, yard brooms, electric blowers, electric trimmers, electric vacuums, and lawn mowers.
3. In an effort to minimize delays during the vehicle inspection process, employees should clean out their vehicle and leave unnecessary equipment, tool-boxes, boxes, luggage, garden tools (items listed above) at home. Certain items could be considered a prohibited and controlled item (weapon) such as machetes, axes, pipes and nail guns, unless these items are needed and approved for an employee's work requirements.

B. Controlled Articles Not Permitted in Security Areas (Limited Areas and above) include:

- Electronic copying or recording devices (e.g., tape recorders, video recorders, digital cameras)
- MP3 players, iPods, or other similar devices containing a microprocessor
- Cameras and undeveloped film including disposable cameras with built-in film.
- Wireless transmitting equipment
- Two-way radios (including Citizen Band – CB) and cellular telephones unless permanently mounted in a vehicle that is authorized to enter on official business (Radios identified as government property or installed in a vendor vehicle authorized to enter a security area on official business are exempt from this policy)
- Non-government pager with transmitting capabilities

C. Personally-Owned Electronic Equipment

Personally-Owned Electronic Equipment (POEE) is defined as all electronic equipment not purchased with U.S. Government funds. Site policy prohibits the use of any employee-owned computer, recording device, or communications device for site business or from entry into site facilities Limited Area or higher.

Examples include, but are not limited to:

- iPod, MP3 players, thumb drive or any similar device
- Cell phones, Blackberry devices, iPhones and iPads
- Personally-owned computer, including but not limited to: desktop, laptop and hand-held computers
- Portable storage devices (thumb drive and USB storage devices)
- Pagers (two way)
- Cameras and recording equipment

NOTE: The use of electronic devices to transmit or record meetings or conversations without acknowledgement and permission of all parties is prohibited.

Employee-owned devices may be brought on the general site as long as they are not interfaced in any way with Site systems or networks. This policy does not apply to contractor-owned or leased equipment. It does not apply to any equipment personally-owned by the subcontract employee. This personally owned equipment is not under Site control, either by procedure or the terms of the contract, and therefore, is not allowed.

D. Nuclear Material Control and Accountability (NMC&A)

The DOE NMC&A Program is responsible for ensuring our site's nuclear materials inventory is accounted for and adequately protected. One of SRS' primary missions is the disposition of Special Nuclear Material (SNM, such as plutonium and uranium), including processing, storage, and final disposal activities. The NMC&A program assures that the nuclear material inventory is accounted for and that nuclear materials have not been lost, diverted, or stolen. NMC&A employs three system elements working together with other security programs to ensure nuclear materials are properly managed:

- **Program Administration** (basic tenants, implementation plans, procedures, training and performance testing)
- **Material Accounting** (defines requirements for nuclear material accounting, tracking internal nuclear material movements, shipping offsite as well as nuclear material measurements, measurement control and physical inventory.
- **Material Control** (requirements for authorizing access to nuclear material, accounting data and NMC&A equipment used in material control activities, material surveillance and detection/assessment requirements)

These NMC&A elements implemented in 22 Material Balance Areas at SRS assure the Department of Energy that nuclear materials have not been lost, diverted or stolen. The basis for NMC&A requirements is the Atomic Energy Act of 1954 and other applicable United States codes and regulations.

E. Cyber Security

- The purpose of the Cyber Security Program at the Savannah River Site (SRS) is to adequately and cost effectively protect the integrity, confidentiality, and availability of classified and unclassified information, networks, systems, and applications.
- Cyber Security is the site security oversight organization responsible for establishing and maintaining network perimeter security and administering and managing a risk-based classified and unclassified cyber security program to meet the requirements established in DOE orders and policies for DOE Environmental Management (EM) and the National Nuclear Security Agency (NNSA).
- Personal software/games and personal thumb drives are not allowed on government computers. If any government equipment or property assigned to you is missing, immediately report the situation to your organizational Asset Management Specialist or Property Management. If you know the item has been stolen, immediately contact WSI-SRS.
- Waste, fraud, and abuse of government computers is prohibited. Such activities may be considered criminal and punishable under the Computer Fraud and Abuse Act of 1986. Examples of inappropriate use of computer resources include:
 - ✓ unauthorized copying of computer software
 - ✓ placing unauthorized personally-owned software or hardware (e.g. thumb drive, flash drive or mobile phones) on government computers
 - ✓ improper protection/control of CUI

1. Computers and the Internet

It has been determined that employee use of the Site internet and email resources will be allowed on a responsible basis. Employees are permitted limited use of their Site computers for personal purposes, but only where such use:

- Involves de minimis (insignificant) expense to the U. S. government
- Does not interfere in any way with proper completion of the daily duties of the employee
- Does not in any way facilitate, enhance or promote the employee's outside, personal business
- Does not allow for the creating, downloading, viewing, storing, copying or transmitting sexually-explicit or sexually-oriented materials
- Does not require any change to any current site operation or support from site organizations.
- Online gambling is strictly prohibited

Employees who use government computers are required to:

- Ensure that the site networks are protected
- Ensure that software is used for work-related purposes
- Use site-standard software as much as possible
- Prevent the introduction, connection or interface of POEE to government computing resources.

Warning – When you send your personal, encrypted information through the SRS firewall to a bank, retail establishment or any web or email address, this encrypted traffic will be decrypted for security inspection. It will be re-encrypted prior to being sent to its final destination. However, your personal information will remain on a server onsite. Use of appropriate caution is your responsibility.

**EO 4.07 STATE the SRS Incidents of Security Concern
Program reporting requirements.**

A. Incident Identification

Incidents of security concern may involve a security deviation; inadvertent access, unauthorized disclosure, loss, potential or actual compromise of classified and unclassified controlled information; theft, diversion, loss or destruction of special nuclear material, nuclear weapons or weapon components; espionage; loss or theft of government property; loss of confidentiality, integrity, or availability of information systems; and other hostile acts that may cause unacceptable adverse impacts on national security.

• **Incidents of Security Concern (IOSC)**

Are any actions, in-actions, or events that have occurred at the SRS that:

- Pose threats to national security interests and/or critical DOE assets,
- Create potentially serious or dangerous security situations,
- Degrade the effectiveness of the Safeguards and Security (S&S) program, or
- Adversely impact the ability of SRS organizations to protect DOE S&S interests.
- Such events are of concern to the DOE S&S Program and warrant preliminary inquiry and subsequent reporting.
- Any SRS employee or subcontractor discovering an incident of security concern, must immediately report the issue to his supervisor/manager. Notification of the incident should be made to the Security Incident Program Manager (SIPM) by the supervisor/manager.
- If the discovery involves classified matter, SNM or nuclear material, CUI, or other DOE security interest at risk, the employee or subcontractor must make

reasonable steps to safeguard and secure the security interest in an appropriate manner until relieved by authorized authorities.

- The supervisor reports the incident to the SIPM who will determine if the event meets the incident criteria and what the appropriate method of reporting should be. The SIPM will make appropriate notifications to management and DOE officials as warranted.

Violation – Any action or intent that constitutes a violation of U.S. law or Executive Order or the implementing directives

- **Traffic Accidents and Citations**

- Report all on-site traffic accidents to:
 - ✓ WSI-SRS at 803-725-2310 **AND** your supervisor
 - ✓ Off-site traffic accidents and traffic citations to your supervisor for a government vehicle or personal vehicle on government time
- For a traffic accident in a government vehicle, fill out accident report forms located inside the glove compartment

- **Use of Government Vehicles**

- Must have supervisor's authorization to operate a government vehicle.
- Vehicle must be used for official business only.
- Only passengers on official business are permitted in government vehicles.
- The driver must possess a valid state driver's license.
- Tobacco use in any form in a government vehicle is prohibited.
- Drivers must stop at Site perimeter barricades for inspection.
- All government vehicles must be locked when unattended.

- **Personally-Owned Recreational Vehicles**

- Boats, campers, travel/cargo trailers, and motor homes are not allowed on site but employees may park such vehicles in a short-term lot near the badge office.
- Employees must contact WSI-SRS at 803-725-2310 to gain permission to park in this area for less than 24 hours. All vehicles are subject to inspection and vehicles parked without prior notification/ permission will be towed.

B. Counterintelligence Office

The Office of Intelligence and Counterintelligence, Savannah River Field Office was established to provide counterintelligence and counter terrorism support to the Savannah River Site. Counterintelligence Officers can be reached at 803-725-5086 or Building 705-A to discuss Counterintelligence concerns.

- **Security Reporting Requirements**

Employees applying for or granted a DOE access authorization must report the following information to their Personnel Security Office, verbally, within two working days followed by written notice within the next three working days. All SRNS and SRR employees and their partners are to report:

- **To the Personnel Security Office**

- Legal action effected for name change
- Change in citizenship
- Any use of an illegal drug, or use of a legal drug in a manner that deviates from approved medical direction
- Any arrest, criminal charges (including charges that are dismissed), citations, tickets, summons or detentions by Federal, State, or other law enforcement agencies for violation of law within or outside of the US traffic violations for which a fine of up to \$300 was imposed need not be reported, **unless** the violation was alcohol or drug related
- Any immediate family member assuming residence in a sensitive country
- Hospitalization for mental health reasons or treatment for drug or alcohol abuse
- Employment by, representation of, or other business-related association with a foreign or foreign-owned interest or non-US citizen or other individual who is both a US citizen and a citizen of a foreign country
- Personal or business-related filing for bankruptcy
- Garnishment of wages
- Provide full, frank, and truthful answers
- Authorize others to furnish pertinent information
- Immediately notify Personnel Security after approach or contact by anyone seeking unauthorized access to classified matter or Special Nuclear Material
- Provide completed DOE Form 5631.34, "Data Report on Spouse/Cohabitant," within 45 days of marriage or cohabitation if individual has never possessed a DOE access authorization.
- Any approach or contact by an individual seeking access to classified matter or sensitive information
- Lost or stolen badges

- **To the Security Incident Program Manager (SIPM)**

Any employee who becomes aware of a security-related incident shall report it promptly to their supervisor. The supervisor then has the responsibility to **IMMEDIATELY** report the incident to the organizational SIPM and to any of the following, as appropriate to the event:

- Security Representative,
- SRS Operations Center, or
- On-duty Protective Force personnel

- **To WSI-SRS or your organization's area Security Representative**

- Theft or destruction of government property
- Malicious mischief or vandalism
- Unfamiliar persons within your work area
- Workplace violence
- Suspicious activities or suspicious items



- **To Cyber Security**

- Suspected or confirmed malicious code (virus)
- Suspected misuse or intrusion
- Suspected loss of Personally Identifiable Information (PII)

- **To Technical Surveillance Measures (TSM)**

For suspected wiretap and/or eavesdropping devices, do not call from the suspected area and do not discuss the incident over the telephone. Request that a Technical Security person meet you personally.

- **To the Counterintelligence Office**

- All contacts with individuals of any nationality, in which illegal or unauthorized access is sought to classified or otherwise sensitive information, material, technology, or facilities
- Any attempted exploitation by a foreign entity
- DOE Office of Counterintelligence 803-725-5086

- **To the Foreign Travel Office**

All intended official foreign travel 30-45 days prior to departure, including travel to non-sensitive countries.

EO 4.08 STATE the Reporting Requirements for Employees and Management for the Workplace Violence program.

A. Workplace Violence

- Workplace Violence (WPV) is:
 - Any action that may threaten the safety of an employee,
 - Impact the employee's physical or psychological well-being, or
 - Cause damage to company property.
- Internal WPV (primary concern at SRS) is committed by current employee who is familiar with facility layout, Security, critical equipment and victim location.
- Any occurrence of violent behavior or threat of physical violence is considered unacceptable conduct and is strictly prohibited. Individuals who engage in prohibited behavior may be removed from the Site and may be subject to disciplinary action up to and including immediate termination, criminal penalties, or both.

B. Workplace Violence - Prohibited Behaviors

- No work location is immune to the threat of workplace violence. Did you know that employees are usually the first to detect unusual and often threatening behavior in a co-worker? You should report any acts or behaviors that seem out of the ordinary for an individual and are potentially harmful. Certain behaviors will not be tolerated. These behaviors include:
 - Threats of physical violence – spoken or written
 - Threatening gestures
 - Physical, aggression directed at persons or property
 - Bullying
 - Intimidation
- Report such behavior to management immediately! Management is responsible for investigating and taking action..

C. Workplace Violence - Management's Role

- When reports of WPV is received, management is responsible for immediately reporting the issue to the Security Incident Program Manager (SIMP) or the Emergency Operation Centre at 5-1911.
- Any occurrence of violent behavior or threat of physical violence is considered unacceptable conduct and is strictly prohibited. Individuals who engage in prohibited behavior may be removed from the Site and may be subject to disciplinary action up to and including immediate termination, criminal penalties, or both.

- The Employee Assistance Program (EAP) has counseling and training to prevent WPV.

D. Other Points to Remember

- Case histories of WPV incidents show a clear pattern of verbal abuse, threatening behavior, and then escalating physical violence.
- Changes in employees behavior can be an indicator of a possible reliability concern.
- Strategies for prevention of WPV include employee awareness on this topic.
- Employees have the opportunity to prevent an incident if they are aware of what to look for, are willing to be observant in the workplace and are committed to report concerns to the appropriate personnel.

	<i>Answer the self-check questions below. The answers are in the back of this study guide.</i>	
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1. Which item is prohibited and may not be brought onsite?
 - A. Cell phone
 - B. Ammunition
 - C. Two-ounce container mace
 - D. Disposal camera

2. Without a cleared security escort, which of the following area can an uncleared employee enter on site?
 - A. Property protection Area (PPA)
 - B. Limited Area (LA)
 - C. Protected Area (PA)
 - D. Exclusion Area (EA)

3. When accessing the SRS site, what are the three documents you must show if you are stopped for a random inspection?
 - A. A property pass, valid SC drivers' license and your photo ID
 - B. Birth certificate, social security card and a photo ID
 - C. Valid driver's license, proof of insurance and vehicle registration
 - D. Current proof of insurance, photo ID and current vehicle registration.

4. What is the purpose of the Challenge System?
- A. To warn other that an intruder is in your area
 - B. To prevent a "Q" cleared employee from entering a limited area
 - C. To ensure uncleared individuals obtain proper authorization from WSI before entering a limited or higher area
 - D. To prevent unauthorized persons from obtaining access to classified areas and/or information and to address persons not wearing a security badge.

5. If you need to transport DOE-SR property offsite, you must have a valid

_____.



V. EMERGENCY MANAGEMENT PROGRAM

Enabling Objectives:

- EO 5.01 IDENTIFY the purpose and elements of the Emergency Management Program.**
- EO 5.02 STATE the appropriate response to a given emergency alarm signal.**
- EO 5.03 STATE the definition of and communication requirements for a Remote Worker.**
- EO 5.04 IDENTIFY the appropriate response to a security emergency or bomb threat.**
- EO 5.05 LIST the credible threat indicators for packages, mail, and vehicles.**

Given the size of the Savannah River Site and the number of employees, visitors and vendor that may be on this site at any time, it is only prudent that a concerted effort be directed toward the management of emergencies which could be reasonably be expected to occur.

This effort consists of the men and women necessary to deal with the various threats to personnel, equipment, and the environment and includes the facilities, procedures training and drills that are requisite to ensure an adequate response in the case of an actual emergency.

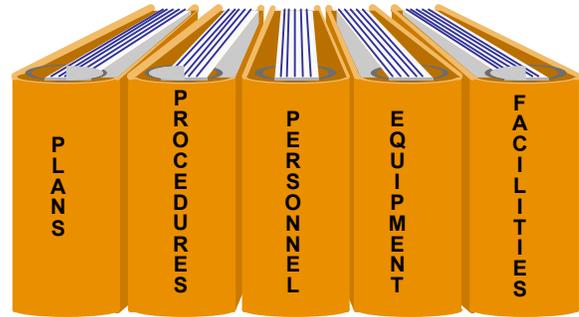
You, as an individual and SRS employee, have a vital role to play in the proper response to many credible scenarios constituting emergencies and potentially affecting the health and safety of countless other SRS employees

EO 5.01 IDENTIFY the purpose and elements of the Emergency Management Program.

A. Purpose of the Emergency Management Program

The Emergency Management Program is the collection of plans, procedures, equipment, and facilities providing dedicated emergency response personnel the capability to mitigate an emergency to:

- a) Protect the health and safety of the public and site personnel.
- b) Protect site property and equipment.
- c) Protect the environment.



For any emergency call 3-3911 (site land line) or 803-725-3911 (cell)

1. Elements of the Emergency

Management Program

The elements of the Emergency Management Program and SRS facilities include:

Emergency Plans

- The Site Emergency Plan is a joint contractor/federal plan which establishes all SRS Emergency Management requirements for responding to an emergency in an organized and logical manner. It applies to all personnel working at SRS.
- Area/Facility Emergency Plan defines how a specific area will implement these requirements.

Emergency Response Organization (ERO)

- The ERO comprises full time contractor and federal personnel who assume duties assigned according to position/training in Emergency Management, Operations, Environment, Safety, Health, Administration, Public Information, and Security.

Facilities

- These are buildings where Emergency Response Organization members effectively support emergency operations, mitigate events and coordinate the SRS response to any emergency.

Off-site Agencies

- SRS must work closely with many federal, state, and local agencies to ensure the health and safety of the public.
- These agencies include DOE-HQ, USDA Forest Service, Federal Bureau of Investigation (FBI), Environmental Protection Agency (EPA), SC and GA agencies, surrounding counties, fire departments, medical services, law enforcement, etc.

Training

- Members of the ERO participate in annual training.

Drills/Exercises

- Drills and exercises test the effectiveness of the Emergency Management Program.

B. Emergency Classification System

Emergencies that impact the health and safety of workers are specifically defined and categorized by DOE Order.

Operational Emergencies involving a hazardous material release may be further classified as:

Alert

Indicates that a problem has occurred that could impact personnel within the incident facility.

Site Area Emergency

Indicates that the impacts go beyond the facility boundary and may affect other parts of the site.

General Emergency

Most severe type of event and may result in the release of hazardous material off-site.

EO 5.02 STATE the appropriate response to a given emergency alarm signal.

A. Emergency Alarms and Proper Responses

The following are SRS's safety alarm signals and the generic responses.

NOTE: Specific responses to safety alarm signals may vary in different SRS facilities. Check your Job Performance Aid on InSite for details.

EMERGENCY ALARM SIGNALS

VOICE ONLY (No tone)	Important bulletin	Listen for essential information. Follow public address instructions.
WARBLE	Emergency Alarm (Including tornado warnings)	Listen to public address announcement and follow PA instructions. If you cannot hear it, go to a location where you can safely hear the announcement.
ALARM BELL (NIM Alarm)	Nuclear Incident	Evacuate the immediate area, walk briskly and go to your designated Rally Point.
HORN A fire alarm tone may also be a pulsing “chirp” tone.	Fire	Evacuate building, walk briskly to designated Rally Point or to an upwind location.
VOICE (All clear)	Emergency or drill is over	Return to your normal work activities.

B. Protective Actions

When emergency conditions pose a potential risk to the health and safety of workers, an emergency alarm signal (warble) will be initiated. A public address announcement will then direct site workers to take appropriate protective actions. There are three types of protective actions:

1. Remain indoors

Personnel will be directed to remain inside, or if outside, to go to the nearest structure and close all doors, windows and shut down ventilation if safe to do so.

2. Shelter

- Personnel will be directed to go to a designated shelter (substantial brick or concrete).
- Look for the “Shelter Area” sign on the building. This shelter can be used for a hazardous release, but its primary use is for severe weather with high winds or a tornado.
- For **severe weather**, you would be advised when to seek shelter. For high wind warnings, leave trailers and vehicles and seek shelter in a building. Butler-type buildings may be used as shelters for high winds but not for tornadoes. For tornado warnings, seek shelter in a designated structure and move to the interior, away from doors and windows.
- Based on guidance provided by the National Weather Service, when a **tornado warning** is issued, and you do not have a shelter, or cannot access a shelter in time, you should:
 - ✓ Evacuate trailers, prefabricated buildings, or vehicles if a tornado is sighted.
 - ✓ Move to an area free of trees and power lines.
 - ✓ Locate a depression or ditch that places you lower than the surrounding area, and lie flat.
 - ✓ Do not try to outrun a tornado in a vehicle.



NOTE: Trailers and prefabricated buildings are never “designated shelters.”

3. Evacuate

Personnel will be directed to go to a rally point: primary, alternate or ad hoc.

C. Rally Points

Rally Points provide an assembly point during an event which requires the evacuation of personnel from a building or area. This is primarily used for a fire, explosion, earthquake, credible bomb threat, or a confirmed explosive device.

Rally Points support accountability and centralize personnel in a single area, away from the emergency situation.



D. Emergency Information – Online

Identifies key telephone numbers and checklists for the different areas. To access:

- Go to the InSite homepage.
- Click on “Emergencies” in the left corner.
- Click on the desired area. Employees may also view Emergency Management information at www.srs.gov.

EO 5.03 STATE the definition of and communication requirements for a Remote Worker.

A. Remote Worker Safety

1. Most people work in locations where they are in range of an installed safety alarm system; that is, where they can hear safety alarm tones and public address announcements. Some workers do not. Those workers in locations where they can't hear alarm signals or PA announcements are considered “remote workers.”
2. The SRS Remote Worker Notification Procedure establishes specific communication and accountability requirements to ensure that workers located in a remote location can be notified of an emergency and can immediately report emergencies.
3. Remote Worker Identification
A remote worker is any worker within the SRS boundaries who is beyond range of an installed Safety Alarm System (SAS) or Public Address (PA) system. Examples:
 - USDA Forest workers
 - Some construction workers
 - Some SREL workers
 - Environmental workers
 - Deactivation and Decommission (D&D) workforce



4. Persons Who Are Not Remote Workers

Persons in transit on site roadways to a location where a SAS or PA system is installed or performing assignments in routinely-occupied buildings with SAS/PA systems are **not** remote workers. Examples:

- Traveling to and from work
- Driving from B-Area to 766-H to attend a class

5. Remote Worker Responsibilities

- Test communications equipment before taking it to the field.
- Ensure communications equipment is turned on and working at the job site.
- Ensure communications equipment can be heard.
- Report to dispatcher (if applicable) **PRIOR** to going to the work area.
- Contact your Remote Worker Dispatcher or the SRSOC (803-725-3911 or 803-725-CALL) to report location and status in response to an emergency notification broadcast..
- Report to your dispatcher when work is completed and you have returned from the job site for the day.
- Report to your dispatcher (if applicable) or the SRSOC anytime the remote work location changes.

NOTE: eDispatch and allows trained workers to self-check-in and check-out of the Remote Worker system using computers on SRSNet. Persons using eDispatch are responsible for:

- ✓ Complying with requirements for self-check (eDispatch) to include completion of the remote worker web based training
- ✓ Adherence to the policy for self-checking-in and checking-out
- ✓ Assuming responsibility of the Remote Worker and the Dispatch

6. Remote Worker Communication Requirements

- Remote workers must carry a site-issued radio **OR** a remote worker pager **AND** cell phone. (A remote worker pager is an alpha-numeric pager capable of receiving an “all call” message from the SRSOC.) This is to ensure the remote worker can receive emergency communications from the SRSOC and report emergencies.
- A cell phone alone **DOES NOT** meet the communications requirements. Failure to follow procedures could result in the remote worker being escorted from the site.
- Remote Workers have a dedicated line 803-725-CALL to report emergencies.



EO 5.04 IDENTIFY the appropriate response to a security emergency or bomb threat.

A. Bomb Threats

The proper response to a bomb threat received at SRS is to:



- Remain calm; most bomb threats are hoaxes, but need to be treated as real.
- Refer to the Bomb Threat Checklist (OSR 10-128), and get as much information from the caller as you can. The checklist is also in your handout.
- Notify the SRS Operations Center (SRSOC) at **3-3911** (from a site phone) or **803-725-3911** (from a cell phone).

B. Protective Actions for a Confirmed Bomb Threat or Explosive Device

Protective Actions that may be implemented for on-site employees could include:

- A general announcement may direct personnel to check their work spaces and look for anything suspicious.
- Direction to evacuate the entire building or just part of the building.
- When you evacuate a building, you will be directed to assemble at an “ad hoc” rally point (a location other than the normal or alternate rally point).
- Direction to evacuate the area completely to another area on the site.

EO 5.05 LIST the credible threat indicators for packages, mail, and vehicles.

A. Credible Threat Indicators

1. For Suspicious Packages

If you receive or discover a suspicious package, do not touch or move the item. Clear the immediate vicinity and contact the SRSOC immediately at 3-3911 or 803-725-3911.

2. For Mail

- Excessive postage
- Unexpected suspect mail
- Oily stains, discoloration, leaks or spills
- Misspelling of common words
- Addressed to title only
- Foreign mail or special delivery

- Package is uneven, lopsided or excessively heavy
- No return address
- Handwritten or poorly typed address
- Excessive securing material (masking tape, string)
- Strange, oily, or waxy smell
- Package has protruding wires or foil
- Return address and postmark don't match

3. For Unattended Packages

(Boxes, briefcases, tool boxes, purses, etc.)

- Package is near key facility, occupied pathway, or sensitive equipment.
- Prior threat or related incident has occurred.
- No markings or identification tags on package
- Cannot locate owner
- Package is left by person behaving in a suspicious manner

4. For Unattended Vehicles

- Vehicle is left near key facility, occupied pathway or sensitive equipment
- Prior threat or related incident has occurred
- No marking or license plates on vehicle
- Cannot locate owner/driver
- Vehicle is left by person behaving in a suspicious manner
- Vehicle is stolen or rented

B. Security Emergency

Respond to an emergency alarm signal or voice announcement given by Wackenhut Services Inc., (WSI) Protective Force personnel. Protective actions may include relocation to a nearby facility or area.

If no instructions are given, employees in proximity to the event should:

- a) If outdoors**, seek shelter in the nearest structure not involved in the event. This does **not** have to be a designated shelter protection building.
- b) If indoors**, lie on the floor, preferably under or behind furniture, display photo badge and follow the instructions of WSI-SRS personnel.





*Answer the self-check questions below.
The answers are in the back of this study guide.*



1. What is the responsibility of the Emergency Management Program?

- A. To protect the health and safety of the public and site personnel
- B. To protect site property
- C. To protect the environment
- D. All of the above

2. Give the meaning and response for each alarm signal

- A. Horn/Chirp _____ / Response
- B. Bell _____ / Response
- C. Warble _____ / Response
- D. All Clear _____

3. One responsibility of the remote worker is to _____.

- A. Ensure their communication equipment is working and turned on
- B. Report their location to WSI every two hours
- C. Record their mileage to and from the job site
- D. Wear an orange safety vest

4. What is the appropriate response upon hearing a warble tone?

- A. Go to the ground floor of the building
- B. Evacuate the building to an upwind position
- C. Listen for more information over the PA system
- D. Get behind or underneath a piece of furniture

5. Credible indicators that a package may contain an explosive or chemical device is _____.

- A. The package is unusually heavy or lopsided
- B. The package is wrapped in brown paper
- C. Postage is due on the package
- D. The handwriting is not readable



VI. FIRE SAFETY

Enabling Objectives:

EO 6.01 IDENTIFY the phases of a fire.

EO 6.02 LIST the Fire Alarms in use at SRS.

EO 6.03 STATE the actions to take if you discover a fire, smell smoke, or hear a fire alarm.

EO 6.04 STATE the considerations for fighting fires using a fire extinguisher.

Each year, thousands of people die in fires. One day, without warning, your life and the lives of others may suddenly depend on how you react to a fire.

If a fire does break out at SRS, you need to know some fundamental fire safety measures and what your responsibilities are. Your knowledge may save lives.

It is the SRS Fire Department's job to fight fires, perform rescues (i.e., high and low angle, confined space, structural collapse, vehicle extrication, trench collapse), provide emergency medical services (EMS), and respond to and mitigate hazardous material incidents.

EO 6.01 IDENTIFY the phases of a fire.

A. Three Phases of a Fire's Development

There are three phases of a fire's development. Each phase has its own characteristics and inherent dangers. The three phases of a fire's development are:

- 1. Incipient – First phase of a fire.** Can be put out easily with a portable fire extinguisher. There is plenty of oxygen present for burning and the temperature is relatively low, but smoke and fire gases are also present. This is the **ONLY** phase of a fire that a regular site employee (non-fire fighter) is allowed to fight, if safe to do so.

2. **Free burning – Second phase of a fire.** Has plenty of oxygen and a lot of flames and higher temperatures. **Can be fought ONLY by professional fire fighters.** Flashover is possible.
3. **Smoldering – Third phase of fire.** The fire is reduced to glowing embers because of reduced oxygen supply; a lot of smoke and gases are present. The temperature can be above 1,000°F. **Can be fought ONLY by professional fire fighters.** Flashover is possible.

EO 6.02 LIST the Fire Alarms used at SRS.

The sound of a fire alarm in most areas at SRS is a buzzer sound. In other areas at SRS, including SRNL and MOX, the sound of a fire alarm is a chirping sound.

EO 6.03 STATE the actions to take if you discover a fire, smell smoke, or hearing fire alarm.

Employee Actions Upon Discovering a Fire, Smelling Smoke, or Hearing a Fire Alarm

If you smell smoke or discover a fire:

- Pull the building fire alarm to alert emergency personnel,
- Alert your coworkers,
- Walk briskly to your Rally Point.
- Call 803-275-3911 from a phone outside the building
- Never use a phone in the area of the fire

EO 6.04 STATE the considerations for fighting fires using a fire extinguisher.

A. Successful Use of Portable Fire Extinguishers

- To quickly put out small **Incipient** fires, portable fire extinguishers must be used properly.
- Remember, the fire extinguisher is only the initial line of defense against a fire. Always get help on the way **first**.

Note: You may want to check the fire extinguishers in your work area so you will know where they are located. Remember, you may volunteer to fight a fire on the site in the incipient phase ONLY, and, ONLY if you feel comfortable doing so!

- Proper fire extinguisher operation can be achieved by following the steps described by the acronym, “P.A.S.S.”
- **P**ull the pin
- **A**im the nozzle at the base of the fire
- **S**queeze the handle completely
- **S**weep the nozzle rapidly from side to side, beginning at the front of the fire and working toward the back of the fire



B. Safety Rules for Fighting a Fire

Even if you decide initially to fight a fire (Incipient phase only), you are free to stop and leave at any time. Although remembering the word “PASS” will help you through the physical operation of most portable extinguishers, you must always put safety first when considering whether or not to fight a fire. Safety rules to follow include:

- Never turn your back on a fire.
- Always approach a fire upwind so the wind blows the fire and smoke away from you to prevent your breathing any toxic gases that may be present.
- Always keep an exit behind you. If the fire gets out of control, you will have a means of escape.
- If your extinguisher starts to run out of agent, you should continue to sweep the fire and back away from the flames.
- Smoke and deadly gases will fill the room from the ceiling down. The best air will be several inches off the floor. Get down on your hands and knees and crawl quickly to the exit.
- If you start to fight a fire – in the incipient phase only – but you start feeling unsure of yourself, or you think the fire is spreading, just **GET OUT!!!**



*Answer the self-check questions below.
The answers are in the back of this study guide.*



1. The name of the phase of a fire that an employee is allowed to put out is the _____ phase.
2. What is the most common alarm tone for a fire?
 - A. Bell
 - B. Fast Warble
 - C. Slow Warble
 - D. Horn
3. What does the acronym PASS stand for?
_____, _____, _____, and _____.
4. Which one is a safety rule for fighting a fire?
 - A. Make sure you have a co-worker help you
 - B. Close the door to keep the fire from spreading
 - C. Have an exit behind you and back toward the exit
 - D. Always wear a face mask



VII. SRS HAZARD COMMUNICATION PROGRAM

Enabling Objectives:

EO 7.01 IDENTIFY the purpose of OSHA's Hazard Communication Standard.

EO 7.02 IDENTIFY the five elements of OSHA's Hazard Communication Standard.

EO 7.03 IDENTIFY the factors regarding how chemicals will affect the body.

EO 7.04 IDENTIFY the precautions for avoiding chemical exposure.

EO 7.05 IDENTIFY the information associated with MSDS's.

EO 7.06 LIST the information found on a chemical hazard-rating label.

Savannah River Site, like any other large industrial complex, has numerous chemicals present necessary for the day-to-day operations of the facilities on site and also for the general maintenance of equipment within those facilities.

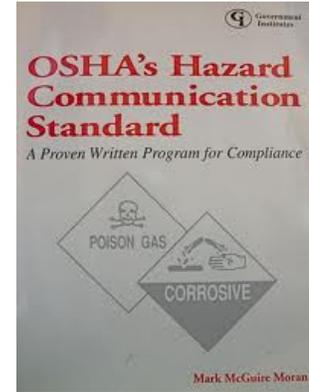
In order for Savannah River Site employees to safely work with and around these chemicals, certain information and protective equipment must be available to those employees. This information can be in the form of warning placards and labels or in the form of Material Safety Data Sheets that detail the hazards and precautions for each and every chemical that resides on site.

The protective equipment that may be utilized by the employee can include, but are not limited to, goggles, face-shields, aprons, glove, chemical suits, and respiratory protection equipment. It is only through knowledge of the hazard posed by a chemical that the employee will be adequately protected from that hazard while working at the Savannah River Site.

EO 7.01 IDENTIFY the purpose of OSHA's Hazard Communication Standard.

A. Purpose of OSHA's Hazard Communication Standard

1. The purpose of OSHA's Hazard Communication (HAZCOM) Standard is to protect every employee's "Right to Know" about chemical hazards they may be exposed to in the workplace.
2. OSHA's Hazard Communication Standard protects the employee's right to work in a safe and healthful environment.



B. Chemical Hazards

OSHA's definition of a hazardous chemical is any chemical that is a physical hazard or a health hazard.

1. **Physical hazards** are chemicals that can cause explosions, fires, violent chemical reactions, or other hazardous situations.
2. **Health hazards** are chemicals that can cause illness or injury when inhaled, swallowed, touched, or absorbed.

C. Chemical Forms and Effects

All chemicals exist in one of three basic forms:

1. **Solids** have a definite shape and can become airborne as dust or fume particles.
 - a) **Dust** is made up of tiny solid particles. Mechanical operations like grinding produce dust.
 - b) **Fumes** are also made up of tiny solid particles. They form by vapor condensation when solids are melted in operations like welding and metal casting.
2. **Liquids** take the shape of their containers and can become airborne as vapors or mists.
 - a) **Vapors** are formed above any exposed liquid surface. Heating a liquid makes it vaporize more quickly.

- b) **Mist** is made up of tiny droplets that become airborne when liquids are sprayed, agitated, or applied to a hot surface. Mists also form when hot vapors cool in air and condense.
- 3. **Gas** is a phase of matter in which the substance expands readily to fill any containing vessel. A gas has neither definite shape nor volume.

HEALTH HAZARDS
Irritants
Corrosives
Cryogenics
Chemicals that damage target organs
Reproductive Toxins
Sensitizers
Carcinogens



EO 7.02 IDENTIFY the five elements of OSHA's Hazard Communication Standard.

A. Hazard Communication Program

- 1. Five elements of OSHA's Hazard Communication (HAZCOM) Standard** (Per 29 CFR 1910.1200)
 - a) Written program
 - b) Material Safety Data Sheets (MSDSs)
 - c) Container labeling
 - d) Hazardous chemical inventory
 - e) Training

B. Locations of SRS Written Hazard Communication Program

1. The Chemical Management Center (CMC) of the Supply Chain Management has the responsibility for development of the SRS Written Hazard Communication Program and its implementation.
2. The written program is located in:
 - a) Chemical Management Manual 13B, Procedure 2.3
 - b) Construction Management Procedures, CMP 11-4.3.

C. Product Warning Labels

1. Every chemical container must be labeled with a manufacturer's label. The label must contain:
 - a) Product name traceable to an MSDS
 - b) Hazard warning
 - c) Manufacturer's name and address
2. If the manufacturer's warning label is damaged/missing or the product is transferred to a secondary container, then the SRS Chemical Hazard Rating Label must be used.

D. Location of the SRS Hazardous Chemical Inventory

1. At SRS, each division, department or facility maintains its own chemical inventory. The responsibility for conducting the inventory rests with the Chemical Coordinator. Each month the Chemical Coordinator will update the site database and annually verify the inventory for regulatory reporting.

2. The SRS Hazardous Chemical Inventory is maintained in a sitewide database by the Chemical Management Center.
3. The inventory can be viewed online at SRS Intranet or employees may contact their Chemical Coordinator.

E.SRS Hazard Communication Program (HAZCOM) Training Requirements

1. Employees shall receive hazard communication training through General Employee Training (GET) and thereafter through Consolidated Annual Training (CAT).
2. Employees shall also receive training through facility qualification training and/or Assisted Hazard Analysis when a new hazard is introduced into their work area.
3. Subcontractors may have a separate Health and Safety Plan.
4. Training helps protect the workers, the public, and the environment.

EO 7.03 IDENTIFY the factors regarding how chemicals will affect the body.

A. Five Factors to Consider How Chemicals Affect the Body

1. Route of exposure
2. Toxicity
3. Dosage
4. Workers' individual differences
5. Workplace controls

B. Route of Exposure

- Exposure routes are ways chemicals enter your body. Some chemicals are more toxic by one exposure route than by another. For example, onion juice vapor irritates the eyes, but skin contact with onion juice produces little or no effect. In addition, some routes are more direct, depending on the physical state (i.e., solid, liquid, or gas) of the chemical.
- **Another example:** inhalation is the most likely route of entry for vinyl chloride gas at room temperature, whereas skin absorption and ingestion are less likely. **A third example:** airborne asbestos fibers that are inhaled can induce cancer, but other exposures are not significant.

1. There are four main routes of exposure:
 - a) **Breathing / Inhalation** - Takes a chemical from your nose or mouth, down your windpipe, and into your lungs. Some chemicals get trapped in your lungs. Others leave when you breathe out. However, many pass from your lungs into your bloodstream.
 - b) **Skin Absorption** - Hazards pass through the skin on contact and enter the bloodstream. Once in your bloodstream, chemicals can spread throughout your body and cause injury or disease far away from the original site of contact. Chemicals can also be absorbed through the mucous membranes of the nose.
 - c) **Swallowing / Ingestion** - Takes a chemical from your mouth, down your esophagus, and into your stomach. From there, many chemicals enter the intestines, where they can be absorbed into the bloodstream and spread throughout your body. Damage can be done at any point along the way.
 - d) **Injection** - Allows a chemical to enter the body via sharp objects penetrating the skin.

C. Toxicity

Toxicity is relative and depends on:

1. The living organism involved
2. Dose, rate, method, and site of absorption
3. General state of health, individual differences, tolerance, diet, and temperature

D. Dosage

Dosage depends on:

- How **MUCH** you are exposed to each time
- How **LONG** each exposure lasts
- How **OFTEN** you are exposed

E. Worker's Individual Differences

The things that make you **you**, also affect a chemical's effect on you. Traits that play a part in the degree of hazard include:

- Your work practices
- Your age and size
- Your general physical and emotional health
- Allergies and sensitivities you may have
- Your level of exertion
- The combination of chemicals in your body, including what medications you're taking and whether or not you smoke tobacco or drink alcoholic beverages

F. Target Organ Effect

A **target organ effect** is defined as the damage done to organs of the body from exposure to certain materials or chemicals. Examples of categories of chemicals and their target organs are:

1. **Hepatotoxins** produce liver damage, such as ethanol and chloroform.
2. **Nephrotoxins** produce kidney damage, such as mercury, antifreeze, and lead.
3. **Neurotoxins** attack the central and/or peripheral nervous system, such as mercury, ethyl alcohol, and chlorine gas.
4. **Hemotoxins** affect the blood, such as benzene, lead, and carbon monoxide.
5. **Pulmonary** toxins attack the lungs, such as asbestos and silica.
6. **Cardiotoxins** affect the heart rates, such as ethyl alcohol, carbon monoxide, and lead.
7. **Reproductive** toxins affect the reproductive system, such as lead, glycol ether, and carbon disulfide.
8. **Cutaneous** hazards affect the skin, such as greases, acids, PCBs, and fiberglass.
9. **Eye** hazards affect the eye, such as lime, cement, and mace.

EO 7.04 IDENTIFY the precautions for avoiding chemical exposure.

A. Workplace Controls

There are three basic methods of controlling chemical hazards.

1. Engineering Controls

- **Substitution** – Replacing a chemical, process, or piece of (instead of solvent cleaning)
- **Isolation** – Using an enclosure, barrier, or safe distance to separate workers from exposure hazards (e.g., machine enclosures, enclosed control rooms, splash guards)
- **General Ventilation** – Mixing an airborne hazard with fresh air to reduce exposure levels, which is only suitable for hazards of low toxicity that mix readily with air (e.g., fans, make-up air vents)
- **Local Exhaust Ventilation** – Capturing an airborne hazard as it is released and taking it out of the workplace to eliminate exposure (e.g., hoods, slots, dust collectors)

2. Administrative Controls

- **Documentation, Information, and Training** - Such as warning labels, Hazardous Chemical Inventory, written Hazard Communication Program Procedures.
- **Work Practices** - Using all available controls correctly, reporting uncontrolled hazards promptly.
- **Housekeeping** – Containing and removing hazards such as vacuuming toxic dusts, proper storage and handling, correct disposal of chemical wastes.
- **Monitoring** – Checking the effectiveness of other controls such as air and wipe sample for area monitoring, personal sampling for individual monitoring, medical exams, and laboratory tests.

Always be alert for uncontrolled chemical hazards in your workplace. You can see bulk liquids and solids, but most airborne hazards are invisible. You can smell or taste some airborne chemicals, but not others. Some chemicals deaden your sense of smell, but others cannot be detected at the very low levels that can harm you.

Remember – anything you smell or taste is entering your body.

B. Personal Protective Equipment (PPE)

Personal Protective Equipment (PPE) puts a barrier between the hazard and the individual who wears the PPE. It can protect against both physical hazards and health hazards. Examples of PPE include:

- Protective gloves and clothing such as hats, hoods, boots, impervious gloves, cloth gloves, rubber aprons, lab coats, impervious boots
- Eye and face protection such as safety glasses, splash goggles, and face masks and shields
- Air-purifying respirators such as respirators with a cartridge or filter that removes contaminants from the air you breathe
- Air-supplied respirators such as self-contained units that supply air from a tank carried on the back or air-line units that provide air from a remote source

To protect you, you must match PPE with the specific hazard. For example, cloth gloves are useless for protection against a corrosive liquid. PPE is also useless unless you wear it. Proper fit, correct use, and routine maintenance are also critical.

C. Actions for Skin Exposure

1. **Before you begin work**, ensure adequate safety showers and eye wash stations and note their locations.

2. Immediate action for chemicals on the skin:

- **DO NOT** attempt to neutralize the acid with a base (or vice versa).
- Irrigate with **LARGE** amounts of **WATER** until medical help arrives.
- Contact medical personnel.

3. Spills

- Assume **ALL** spills are hazardous!
- Notify your supervisor.
- Do not attempt to clean up the spill.

EO 7.05 IDENTIFY the information associated with a Material Data Safety Sheet (MSDS).

A. Material Safety Data Sheets

SRS maintains Material Safety Data Sheets that are received prior to purchase or with incoming shipments of hazardous chemicals, and ensures that they are readily accessible during each work shift to employees when they are in their work areas. Employees are required to obtain MSDSs before using chemicals and to read and use the information in the MSDS and are readily accessible through InSite. Contact your supervisor if you have questions.



1. Locations of MSDS

- InSite is the primary source for MSDSs at SRS. Manufacturers' MSDSs have been scanned into a computer database.
- You can obtain an MSDS from your Department Chemical Coordinator.
- There is one set of MSDS master binders in 704-1N, Document Control available during normal business hours.
- Off hours: (803) 507-7530 (site cell), Pager 16790.

2. Point of Contact for MSDS

- The Chemical Coordinator should be the **FIRST** point of contact when a material is brought into the work area without an MSDS.
- Chemical Coordinators also assist with the chemical inventory and locating MSDSs.

3. Information Contained on the MSDS

- Manufacturer's name and chemical identification.
- Hazardous ingredients that lists what's in the chemical that can harm you and the airborne exposure limits.
- Physical characteristics that describes the chemical's appearance, odor, and other characteristics.
- Reactivity data lists materials the chemical should not come in contact with and conditions that would cause a dangerous reaction.
- Fire and explosion data indicates the chemical's potential to catch fire or explode and what puts out the fire safely.
- Control measures that the manufacturer deems as a health hazard associated with the chemical..
- Target Organ Effect lists toxicity information, effects of overexposure, the product's carcinogenicity and target organ effects.
- Special precautions for safe handling and use to work safely with the chemical as well as any Personal Protective Equipment required.



B. Employee Responsibilities

- Be aware of the chemical hazards
- Review the chemical label and MSDS
- Ask your manager if you have questions
- Wear PPE as prescribed when using chemicals

Notify your Chemical Coordinator if you:

- Bring new chemicals into the work area
- Find damaged or unreadable labels
- Cannot find an MSDS in your area

EO 7.06 LIST information found on a chemical hazard rating label.

A. SRS Chemical Hazard Rating Label

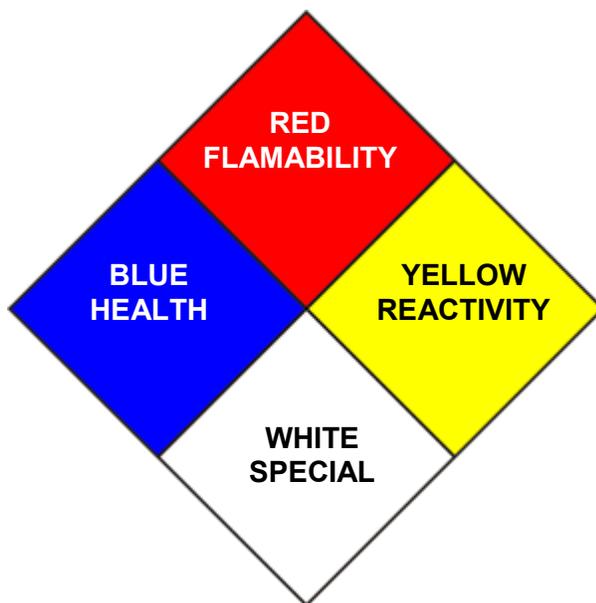
Chemical hazard ratings are classified by using the National Fire Protection Association (NFPA) standards adapted for use at SRS.

The Chemical Hazard Rating Label is a large diamond made up of four smaller diamonds, each representing a different hazard. The severity of the hazard is indicated by a numbering system (within the colored diamonds), ranging from 0 (indicating minimal hazard) to 4 (indicating a severe hazard).

1. Hazard coloring system:

- a) **Red** represents flammability and is always on top. There are flammable liquids and solids.
- b) **Blue** represents a health hazard and is always on the left. A health hazard is that which occurs when a chemical brings about an acute or chronic health effect on exposed employees.
- c) **Yellow** represents instability and is always on the right. There are materials that are water reactive or unstable.
- d) **White** represents special hazards and is always on the bottom.

Chemical Hazard Warning Label



FLAMMABILITY

4	Danger	Very flammable gas or liquid
3	Warning	Burns at room temperature
2	Caution	Will burn if moderately heated
1		Must preheat to burn
0		Will not burn

HEALTH

4	Danger	Life threatening; may be fatal on short exposure. Specialized protective equipment required.
3	Warning	Toxic – Major injury. Corrosive. Avoid skin contact or inhalation.
2	Warning	Minor injury possible (may burn or cause blistering)
1	Caution	Minor irritation
0		Minimal risk

INSTABILITY

4	Will explode
3	May explode
2	Violent chemical exchange possible
1	Normally stable unless heated
0	Normally stable

SPECIAL NOTICE

-	None
W	Water reactive
Oxy	Oxidizing agent
C	Carcinogen
R	Reproductive toxin
D	Developmental hazard
Pol	Polymerizes
EXP	Explosive
SA	Simple Asphyxiant

	<i>Answer the self-check questions below. The answers are in the back of this study guide.</i>	
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1. What is the purpose of OSHA's Hazard Communication Standard?

- A.** To provide employees with guidelines for communicating safely with one another
- B.** To provide employees with guidelines for use of communication equipment
- C.** To protect every employee's "Right to Know" about chemical hazards in the workplace
- D.** To protect employees against gossip on the and off the job.

- 2. What are the some of the elements of the OSHA's Hazard Communication standard?**
- A.** Written program, Material Safety Data Sheets (MSDS), container labeling
 - B.** Hazardous chemical training, Chemical Management Coordinator
 - C.** Safe work practices, Work Release Form, SRS Chemical Coordinator, Automated hazard analysis.
 - D.** Fire department rating, Personal protective equipment.
- 3. What part of the human body do Neurotoxins attack?**
- A.** Kidneys
 - B.** Nervous system
 - C.** Heart
 - D.** Eyes
- 4. How does OSHA define a "hazardous chemical?"**
- A.** Any chemical which is a physical hazard or a health hazard?
 - B.** Any chemical that will not cause harm to the body
 - C.** Chemicals that are not cancer causing agents
 - D.** Any chemical that is not a physical hazard or a health hazard
- 5. Who is the best contact for obtaining a Material Safety Data Sheet (MSDS)?**
- A.** Area Industrial Hygienist
 - B.** Area Safety Engineer
 - C.** DOE Chemical Manager
 - D.** Department Chemical Coordinator
- 6. On the SRS Chemical Hazard Warning label, what do the following colors represent?**
- White: _____
- Yellow: _____
- Red: _____
- Blue: _____



Beryllium Awareness

Because this is a briefing, there are no enabling objectives.

Beryllium Awareness Training is required for all SRS employees. If you perform work, or have the potential to perform work, in a facility that may contain trace quantities of Beryllium, your supervisor/manager, or Subcontract Technical Representative (STR) will inform you, and you will be required to complete Beryllium Associated Worker Training.

Chronic Beryllium Disease Prevention Program at SRS

Federal law (10 CFR 850) requires SRS to implement a Beryllium exposure control program. This program must reduce the number of employees exposed and ensure the early detection of diseases associated with Beryllium exposure.

The SRS Chronic Beryllium Disease Prevention Program provides program requirements to identify, evaluate, and control occupational exposures to beryllium to below the DOE prescribed exposure limits.

What Is Beryllium?

Beryllium is a metallic element that occurs naturally in about 30 minerals. It is lightweight (lighter than aluminum), but stronger than steel. It has a high melting point, conducts heat well, and is corrosion-resistant. Though useful, it can cause serious health problems to those who are exposed to airborne particles.

Beryllium and Its Uses

Beryllium metal has been produced for various industrial uses since the late 1950s, especially in aerospace and defense applications.

Some examples of industrial use include:

- Windshield frames and other structures in high-speed aircraft and space vehicles
- Aircraft and space shuttle brakes
- Satellite mirrors and space telescopes
- Inertial guidance systems and gyroscopes
- Neutron moderator or reflector in nuclear reactors
- X-ray windows
- Nuclear weapons components

In addition to industrial applications, Beryllium alloys and compounds are used in products found at home. Some examples include:

- Bicycles (more expensive models)
- Golf clubs

- Jewelry
- Computer parts
- Air bags in automobiles
- Dental bridges

These products do not pose a health risk.

Beryllium Use at DOE Sites

Beryllium is predominately used in engineering, defense, and nuclear weapons technology. Machining, powder pressing, laser cutting, welding, and mechanical testing are the major work activities that have occurred at DOE installations.

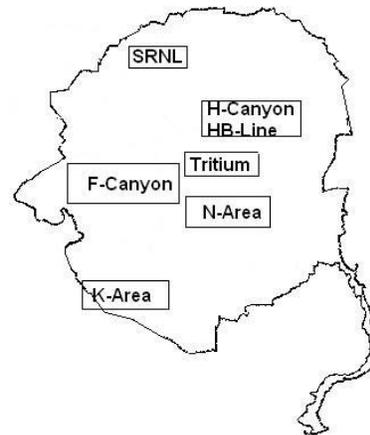
Beryllium is found at some DOE sites throughout the country, such as Los Alamos and Oak Ridge. These two sites have the greatest potential for exposure to Beryllium in the DOE Complex.

Beryllium at Savannah River Site

Historically, Beryllium was associated with reactor assemblies, weapon components, radioactive check sources, and research activities at SRS. Current missions involve processing of waste materials from across the complex that may contain trace quantities of Beryllium.

Although SRS is not listed as having the “Greatest Exposure Potential” among the DOE sites, there are facilities in some areas where there is a greater potential to find Beryllium. These areas include:

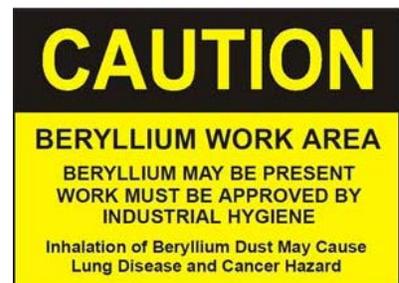
- SRNL
- Tritium
- H-Canyon
- F-Canyon
- K Reactor
- N-Area



Beryllium Hazards, Controls, Signs and Postings

Inhalation of beryllium particles may lead to:

- Beryllium Sensitivity
- Acute Beryllium Disease
- Chronic Beryllium Disease
- Lung Cancer



Beryllium Controls

DOE requires that exposure be minimized to the extent possible through:

- Engineering Controls
- Administrative Controls
- Personal Protective Equipment (PPE)

Signs and postings at the boundary of all Beryllium work areas alert workers and visitors to the possible presence of Beryllium.

Beryllium Information

For more detailed information on Beryllium or Beryllium disease, see the site's Beryllium Web Page on InSite by typing "Beryllium" and then "Quick Search" and then "Beryllium Information".

If you think you may have been exposed to Beryllium at SRS or in a previous job, contact the SRS Beryllium Program Coordinator, Steven Jahn, 730-1B at 803-952-9078 or through email steven.jahn@srs.gov.



IX. ENVIRONMENTAL MANAGEMENT

Enabling Objectives:

EO 9.01 STATE the purpose and resources of the SRS Environmental Management System.

EO 9.02 IDENTIFY the three types of solid waste and the requirements for their proper handling and disposal.

EO 9.03 LIST your responsibilities for reducing waste at SRS.

The Savannah River Site is owned and managed by the Department of Energy. The operations at this site are required to comply with the pertinent federally-mandated environmental regulations, overseen by the Environmental Protection Agency, and state and local environmental requirements.



Because the legal requirements are broad as well as complex, the Savannah River Site has many individuals trained and in place to assist in the compliance with these various regulations and requirements,

It is up to each individual Savannah River Site employee to ensure that their day-to-day work activities do not constitute an environmental concern or an avoidable release to the environment of a toxic or noxious substance.

EO 9.01 STATE the purpose and resources of the SRS Environmental Management System.

A. Purpose of the Environmental Management System (EMS)

The purpose of the Environmental Management System (EMS) is to ensure compliance with environmental regulations and the SRS Environmental Policy for the safety of employees, the public, and the environment.



Employees must follow sound environmental stewardship practices that protect environmental media (i.e., air, water, land and other natural and cultural resources).

Environmental stewardship involves these three components:

1. Regulatory Compliance – worker and environmental
2. Pollution Prevention
3. Continual Improvement



B. Primary Environmental Regulatory Resource at SRS

The primary environmental regulatory resources at SRS are Environmental Subject Matter Experts (SMEs). Some of the environmental professionals are located in the Environmental Services (ES) section of the SRNS Environment, Safety, Health (ESH) Department. Others are assigned within other site organizations. Their responsibilities are:

- Coordinate the development and implementation of sitewide environmental programs to meet SRS policy and regulatory requirements.
- Interface with DOE, state, and federal agencies on environmental issues. Routine discussions with the regulators on environmental matters must include the environmental SME for that particular environmental law/media.
- Interpret Environmental Regulations.
- Review and comment on Work release documents for environmental impacts.
- Evaluate all alternative environmental solutions.

NOTE: Environmental SMEs are listed in the “Environmental Knowledge Portal” in InSite.

C. Primary Line Organization Contact

Environmental Compliance Authorities (ECAs) are knowledgeable in environmental requirements and specific regulatory protocol for Facility and Area projects. They are **YOUR primary contact on environmental matters**. All personnel should know the name of their ECA. Environmental Services maintains a list of the Site ECA's. You can also locate your local ECA on InSite.

The primary line organization contact for environmental matters is the ECAs. Each major SRS organization has an ECA.

ECA's:

- Review National Environmental Policy Act (NEPA) / Environmental Evaluation Checklists on new or modified SRS projects to identify environmental regulatory requirements.
- Assist in environmental planning by recommending resources and funding needs.
- Support facilities/projects with the implementation of environmental policies, programs, and permits as applicable.

- Answer questions on how your work might affect the environment and assist with meeting environmental requirements.

EO 9.02 IDENTIFY the three types of waste and the requirements for their proper handling and disposal.

A. Management of Solid and Hazardous Waste

Solid Waste is any item (radioactive or non-radioactive) subject to specific regulatory requirements for storage, handling, and disposal.

There are three types of solid waste:

1. Non-radiological
2. Hazardous - based on specific chemical content
3. Mixed - radiological and hazardous



Solid waste must be properly characterized, segregated, stored, treated, and disposed of by qualified employees in a way that protects site workers and the general public and is compliant with state and federal laws.

- DO NOT throw waste in a dumpster or pour down a drain unless authorized to do so (contact your building custodian or ECA).
- Many items not considered hazardous waste in a household are hazardous waste at a large facility like SRS, such as paint and aerosol cans or rags with solvent used for cleaning.
- Call your ECA with any questions you have about handling and disposing of solid waste.

EO 9.03 LIST your responsibilities for reducing waste at SRS.

A. Regulated Cleanup Areas

In the early years of SRS, waste was disposed of in seepage basins, rubble piles, and ash pits. Modern technology has replaced these practices. However, many of these areas still exist on site today. These areas are in the process of being cleaned up.

These units are clearly **marked with orange balls and/or signs.**



An employee **should not enter**, begin work in or around, or disturb the area, before gaining permission from your ECA.

B. Environmental Media - Water

The South Carolina Department of Health and Environmental Control (SCDHEC) regulated work activities in or near wetlands at SRS. Permits must be obtained before beginning the following activities:

- Wastewater treatment
- Drinking water treatment
- Land clearing for construction and D&D activities
- Discharge of wastewater
- Discharge of stormwater
- Work in wetlands
- Well drilling



C. Environmental Media - Air

Facility projects and modifications can impact air quality. Contact the assigned ECA to ensure necessary documentation is on hand when faced with:

- Non-radiological air pollutant emissions, as permitted under the Clean Air Act and,
- Radiological air pollutant emissions for evaluation under the SRS National Emission Standards for Hazardous Air Pollutants (NESHAP) program.
- For more information, refer to Section 4 of 3Q Environmental Compliance Manual.



	<p><i>Answer the self-check questions below. The answers are in the back of this study guide.</i></p>	
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1. Name the three types of solid waste.

_____, _____, _____.

2. If you have a question regarding disposing of pesticides, paint, or other harmful products, your primary point of contact is your:

- A.** Hazard Communication Manager
- B.** Environmental Compliance Authority
- C.** Industrial Hygienist
- D.** Supervisor

3. How are Regulated Cleanup Areas identified?

- A.** Red and white signs
- B.** Green flags
- C.** Magenta balls
- D.** Orange balls



X. Operating Experience Program

Because this is a briefing, there are no enabling objectives.

Overall Objective

To understand the purpose of the SRNS Operating Experience Program and how it operates.

A. Purpose of the SRNS Operating Experience Program

The purpose of the SRNS Operating Experience Program is to identify and distribute lessons learned by others and to share lessons from our own experiences, including “near misses,” to prevent events from occurring and to prevent reoccurrence.

The program reviews experiences in:

- Quality
- Personnel safety and health
- Process safety including
- Conditions that degrade operations and equipment
- Conditions that can negatively impact the environment and public confidence

These experiences are taken from both internal and external facilities such as:

- Savannah River Site facilities
- Similar DOE complex facilities
- Commercial nuclear industry facilities

B. Examples of Lessons Learned

Hanford National Lab Trailer Fire Due to Faulty Surge Protector

In June 2006, as part of its normal duties, the SRS Operating Experience Program reviewed an event from the Hanford DOE site where a trailer caught fire due to a faulty surge protector. Hanford determined that some surge protectors sold before 1998 did not prevent overheating. The SRS Operating Experience Program distributed the information to the SRS Senior Electrical Review Board (SERB) for further review.

After additional study, and in conjunction with Senior Management, the SERB initiated a sitewide review and replacement of certain unapproved surge protectors in order to prevent a similar fire occurrence at SRS.

Los Alamos National Lab Small Fire In Microwave

In December 2007, a small fire broke out in a microwave at the Los Alamos National Laboratory (LANL). An employee had placed her Starbucks plastic coffee mug in the microwave to reheat her coffee, just as she had done several times before without incident. She thought she had set the timer for 45 seconds. She left the room for about 10 minutes, saw smoke in the area, returned to the break room and noticed her mug was on fire. She immediately called 911 and activated a building pull station as she left the room.

Remember these safety rules when using a microwave:

- Ensure container is microwave safe
- Set correct time and temperature
- Remain at microwave

C. Responsibilities of All Site Employees

- Avoid an attitude of “we’ve always done it this way” (not a sound approach to fulfilling tasks).
- Be alert to abnormal conditions in the workplace and report these conditions to management.
- Do not assume that someone else has reported a condition. Often, irregularities are common knowledge to employees working in the facility, but no effort is made to correct or report them.
- Question the consequences of your actions.



XI. Additional SRS Policies and Procedures

Enabling Objectives:

- EO 11.01 IDENTIFY the responsibilities of the Subcontract Technical Representative (STR).**
- EO 11.02 IDENTIFY your responsibilities regarding SRS Procedures and Government Telephones.**
- EO 11.03 STATE the purpose of the SRS Quality Assurance Program.**
- EO 11.04 IDENTIFY your responsibilities under the Stop Work Program.**
- EO 11.05 DEFINE the Price-Anderson Amendments Act.**
- EO 11.06 LIST the elements of the SRS Fitness for Duty Program.**
- EO 11.07 IDENTIFY the components of the SRS Employee Concerns Program.**
- EO 11.08 STATE the appropriate method for dealing with an Employee Concern and or differing professional opinion.**

All individuals with an SRS photo security badge are responsible for performing their work in compliance with SRS policies and procedures. Job-specific and facility-specific policies and procedures will be provided to you once you report to the job site.

EO 11.01 IDENTIFY the responsibilities of the Subcontract Technical Representative (STR).

A. Subcontract Technical Representative (STR)

1. The Subcontract Technical Representative (STR) is an individual who serves as the technical liaison between an SRS contractor and the subcontractor. While the STR represents the interests of the department who established the requirement, he or she also represents the interests of the Procurement Department in making sure the subcontractor fulfills its obligations.

2. Duties and Responsibilities of the STR

- Serves as the technical liaison
- Monitors subcontractor performance
- Inspects work for acceptability
- Reviews invoices and comments on chargeability
- Establishes and tracks cost and schedule
- Analyzes subcontractor progress from cost and technical perspectives
- Prepares written evaluation of subcontractor's performance

11.02 IDENTIFY your responsibilities regarding SRS Procedures and Government Telephones.

A. Procedure Compliance

1. SRS is committed to **100% compliance** with procedures.
2. 100% procedure compliance requires that all steps in a procedure be followed exactly as written.
3. There are **only two exceptions** to this rule:
 - a) If you find it is unsafe to follow the procedure, stop work when it is safe to do so, and report your concern to your supervisor or STR.
 - b) If you discover an administrative error in the procedure, bring it to your supervisor's attention immediately.

B. SRS Government Telephones

- Site employees may use the toll-free number for business purposes only 1-800-278-5009.
- Personal Use of Government Telephones
 - ✓ Limit frequency and duration
- Personal Long Distance Calls
 - ✓ Credit/Calling Card
 - ✓ Charge to home number
 - ✓ Call collect



EO 11.03 STATE the purpose of the SRS Quality Assurance Program.

A. Quality Assurance Program

The Quality Assurance Program provides the framework for achieving continuous quality improvement by:

- Ensuring that risks and environmental impacts are minimized.
- Ensuring that safety, reliability, and performance are maximized.
- Empowering employees to look for better, safer, and more efficient ways of doing their work.



EO 11.04 IDENTIFY the SRS Employee's responsibilities under the Stop Work Program.

A. Stop Work Program

Personnel shall stop work if an activity would result in one or more of the following:

- Nonconforming or indeterminate item
- Conditions outside of normal limits or technical specifications
- Hazardous conditions to personnel
- Damage to equipment or facilities
- Equipment or items with a QA Hold Tag in use



EO 11.05 Define the Price-Anderson Amendments Act.

A. Price-Anderson Amendments Act

1. The Price-Anderson Amendments Act (PAAA) is a federal law, enacted by Congress in 1988, that subjects DOE contractors, subcontractors, and suppliers to civil and criminal penalties for violations of DOE Rules, Regulations, and Orders related to **nuclear safety**.
2. The purpose of the nuclear safety requirements is to minimize the risk to workers and the public by ensuring that DOE nuclear activities are conducted in a manner that adequately protects human health and safety, and the environment.
3. PAAA violations usually involve events where personnel did not follow site procedures. Examples of PAAA violations are:
 - Failure to document problems involving nuclear safety
 - Violations of Technical Safety Requirements (TSRs)
 - Not complying with Radiological Work Permits (RWPs)
 - Using radiological monitors that are out of calibration
4. DOE expects the contractors who operate its facilities to have the proper management and supervisory systems in place to assure that all activities at DOE facilities, regardless of who performs them, are carried out in compliance with all DOE Nuclear Safety Requirements.

EO 11.06 LIST the elements of the SRS Fitness for Duty Program.

A. Fitness for Duty

1. "Fitness for Duty" is defined as an individual's ability to perform his/her assigned job free from impairment due to drugs and alcohol abuse, emotional distress, and personal health problems.
2. For purposes of this policy, "drugs or controlled substances" include legal and illegal (street) drugs taken for non-medical reasons. It does not include prescription medication taken in accordance with a physician's instructions.
3. All SRS personnel are responsible for:
 - Reporting to and remaining at work in a condition to perform assigned duties and tasks free from the effects of alcohol and other controlled substances.

- Informing their supervisor if taking any medication, which could adversely affect safety or performance.
- Identifying and reporting workers suspected of not being fit for duty.

4. Testing

- a) The following substance abuse testing program applies to all SRS-badged employees.
- **Initial testing** - All employees (potential employees) will be tested at the time of initial employment. All visitors, contractors, subcontractors, and vendors performing services at SRS must successfully complete chemical testing prior to being granted unescorted access to site facilities. Failure to pass the test will result in a termination of the employment process.
 - **Random testing** – Employees, visitors, contractors, subcontractors and vendors are subject at any time to chemical testing. Employees are chosen for random testing based on a computer-generated random selection program.
 - **For-Cause testing** - For-Cause tests of an employee may be necessary if the employee behavior creates the basis for reasonable suspicion of the use of illegal drugs, the abuse of prescription drugs, or alcohol use to the extent that impaired performance is possible. Reasonable suspicion could result from direct observation of drug use, erratic behavior, arrest or conviction for an illegal drug offense, or reliable information received from a credible source.
 - **Occurrence Testing** - Individuals assigned to Human Reliability Program (HRP) positions and individuals in Department of Transportation (DOT) Driver and Hazardous Waste Operations and Emergency Response (HAZWOPER) medical surveillance programs are required to undergo chemical testing:
 - (a) When it is determined that they could have caused or contributed to an occurrence that requires immediate reporting to DOE, or
 - (b) For other occurrences, incidents, and unsafe practices (i.e., non-immediately reportable occurrences) under the For-Cause Chemical Testing provisions.
 - (c) Any employee involved in an occupational incident resulting in damage to a government vehicle or property.
 - (d) Any employee involved in an accident resulting in recordable injury or transport due to a local hospital for medical attention.

5. Disciplinary Action

It is the employee's responsibility to report to work in a condition to perform assigned duties and tasks free from the effects of alcohol and/or drugs.

Employees are subject to *termination* for:

1. Failure of Random or For-Cause test
2. Refusal to take test
3. Use, possession, manufacturing or distribution of illegal drugs

Anyone in violation of the above will be immediately escorted off-site and is ineligible to return pending investigation by management and Human Resources. Appropriate disciplinary measures, up to and including *termination*, are applied where prevention, deterrence, and rehabilitation are inadequate or ineffective.

6. Rehabilitation and The Employee Assistance Program (EAP)

The Savannah River Site provides support and rehabilitation through the Employee Assistance Program (EAP). EAP provides assistance in ensuring employees are provided sufficient resources and proper follow up for recovery and rehabilitation. Employees should always notify management of any legal (over-the-counter or prescription) drug they may be using that could possibly affect their work performance. Additional info on EAP can be found on the Human Resources homepage on InSite.

EO 11.07 IDENTIFY the components of the SRS Employee Concerns Program (ECP)

A. Open Communication Policy

The Department of Energy and SRS Contractors recognize that open expression is essential to the safe, efficient operation of SRS. Promotes and encourages open and honest communication and allows employees to seek resolution of issues in a reprisal free environment.

Open communication is your right and responsibility!

1. SRS Contractors promote and encourage open and honest communication of issues and concerns that have the potential to adversely affect the site or their employees. It is SRS policy that employees be allowed to identify and seek resolution of workplace issues and concerns in a reprisal-free environment, with the expectation that they will be fully addressed.

2. Employees have the right and responsibility to seek resolution of their workplace issues and concerns. Employees also have the right to receive a timely response to their issues and concerns, and the right to receive protection from adverse consequences as a result of reporting such matters.
3. The Open Communication Policy states that employees shall have the right and responsibility to report concerns relating to safety, quality, security, environment, or health arising from operation of SRS. They shall also have the right to receive a timely investigation and resolution of the concern, and protection from reprisal, reprimand, harassment, intimidation, retaliation, or criticism as a result of reporting the concern.

B. Employee Concerns Program

SRNS, SRR, WSI-SR, NNSA, MOX Services, Parsons and DOE-SR maintain Employee Concerns Programs to assist employees in seeking resolution of their issues and concerns if resolution through the established channels cannot be achieved, employees fear reprisal, or employees wish to remain confidential or anonymous. The ECP is available for all contractor and subcontractor employees.

1. The Employee Concerns program assures that the Open Communication Policy works by:
 - Serving as the site point of contact for issues related to the Environment, Safety, Health, Waste, Fraud and other matters.
 - Promoting the use of existing programs and avenues available to help employees seek resolution of workplace issues
 - Providing an effective process for ensuring employee concerns are processed in accordance with DOE regulations and applicable laws.
 - 10 CFR 851 (Worker Safety and Health) requires DOE contractors to provide their employees with a safe and healthful workplace, and violations may be subject to criminal and monetary penalties.
 - Assists employees:
 - if resolution cannot be achieved
 - If they fear reprisal, or
 - If they wish to remain anonymous or confidential

**EO 11.08 SELECT the appropriate method for dealing with
Differing Professional Opinions.**

XI. Differing Professional Opinion (DPO) Process

The Differing Professional Opinions (DPO) process is intended for use in professional areas when more than one professional opinion or direction impacts missions, safety, health or the environment.

The process:

- Is available to all SRS contractors and subcontractors
- Facilitate dialogue and resolution for technical issues
- Encourages employees to first try to resolve issues through normal peer and management review.

A. Alternative Dispute Resolution Process

The Alternative Dispute Resolution (ADR) process provides mediation as a method of resolving conflict following a disagreement.

If the disputing parties agree, ECP will offer a trained mediator to serve as a neutral third-party person to facilitate discussion of disputed issues and to assist the parties with achieving mutual resolution.

B. Employee Concerns Retaliation

Certain employee actions are protected from retaliation (reprisal) by an employer per 10 CFR 708, DOE Contractor Employee Protection Program.

Retaliation as a result of the following is prohibited:

- An employee is disclosing information,
- An employee participating in proceedings, or
- An employee refusing to participate in activities which violate health/safety laws or could cause serious injury to the employee(s) or public.

Retaliations may be subject to fines and penalties under the Price Anderson Amendment Act (PAAA) per 10 CFR 820 or under 10 CFR 851, Worker Safety and Health Program.



*Answer the self-check questions below.
The answers are in the back of this study guide.*



- 1. What does it mean to be Fit for Duty?**
 - A. Getting enough sleep and getting to work on time
 - B. Having a college degree
 - C. Volunteering for a hazardous job
 - D. Reporting to and staying at work free from the effects of alcohol

- 2. What is the purpose of the Quality Assurance Program?**
 - A. To document and investigate security violations to the fullest extent
 - B. To ensure risks to safety and the environment are minimized
 - C. To collect and store unused government equipment
 - D. To document unsafe subcontractor performance

- 3. You are following a site procedure while doing your job. A condition arises that isn't covered in the procedure, what is your responsibility?**
 - A. Stop work as soon as it's safe to do so and notify your supervisor
 - B. Stop work immediately and notify Security
 - C. Make a note in the procedure and keep working
 - D. Stop work only if the Safety Engineer tells you to

- 4. What is an example of a potential violation of the Price-Anderson Amendments Act?**
 - A. Disposing of aerosol cans in a regular trash dumpster
 - B. Not wearing your badge in the chest area
 - C. Bringing an explosive device on the site
 - D. Not following requirements on the Radiological Worker Permit

- 5. What method is available to the employee after exhausting all other avenues to have a concern resolved through SRNS?**
 - A. Standard Employee Concerns Program
 - B. Savannah River Concerns Program
 - C. Code of Concerns Program
 - D. DOE-SR Employee Concerns Program

APPENDIX

SRS ACRONYMS

ALARA	As Low As Reasonably Achievable	PC	Personal Computer
AMS	Asset Management Specialist	PM-6A	Portal Monitor 6A
CAT	Consolidated Annual Training	POE	Point of Entry
CI	Counterintelligence	PCM-1B	Personnel Contamination Monitor 1B
CIF	Consolidated Incineration Facility	PII	Personally Identifiable Information
CND	Criticality Neutron Dosimeter	PPA	Property Protection Area
COI	Conflict of Interest	PPE	Personal Protective Equipment
dB	Decibel	QA	Quality Assurance
DNO	Do Not Operate	QAP	Quality Assurance Program
DOE	Department of Energy	R&D	Research and Development
DOE-SR	Department of Energy-Savannah River	RBA	Radiological Buffer Area
DWPF	Defense Waste Processing Facility	RP	Radiological Protection
ECA	Environmental Compliance Authority	RWP	Radiological Work Permit
ECP	Employee Concerns Program	SAS	Safety Alarm System
E&I	Electrical & Instrumentation	SCA	Soil Contamination Area
ERO	Emergency Response Organization	SME	Subject Matter Expert
FOIA	Freedom of Information Act	SNM	Special Nuclear Material
GERT	General Employee Radiological Training	SPO	Security Police Officer
GFE	Government-Furnished Equipment	SREL	Savannah River Ecology Lab
GSA	General Services Administration	SRS	Savannah River Site
HAZCOM	Hazard Communications Program	SRSOC	Savannah River Site Operations Center
IH	Industrial Hygiene	SRNL	Savannah River National Laboratory
JPA	Job Performance Aid	SRNS	Savannah River Nuclear Solutions
L/T	Lockout/Tagout	SRR	Savannah River Remediation
MOX	Mixed Oxide Fuel	STR	Subcontract Technical Representative
mrem	Millirem	TEF	Tritium Extraction Facility
MSDS	Material Safety Data Sheet	TLD	Thermoluminescent Dosimeter
NNSA	National Nuclear Security Administration	UCI	Unclassified Controlled Information
NFPA	National Fire Protection Association	UCNI	Unclassified Controlled Nuclear Information
OSHA	Occupational Safety and Health Administration	USFS	United States Forest Service
OUO	Official Use Only	WBC	Whole Body Count
		WSI	Wackenhut Services, Inc.

Answers to Self-Check Questions

General Description of SRS

1. (B) Wackenhut Services, Inc.
2. (B) Department of Energy – SR (DOE-SR)
3. (D) Savannah River National Laboratory (SRNL)

Health and Safety

1. (D) Employees have the right to express concerns about worker safety and health
2. (A) Taking shortcuts through constructions areas
3. (C) A pool of water spilled on the floor
4. (D) Define the scope of work, identify the hazards, and develop controls to mitigate the hazards, perform work within the boundary of the controls and provide feedback for continuous improvement
5. (B) Call 725-3911 and the Rescue Team will rescue the employee
6. (A) Danger-Do Not Operate (DNO) – Hazardous Energy Control
7. (B) Visually inspect all equipment before each use
8. (C) The work scope has changed
9. (A) Employee Safety Manual 8Q

Radiological Protection

1. (A) The risk form working in the nuclear industry is lower
2. (D) X-Rays, glow in the dark signs, smoke detectors
3. (D) 100 mrem/year
4. (A) Posting radiological signs colored yellow and magenta
5. (A) Keep your radiation exposure As Low As Reasonably Achievable (ALARA)
6. (C) Tell your Supervisor so he can arrange a radiological worker escort for you
7. (B) PCM
8. Cosmic, Radon, Human Body, Earth's Crust

Safeguards and Security

1. (B) Ammunition
2. (A) Property Protection Area (PPA)
3. (C) Valid drivers license, proof of insurance and vehicle registration
4. (D) To prevent unauthorized personnel
5. Property Pass

Emergency Management

1. (D) All of the above
2. Horn or Chirp/Fire – go to the rally point, Bell/Nuclear Incident Monitor – proceed to the rally point, Warble – Listen for instruction over the PA system, All Clear – Voice announcement only.
3. (A) Ensure their communication equipment is working and turned on
4. (C) Listen for more information over the PA system
5. The package is unusually heavy or lopsided.

Fire Safety

1. Incipient
2. (D) Horn
3. Pull, Aim, Squeeze and Sweep
4. (C) Have an exit behind you and back towards the exit

Hazard Communication

1. (C) To protect every employee's "right to know" about chemical hazards in the workplace
2. (A) Written program, Material Safety Data Sheets (MSDS) Container labeling, hazardous Chemical inventory and Training
3. (B) Nervous system
4. (A) Any chemical which is a physical hazard or a health hazard
5. (D) Department Chemical Coordinator
6. White - Special, Yellow - Reactivity, Red – Flammable, Blue - Health

Environmental Management System

1. Hazardous, Non-hazardous, radioactive and mixed
2. (B) Environmental Compliance Authority
3. (D) Orange balls

Policies and Procedures

1. (D) Reporting to and staying at work free from the effects of alcohol
2. (B) To ensure risks to safety and environment are minimized
3. (A) Stop work as soon as its safe to do so and notify your supervisor
4. (D) Not following requirements on the Radiological Worker Permit
5. (D) DOE-SR Employee Concerns Program