

General Employee Training



Savannah River Site

TREGGETASTGD000108
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GET COURSE OVERVIEW

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 permanent 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: Environmental Management (EM) responsibilities for cleaning up the Cold War legacy and preparing for long-term stewardship, NNSA Defense Programs, NNSA Nuclear Nonproliferation Programs and SRNL.

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

GENERAL DESCRIPTION OF SRS

I. General 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. **Wackenhut Services, Inc. (WSI)** provides security (protective) services for the site.
7. The **U.S.D.A. Forest Service** manages the natural resources on the 310 square mile site.
8. **Savannah River Ecology Lab (SREL)** provides ecological studies to the DOE, but retains its independence regarding academics.
9. **Savannah River National Laboratory (SRNL)** does research and development in waste processing, environmental remediation, nonproliferation technologies, and national security projects.
10. **Subcontractors** supply necessary manpower and services as needed.

B. SRS Facility Areas

1. SRS facility areas are identified by letters. The letter denotes the physical location on the site.

NOTE: 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 on Route 1 between Whiskey Road (SC 19) and Route 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, 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 H-Area. 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), which is 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.

	<i>Answer the self-check questions below. The answers are in the back of this study guide.</i>	
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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)

SRS SECURITY PROGRAM

Enabling Objectives:

- EO 2.01 STATE the purpose of the SRS Safeguard and Security Program.**
- EO 2.02 IDENTIFY the SRS Security Areas.**
- EO 2.03 STATE the SRS access controls and regulations.**
- EO 2.04 STATE the elements of the SRS Security Badge Program.**
- EO 2.05 IDENTIFY the security restrictions on items and vehicles.**
- EO 2.06 LIST the SRS security controls on information and property.**
- EO 2.07 STATE the SRS Incidents of Security Concerns Program reporting requirements.**
- EO 2.08 STATE the other SRS Security Program reporting requirements.**

II. 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.
- 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 requirements.

The purpose of the SRS Safeguards and Security Programs is to establish roles and responsibilities and to inform all employees of their responsibility in the area of security. This section provides policies that meet the security requirements of the Department of Energy (DOE) Manuals.

EO 2.01	STATE the purpose of the SRS Safeguard and Security Program.
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A. Safeguards and Security Program Planning and Management

1. Safeguards and Security Awareness

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.

2. 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), Unclassified Controlled Information, and Technical Security Countermeasures.

3. 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.

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

- a) The DOE NMC&A Program is responsible for ensuring our site's nuclear materials inventory is accounted for and adequately protected.
- b) 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.

5. Cyber Security

- a) 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.

- b) 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).
- c) 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.
- d) 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 UCI

6. Office of Counterintelligence

The Office of Intelligence and Counterintelligence, Savannah River Field Office was established to provide counterintelligence and counter terrorism support to all DOE and NNSA Research, Development, Test and Evaluation facilities, programs, personnel and restricted technologies within the Savannah River Site area of responsibility. Counterintelligence Officers can be reached at 803-725-6845 or Building 770-A to discuss situations involving foreign national contact or matters of Counterintelligence concern.

7. OPSEC

- a) 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.
- b) Employees are often targeted by these adversaries as being the easiest and most reliable source to obtain current information about

- c) DOE-SRS operations. This form of "intelligence gathering" is the most common used by adversaries to obtain information.
- d) 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
- d) 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?"

EO 2.02 IDENTIFY the SRS Security Areas.

A. 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.

1. 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.

2. Property Protection Area (PPA)

a) 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).

- b) Entry/exit inspections are conducted randomly to prevent the unauthorized introduction of prohibited articles or removal of government property.
- c) All employees and badged visitors have unescorted access with a security photo badge.
- d) Examples of PPAs are the Central Training Facility (766-H) and the engineering buildings in B-Area as well as SRS off-site facilities.

3. Limited Area (LA)

- a) 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).
- b) Protective Force personnel or other internal controls are in place to prevent access to classified matter by unauthorized persons.
- c) Unescorted entry to LAs requires an "L" or "Q" clearance and for specific facilities, an access limiter on the security badge.
- d) Entry/exit inspections are conducted randomly to prevent the unauthorized introduction of prohibited articles and the unauthorized transporting of government property.
- e) Examples of LAs include some facilities/locations within the 700-A Administration Area, Savannah River National Laboratory, 200-H Area and Tritium Area.

4. Exclusion Area (EA)

- a) 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.
- b) "Q" cleared employees with special access and authorization are allowed unescorted access.
- c) EAs at SRS are located within the Tritium Facilities Limited Area.

5. Protected Area (PA)

- a) 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.
- b) "Q" cleared employees with additional access codes on their badge are allowed unescorted entry.
- c) "L" cleared employees may require access approval and an escort.

6. Material Access Area (MAA)

- a) 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.
- b) MAAs are usually vaults or vault-type rooms located within a PA.
- c) "Q" cleared employees, with special access limiters, are allowed unescorted access.

EO 2.03 STATE the SRS access controls and regulations.

A. Access Controls and Entry/Exit Inspection

1. Point of Entry Process

- a) 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.

- b) All visitors and vendors must receive a general visitor/vendor safety and security briefing in the 703-46A Badge Office via the computer stations located there.
- c) 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.
- d) 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.

2. Access Controls

- a) 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.
- b) 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.

3. Site Violation Policy Notice

- a) 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
 - 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.).
- b) 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.

4. Badge Inspections at Site Perimeter Barricades

NOTE: The driver of the vehicle must have a Site badge, valid driver's license, vehicle registration, and current proof of vehicle insurance.

- a) 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, you 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.
- b) 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.
- c) 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.

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.

5. Property Pass

- a) A **Property Pass** is required for transporting DOE-SR 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.
- b) 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.

- c) 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).

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

6. Use of Government Vehicles

- a) You must have your supervisor's authorization to operate a government vehicle.
- b) The vehicle must be used for official business only.
- c) Only passengers on official business are permitted to ride in government vehicles.

- d) The driver must possess a valid state driver's license. The license does not have to be a South Carolina license.
- e) Tobacco use in any form in a government vehicle is prohibited.
- f) Drivers of government vehicles have the responsibility to stop at Site perimeter barricades for inspection of the vehicle and alert Protective Force that they are driving a government vehicle (not all government vehicles have front government license plates)
- g) All government vehicles must be locked when unattended.

7. Traffic Accidents and Citations

- a) Immediately report all on-site traffic accidents to the WSI-SRS Law Enforcement Dispatcher at 803-725-2310. This applies whether you are driving a government vehicle or your personal vehicle. Report all on-site traffic accidents and any traffic citations to your supervisor immediately. Report all off-site traffic accidents and traffic citations to your supervisor if you were operating a government vehicle or your personal vehicle on government time.
- b) If a traffic accident occurs in a government vehicle, there are accident report forms inside the glove compartments. The operator of the vehicle is required to fill these out and distribute them according to the directions given.

8. Personally-Owned Recreational Vehicles

- a) Personally-owned recreational vehicles (boats, campers/travel trailers, motor homes, cargo trailers, ATVs, riding mowers, etc.) are not allowed to enter the Site. The 3/700-A Area parking lot has been designated to allow Site employees to park these non-essential vehicles, for short-term parking according to the following three requirements:
 - Employees must contact the WSI-SRS Law Enforcement Dispatcher, 803-725-2310, and request permission to park their recreational vehicle in the lower Augusta parking lot in 700-A (adjacent to Road 1). This must be done on the night or day before and provide a description of the vehicle, tag, and date and time the vehicle will be in the parking lot
 - All vehicles are subject to inspection

- Vehicles are only allowed to park in this area for less than 24 hours. Any vehicles parked in this location without prior notification/permission will be towed at the owner's expense

10. Badge Inspections at Security Area Entry Control Facilities

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

EO 2.04 STATE the Elements of the SRS Security Badge Program.

A. DOE Badge Program

1. The DOE-SR Personnel Security Department is established to ensure the overall objectives and requirements of the Personnel Security Program are implemented.
2. A photo ID badge is required for unescorted entrance to the 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.
3. 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:
 - a) Badges must be worn at all times while on the site and at off-site DOE facilities.
 - b) Badges must be worn in plain view and at chest level.

- c) Badges must **not be worn** in public or **used** as personal identification outside of the SRS.
4. The badge you receive is an important credential. Familiarize yourself with the policies listed below.
- a) It is against the law to counterfeit, alter, or misuse your badge.
 - b) 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.
 - c) 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.
 - d) If you take an extended leave of absence (90 days or longer), you must return your badge to the Badge Office.
 - e) Wear your badge in plain view, on the torso, above the waist and below the neck while in DOE security areas, including Property Protections Areas (PPA).
 - f) Renew your badge when there is a change in name, physical appearance, or the badge becomes faded or damaged.
 - g) Do not use your badge outside of DOE facilities, other than for government purposes.
 - h) Do not use your badge as a means of identification for unofficial purposes. Personnel on official government travel must use their Site ID (white badge with bar code) for verification purposes if required for government rates at hotels.
 - i) Do not use your badge off-site for verification of employment or for verification for discounts. Use your Site ID for these functions.
 - j) Do not display your badge in off-site locations such as restaurants, service stations, convenience stores, etc.
 - k) Protect your badge from theft.

NOTE: 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 your badge is stolen, you must produce a police report and submit the proper form to Personnel Security.

5. Site ID/ProRad Badge



- a) 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.
- b) 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.
- c) You must wear your Site ID/ProRad badge at all times on the site.

Example of Site ID/ProRad Badge for Employees with Emergency Positions



6. Proximity Badge

The proximity badge is a tan plastic card attached to the other badges that contains access authorization information and allows an individual access into certain security areas. Uncleared personnel may be issued a proximity badge 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.

7. Unclassified Foreign National Assignment/Visitor

Please contact the SRS Badge Office at 803-725-2383 or 803-725-7176 prior to on-site and off-site Foreign National involvement with SRS information. Federal Employees should call 803-952-6036.

8. Physical Security

The physical security of SRS requires different levels of security and access controls depending on what is to be protected.

The physical security and access control measures are more stringent when protecting certain quantities and types of nuclear material, but may be less stringent when protecting certain items of government property. Your security photo badge must be worn at all times, photo side out and above the waist, while on the site to determine your level of clearance and access authorization for specific security areas.

9. Escorting

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:

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

9. Escortee Responsibilities Include:

- a) 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).
- b) Ensuring the badge (visitor or photo) is properly displayed.

10. The Challenge System

- a) 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.
- b) If you encounter a person who is not cleared for the area they are in or the person is not wearing a security badge, you should enact the Challenge System. Confront the person and simply ask them the location of their escort and/or why their security badge is not visible. You should then assume escort responsibilities and immediately escort the individual or individuals to a WSI-SRS Security Police Officer (SPO) or your area security representative.

EO 2.05 IDENTIFY the security restrictions on items and vehicles.

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 (i.e., 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 (Exception: empty or fired cases) and explosives
 - Incendiaries and accelerants such as gasoline/diesel fuel (not contained within factory-installed fuel tank), explosive materials and related devices (i.e., fireworks, blasting-caps)
 - All 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, and devices containing chemical agents, chloracetophenone [cn], orthochlorbenzalomalonitrile [cs] 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 (small device that generates an electric shock)

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 that are not permitted in Security Areas (Limited Areas and above) include:

1. Electronic copying or recording devices (e.g., tape recorders, video recorders, digital cameras)
2. MP3 players, iPods, or other similar devices containing a microprocessor
3. Cameras and undeveloped film including disposable cameras with built-in film
4. Wireless transmitting equipment
5. 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)
6. Non-government pager with transmitting capabilities

NOTE: Personally-owned electronic equipment is not allowed in Limited Areas and above.

C. Random Vehicle Inspection

1. 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
2. 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.
3. 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.).
4. Personnel driving government vehicles are required to provide their driver's license when pulled for a random inspection.

D. Personally-Owned Electronic Equipment

1. 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 (facilities in Limited Areas or higher).

2. POEE examples include, but are not limited to:

- Personally owned thumb drive(s), USB storage device(s), and flash media
- Electronic organizers (allowed in General Site and Property Protection Areas **ONLY**)
- Cell phones and Blackberry devices (allowed in General Site and Property Protection Areas **ONLY**)
- Any personally owned computer, including but not limited to: desktops, laptops, net books, note pads, and hand-held computers
- Data bank watches (watches that store data such as phone numbers and calendars)
- Pagers
- Cameras or removable camera media such as flash cards
- Recording equipment

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

- Similar devices which might be used for business information communications, processing or data storage
- Employee-owned devices may be brought on the general site as long as they are not interfaced in anyway with Site systems or networks.
- This policy does not apply to contractor-owned or leased equipment. It does 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.

E. Computers and the Internet

1. 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
- Online gambling is strictly prohibited
- Does not include social networking by any means including the following or any similar networking tool: Facebook, My Space, Twitter, YouTube, and blogs (except technical or scientific blogs)
- Does not require any change to any current site operation or support from site organizations.

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 on site. Use of appropriate caution is your responsibility.

F. 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.

EO 2.06 LIST the SRS security controls on information and property.

A. Unclassified Controlled Information

1. Unclassified Controlled Information (UCI) is unclassified information that may be exempt from public release under the Freedom of Information Act.
2. It is important for employees to understand that the protection of information at Savannah River Site includes not only general information, but also classified information as well as UCI which includes Unclassified Controlled Nuclear Information (UCNI), Official Use Only (OUO), and Export Controlled Information (ECI). This information must be protected from unauthorized access.
3. Access to UCI 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 UCI documents while in use. UCI must be stored to prevent unauthorized access to the information.
 - a) If you are located within a Limited Area, UCI documents only require storage in unlocked desks, file cabinets or a bookshelf, but must be out of sight.
 - b) Outside of Limited Areas, UCI must be secured behind a locked door or in a locked container when unattended.
4. All UCI transmitted off the site should be by the most secure method available. When transmitting UCI, it is very important to inform the recipient that the information is UCI. This can be accomplished by marking the transmittal cover (e.g. fax sheet or transmittal letter) as "Document Transmitted is (e.g. OUO)." If the transmittal is UCI, it must contain all applicable markings.
5. Per Cyber Security requirements, if UCI (to include Personally Identifiable Information -- PII) is transmitted off the site, it must be encrypted!

B. Personally Identifiable Information

1. Personally Identifiable Information (PII) is any information about an individual maintained by an agency, including but not limited to, education, financial transactions, medical history, and criminal or employment history and information that can be used to distinguish or trace an individual's identity, such as name, social security number, date and place of birth, mother's maiden name, biometric records, etc., including any other personal information that is linked or linkable to an individual. This is further defined as Public PII and Protected PII.
2. PII **MUST** be protected when emailed. Review the chart below for guidance on emailing PII on the site and off the site.

(For more information on handling and storing paper copies, media copies, etc. of PII, see the Security Manual, 7Q, or contact your local Security Representative.)

Encryption - Guidance

Quick Reference for Emailing Unclassified Controlled Information (UCI)

Sensitivity	On the Site	Off the Site
OUO	OK	OK - Encrypt if available
PII	OK	Must Encrypt
UCNI	OK	Must Encrypt

NOTE: All of the above, whether emailed on the site or off the site, require a label at the beginning of the email stating:

“The following has been determined to contain _____.”
(see Manual 7Q, Procedure 405)

Personally Identifiable Information (PII)

PII – any information about an individual maintained by an agency, including but not limited to, education, financial transactions, medical history, and criminal or employment history and information that can be used to distinguish or trace an individual's identity, such as name, social security number, date and place of birth, mother's maiden name, biometric records, etc., including any other personal information that is linked or linkable to an individual. This definition is further defined as: (1) Public PII and (2) Protected PII.

Public PII (not Protected PII) – information that is readily available in public sources

Protected PII – information that required enhanced security and additional protections

Protected PII:

1. Social Security Numbers *
2. Place of Birth associated with an individual
3. Date of Birth associated with an individual
4. Mother's maiden name associated with an individual
5. Biometric record associated with an individual
 - Fingerprint
 - Iris scan
 - DNA
6. Medical information associated with an individual
 - Previous diseases
 - Metric information
 - Weight
 - Height
 - BP
7. Criminal history associated with an individual
8. Employment history associated with an individual
 - Ratings
 - Disciplinary actions
9. Financial information associated with an individual
 - Credit card numbers
 - Bank account numbers
10. Security clearance history or related information
11. Education Transcripts

Source: SRS Security Manual, 7Q

Public PII (not Protected PII) is defined as an individual's name associated with or without the following that are publicly available:

1. Phone numbers (work, home, cell)
2. Street addresses (home, work, other)
3. Email addresses (work or personal)
4. Digital pictures
5. Birthday cards
6. Birthday emails
7. Grade and Step information for Federal Employees
8. Medical information pertaining to work status (X is out sick today)
9. Medical information included in a health or safety report (X broke his arm when....)
10. Resumes unless it includes SSN
11. Job titles for employment history, resume, or written biography
12. Salaries
13. Bonuses
14. Written biographies (like the ones used in pamphlets of speakers)

*** Office of Management and Budget (OMB) memo M-07-16 requires agencies to eliminate the unnecessary collection and use of SSN and does not distinguish between full, partial, or truncated SSN.**

C. Classified Matter Protection and Control

1. Examples of classified markings are:

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

- a) This information must be protected from unauthorized access.
- b) If a suspected classified document or electronic media is found, maintain control and notify your manager, security representative or Pro Force.
- c) 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.
- d) Under 10 CFR 824, civil penalties for violations by a DOE contractor can be up to \$100,000 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.
- e) The DOE Enforcement Policy includes provisions for full or partial mitigation of civil penalties where the DOE contractor has ensured timely identification, reporting, and correction for noncompliances. However, the best scenario is to avoid noncompliances through careful compliance with the applicable security procedures.

D. Protecting Government Property

1. 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.

2. 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.

EO 2.07 STATE the SRS Incidents of Security Concerns Program reporting requirements.

A. Incidents of Security Concern

1. A **violation** is defined as an action or intent that constitutes a violation of U.S. law, Executive Order or the implementing directives. Example: communication or disclosure of classified information, with or without intent to injure the U.S. through deliberate or negligent means.
2. An **incident of security concern** is defined as events which are of concern to the DOE Safeguards & Security Program that warrant preliminary inquiry and subsequent reporting.

B. 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.

C. Employee Responsibilities in Reporting of Incidents

1. Any SRS employees who become aware of circumstances or events that constitute an incident of security concern are responsible for immediately notifying their supervisor or organizational Security Incident Program Manager (SIPM). After hours, notify the SRS Operations Center at 803-725-3911 who will provide or notify the SIPM and organizational manager.
2. You are charged with the responsibility for security. Employees are asked to make a commitment to security and to make it a top priority.

EO 2.08 STATE the other SRS Security Program reporting requirements

A. Other SRS Security Program Reporting Requirements

1. 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:

a) To the Personnel Security Office

- All arrests, charges, citations (including charges that are dismissed), or detentions by any federal, state, or other law enforcement agencies for violations of law; and violations of federal, state, county, or municipal laws, regulations or ordinances within or outside of the United States. Traffic violations for which a fine of up to \$250.00 is imposed need not be reported, unless the violation was alcohol or drug related.
- Personal or business-related filing for bankruptcy
- Garnishment of wages
- Legal action effected for name change
- Change in citizenship status
- Employment by, representation of, or other business-related association with a foreign, or foreign-owned interest or foreign national

- Any approach or contact by an individual seeking access to classified matter or sensitive information
- Lost or stolen badges
- Hospitalization for treatment of mental illness, treatment for drug abuse, or treatment for alcohol abuse.

Employees who are applying for or have been granted DOE access authorizations must:

- Provide full, frank, and truthful answers to relevant and material questions, and when requested, furnish or authorize others to furnish information that is deemed pertinent to the access authorization eligibility process. This obligation applies during all phases of the access authorization process.
- Immediately notify their Personnel Security Office or their Organizational /Facility Security Officer after any approach or contact by any individual seeking unauthorized access to classified matter or Special Nuclear Material. If such an approach or contact is made while on foreign travel, notify a Department of State (DOS) official at the local United States Embassy or Consulate with a request that DOS report the incident to the Director, S&S, and DOE Headquarters.
- Provide your Personnel Security Office with a completed DOE Form 5631.34, "Data Report on Spouse/Cohabitant," within 45 days of marriage to or cohabitation with an individual who does not now nor ever has possessed a DOE access authorization.

b) To the Security Incident Program Manager

All incidents of security concern.

c) To the Counterintelligence Officer

- 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.

d) To the Foreign Travel Officer

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

e) 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

If you receive or discover a suspicious package or envelope, DO NOT TOUCH OR MOVE THE ITEM AFTER YOU DETERMINE A CREDIBLE THREAT EXISTS. CLEAR THE IMMEDIATE AREA AND CONTACT THE SRSOC at 3-3911 or 803-725-3911.

f) To Cyber Security

Computer security incidents.

g) To Technical Surveillance Counter Measures (TSCM)

Suspected wiretap and/or eavesdropping devices.

NOTE: 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.

2. Workplace Violence

a) 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, either spoken or written
- Threatening gestures
- Physical aggression directed at persons or property.

b) Report such behavior to management immediately. Management is then responsible for promptly investigating the report and taking the

appropriate action. The Employee Assistance Program has counseling and training to prevent workplace violence.

	<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. 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. 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 DOESR property offsite, you must have a valid
_____.

HEALTH AND SAFETY PROGRAMS

Enabling Objectives:

- EO 3.01 STATE the SRS safety policy and philosophy.
- EO 3.02 IDENTIFY the SRS worker rights and responsibility for safety.
- EO 3.03 STATE the SRS safety restrictions on practices and conditions.
- EO 3.04 IDENTIFY the function of the ISMS, BBS VPP and HPI.
- EO 3.05 STATE when and how to call a time out.
- EO 3.06 STATE the restrictions on motorists and pedestrians at SRS.
- EO 3.07 LIST the precautions of the SRS Hazardous Energy Control Program.
- EO 3.08 LIST the types of Personal Protection Equipment available at SRS and the sources of their requirement.
- EO 3.09 STATE the methods for mitigating worker exposure to chemicals, noise and heat.
- EO 3.10 IDENTIFY safe practices for using ladders.
- EO 3.11 STATE the definition of and restrictions on confined spaces at SRS.

III. Health and Safety Program

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 rules and rights, defines responsibilities, and identifies safety regulations.

EO 3.01 STATE the SRS safety policy and 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.

- 1. 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.
- 2. 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.
- 3.** Materials, equipment, and facilities will not be procured, fabricated, modified, built, or utilized until compliance with all relevant procedures has been verified.
- 4.** 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.
- 5.** 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.**
6. Report unsafe acts, unsafe conditions, and near misses to supervision.
 7. 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.
 8. Do not attempt to operate special tools or equipment unless you are trained, qualified, and authorized to operate the specific tool or equipment.
 9. 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.
 10. Do not proceed with any task until you are certain the job can be completed with everyone's safety, including your own, maintained.
 11. Ask for help or clarification if unsure about your safety or the safety of others, regardless of the situation.
 12. Obey all warning signs, barricades and other safety notices. Obtain permission before entry.
 13. 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.
 14. 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.
 15. 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 3.02 IDENTIFY the SRS worker rights and responsibility for safety.

A. Worker Rights and Responsibilities

1. All workers have rights and responsibilities with regard to DOE and Occupational Safety and Health Administration (OSHA) requirements. DOE contractor workers have the right and responsibility, without reprisal, to:
 - a) Participate in activities described below on official time.
 - b) Have access to:
 - DOE safety and health publication
 - The Worker Safety and Health program
 - The standards, controls, and procedures applicable to the site
 - The DOE safety and health poster that informs the worker of relevant rights and responsibilities

- Limited information on any recordkeeping log (OSHA Form 300)
 - Access is subject to Freedom of Information Act requirements and restrictions
 - The DOE Form 5484.3 (the DOE equivalent to OSHA Form 301) that contains the worker's name as the injured or ill worker.
- c) Be notified when monitoring results indicate the worker was overexposed to hazardous materials.
- d) Observe monitoring or measuring of hazardous agents and have the results of their own exposure monitoring.
2. A representative authorized by the worker may accompany DOE during the physical inspection of the workplace for the purpose of aiding the inspection. When no authorized worker representative is available, DOE will consult, as appropriate, with workers on matters of worker safety and health.
 3. Request and receive results of inspections and accident investigations.
 4. Express concerns related to worker safety and health.
 5. Decline to perform an assigned task because of a reasonable belief that, under the circumstances, the task poses an imminent risk of death or serious physical harm to the worker, coupled with a reasonable belief that there is insufficient time to seek effective redress through the normal hazard reporting and abatement procedures.
 6. Stop work when the worker discovers worker exposures to imminently dangerous conditions or other serious hazards, provided that any stop work authority must be exercised in a justifiable and responsible manner in accordance with Manual 8Q, Procedure 1.
 7. Receive, within 15 days of the receipt of a written request, access to or copies of, any monitoring or bioassay records relevant to the worker's potential exposure to toxic materials or harmful physical agents during employment.
 8. File a complaint regarding unsafe conditions or discrimination because of safety-related issues to DOE-SR using form SR-230, (Rev. 10/21/97).
 9. Have access to their personal safety, health, and medical records consistent with the Freedom of Information Act and the Privacy Act.

10. Be notified of any information indicating that a radiation dose may have exceeded the limits specified by the DOE prescribed OSHA standards.
11. Promptly report any condition that may lead to a violation of OSHA standards.
12. Notify supervision of any unsafe conditions.

You Have a Right to a Safe and Healthful Workplace

IT'S THE LAW!

- You have the right to notify your employer or the local Department of Energy (DOE) office about workplace hazards, without reprisal. You may ask that your name not be used.
- You have the right to participate in the activities referenced in 10 CFR 851 "Worker Safety and Health Program" on official time.
- You have the right to access copies of DOE worker protection publications; the worker safety and health program for your workplace; and the standards, controls, and procedures that apply to your workplace.
- You have the right to have access to some accident and illness recordkeeping logs and the information in records of any workplace illness or injury that you experienced.
- You have the right to observe monitoring or measuring of hazardous agents, to receive the results of your own monitoring, and be notified when monitoring results indicate an overexposure.
- You have the right to have a representative accompany the DOE's Director for enforcement or the Director's authorized personnel during the inspection of your workplace.
- You have the right to request and receive results of inspections and accident investigations.
- You have the right to decline to perform an assigned task because of your reasonable belief that, under the circumstances, the task poses an imminent risk of death or serious physical harm to you, coupled with your reasonable belief that there is insufficient time to seek effective redress through the normal hazard reporting and abatement procedures.
- Your employer must post this notice in your workplace.



Title 10 CFR 851 requires DOE contractors to provide their workers with a safe and healthful workplace. To obtain more information about those requirements and your rights; seek advice or assistance; or report an emergency, contact your supervisor, your local DOE office, or the DOE Office of Health, Safety and Security (<http://www.hss.energy.gov>). Additional inquiries or concerns may be addressed to the Employee Concerns Manager at the local DOE office at

P.O. Box A, Aiken, SC 29802 or 803-952-8320 (city, state, zip code)



Workers must comply with the requirements of 10CFR851, including the Worker Safety and Health Program, which are applicable to their own actions and conduct.

EO 3.03 STATE the SRS safety restrictions on practices, conditions, and prohibited activities.

A. Unsafe Practices (At-risk Behaviors)

1. Unsafe practices (at-risk behaviors) are actions which people do or fail to do which may contribute to an accident or injury. Over 95% of occupational injuries are the result of at-risk behaviors.
2. The causes of unsafe practices are failure to follow:
 - a) Safety rules
 - b) Specific instructions
 - c) 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) Failure to properly light passageways, exits and corridors, and keep them clear of obstructions
3. Approach open and closed doors cautiously.
4. Keep passageways and stairways free of tripping hazards.
5. Keep the work area neat.
6. Use caution when handling paper and metal fasteners.
7. Do not tilt back in straight chairs or lean too far back in swivel chairs.

C. Correct Lifting Techniques Include

1. Stand **close to the load**, with feet spread apart for a stable base.
2. **Squat**, with your head and back in line. Do not bend at the waist. Keep the principle of leverage in mind. Tighten stomach muscles. Abdominal muscles support your spine when you lift.
3. Grip the load with your **whole hand**.
4. Lift with your **legs**. Let your leg muscles do most of the work.
5. Hold the load centered and **close to the body**. The closer the load is to your body, the less force it exerts on your back. Do not add the weight of your body to the load. Avoid twisting; it can cause injury.
6. Maximum loads to lift:
 - a) Varies from task to task. Check work procedures if your job requires lifting. When in doubt, get help before lifting.
 - b) Use mechanical means whenever possible to help perform a lift.
 - c) Back support belts are available from Stores, but are **not** designed to increase the weight you can lift.
 - d) Back support belts are designed to help reduce the possibility of lifting-related injuries. Not only must the belt be worn and used according to the manufacturer's instructions, but correct lifting techniques must also be practiced.

D. Responses to Unsafe Practices and Conditions

1. First, correct the situation, if you can. Get help on the way if necessary.
2. Report the practice or condition verbally to your supervisor.
3. Report it in writing to your supervisor using Form OSR 20-24, Unsafe Practice or Condition Card (the "Green Card").
4. Discuss the unsafe practice or condition during safety meetings.
5. Use the Employee Concerns Hotline.
6. **REMEMBER** -- If you identify an unsafe condition:

- a) Notify your supervisor or Subcontractor Technical Representative (STR).
- b) Apply a “Danger – Unsafe Condition” tag in coordination with facility management

EO 3.04 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 the 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) Protect against the identified hazards.
 - d) Use preventative maintenance.
 - e) Ask the question, “Can we do the job safer?”

Individual Hazards Analysis

Directly related to Integrated Safety Management is Individual Hazards Analysis. Each employee has the responsibility to continuously analyze their entire work environment for hazards related to or created by the task, team, territory, tools, time, and techniques. Each employee must perform an Individual Hazards Analysis by asking themselves these five questions for every task done:

1. What task am I doing right now?
2. What things can go wrong?
3. What must I do to make sure things don't go wrong?
4. Am I ready to perform the task safely?
5. How did the task go?

Computer Based Training (CBT) Training Course TRWGHA21, Individual Hazards Analysis & Basic Hazard Controls, has been developed to provide you with more information. This 30-minute course is mandatory for all SRNS, SRR and staff augmentation employees, and must be completed after you arrive at your work location by typing this link into a computer intranet browser address bar: <http://wbt.srs.gov/TRWGHA21>.

B. Behavior-Based Safety (BBS)

1. Studies have shown that 95+ 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 at-risk behaviors, such as not using Personal Protective Equipment (PPE). The Observers do not include the individual's name or other identifying data.
3. The observations are recorded in a data base which helps the different organizations and the site identify "best practices" to emphasize, and improvement areas.
4. Employees are encouraged to become BBS Observers and to request to be observed.

Remember this motto:

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 provides a continuous process reaching toward 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 (HPI) beginning in the mid-1980s as a way to reduce 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 improvement in safety, security and overall work performance.

2. HPI is a set of tools intended to promote behaviors throughout an organization that support safe and reliable operation and is based on these beliefs:
 - a) People are fallible, and even the best make mistakes.
 - b) Error-likely situations are predictable, manageable, and preventable.
 - c) Individual behavior is influenced by organizational processes and values.
 - d) People achieve high levels of performance based largely on the encouragement and reinforcement received from leaders, peers, and subordinates.
 - e) Events can be avoided by understanding the reasons mistakes occur and applying the lessons learned from past events.



E. Error Reduction Tools

1. **Self-Checking. Stop, Think, Act, Review (S.T.A.R.)** – Take a moment to think about the activity and its expected outcome. If visual or physical contact is broken, then self-checking should occur again.
2. **Peer-Checking** – Have a second knowledgeable individual verify that the action planned by the performer is appropriate **before** execution and occurs according to plan.
3. **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.

4. **Procedure Use and Adherence** – “Use” means continuous use (in-hand), reference use, and information use. “Adherence” means following the intent and direction provided in the procedure regardless of the level of use.
5. **Time Out** – If unsure of how to proceed, or if conditions don’t appear correct, call a Time Out.
6. **Questioning Attitude** – Fosters awareness of uncertainty and hazards. A healthy questioning attitude must overcome the temptation to ignore “gut feelings” of something not being right.
7. **Prejob Briefing** – The two primary purposes of the prejob briefing are to prepare workers for what is to be **accomplished**, and to sensitize them to what is to be **avoided**. Prejob briefings should be a **dialogue** among the participants, rather than a monologue by the first-line supervisor or a lead technician. All members of the work crew should participate in the briefing process.
8. **Placekeeping** – Reliably marking steps in a procedure that have been completed or that are not applicable (skipped). It is particularly important for plant status and equipment reassembly, or any situation when the consequences of skipping, repeating, or partially completing a step would result in adverse consequences.
9. **Phonetic Alphabet** – When the only distinguishing difference between two component designators is a single letter, then the phonetic form of the letter should be substituted for the distinguishing character. For example: “766-H” would be pronounced as “766 Hotel.”

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 3.05 STATE when and how to call a time out.

A. 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
- 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

- a) Inform your supervisor or the person in charge (PIC) that a condition requiring a Time Out has been encountered.
- b) Make sure all team members are aware that a time out has been called.
- c) Leave the job site in a safe condition, prior to stopping work, if possible.
- d) Hold a meeting between supervision and members of the team to discuss the job and what can be done to mitigate any unsafe condition(s).
- e) Resume work ONLY after supervision has approved the new work plan.

EO 3.06 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 mandates 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) Obey all posted speed limits and traffic signs on all SRS roadways and parking lots. Remember, South Carolina laws apply. Adjust your driving for the weather: fog, rain, reduced visibility, etc.

- c) If you become lost, STOP where it is safe to stop and ask for directions or call 3-3911 from a site phone or 803-725-3911 from a **mobile** phone.
- d) All personnel operating, driving or riding in a vehicle must properly secure their seat belts and shoulder straps, if provided, before putting the vehicle in motion.
- e) Motorcyclists must wear a helmet on the site.
- f) Watch for deer in the early morning and dusk. Remember that deer travel in packs, so if you see one deer, there may be more.
- g) Before entering a government vehicle, operators are to glance around for traffic flow of vehicles and pedestrians that may interfere with driving and backing safely. Before backing a government vehicle, look to the rear and honk the horn twice.
- h) Before leaving the government vehicle, turn off the ignition and set the parking brake. Government vehicles must be locked when unattended.
- i) The operator of a government vehicle must have a valid driver's license on his/her person. Also, the driver must have current proof of registration and current proof of vehicle insurance.

B. Site Road and Parking Lot Safety Requirements

1. Site road and parking lot safety requirements include the following:
 - a) Pedestrians should use only sidewalks or designated crosswalks.
 - b) Drivers must yield to pedestrians in crosswalks.
 - c) 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.
 - d) When in a parking lot, drive in lanes provided, not across parking spaces.
 - e) Always park in designated parking spaces. **NEVER** park in spaces that are not designated for parking.

- f) The speed limit in site parking lots is 10 miles per hour, EVEN if it's not posted.
- g) Walk on the left side of the shoulder of the road facing the traffic when there is no sidewalk.

C. 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) 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.

D. Material Trucks

1. If the bed of your vehicle requires access by power equipment at loading docks, chock the wheels of your vehicle when you park.
2. Never walk or work under suspended loads during unloading activities.
3. Stay a safe distance from moving equipment and material to avoid potential pinch or crush hazards. Never throw tie-down straps, buckles, chains or other material to the other side of your vehicle during loading or unloading operations unless someone stands clear and confirms it is safe to do so.

EO 3.07 LIST the precautions of the SRS Hazardous Energy Control Program.

A. Danger, Caution, and Warning Tags

1. Danger- Do Not Operate (DNO)- Hazardous Energy Control Tag



- a) Used only for hazardous energy control to prohibit operation or use of equipment which could endanger personnel during a lockout/tagout situation.
- b) The tag is identified as a white card with red stripes and black lettering. Do not attempt to manipulate a component which has a DNO tag applied to it.
- c) The tag can be applied only by employees authorized and trained in Hazardous Energy Control.

2. Danger--Unsafe Condition Tag



- a) Used to prevent use, entry, or other specified conditions for protection of personnel against a hazard.
- b) **Not** to be used for hazardous energy control.
- c) Tag is identified as a white card with black lettering and a red danger label.
- d) Anyone can apply a Danger--Unsafe Condition Tag.

3. Caution Tag



- a) Used when a system or component is functional but the worker needs further information prior to use.
- b) **Not** used for protection of personnel or equipment.
- c) Tag is identified by yellow coloring with black print.
- d) Anyone can apply a Caution Tag.

4. Warning Tag



- a) Used to warn employees that they are approaching a “Tag Only” lockout point.
- b) This tag is identified as white with black lettering and a red warning label.
- c) Lists hazards.
- d) Lists protective equipment requirements.

5. Warning Grounding Tag



- a) Used for Hazardous Energy Control (Lockout/Tagout) procedure for identifying grounding cables or shorting devices.
- b) The tag can be applied only by a qualified Electrical & Instrumentation (E&I) mechanic or a construction equivalent employee.
- c) Tag is identified as a red card with black lettering.

B. Hazardous Energy Control Program

- 1. 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.
- 2. Hazardous Energy Control Lockout/Tagout Requirements
 - a) To participate in a Hazardous Energy Control Lockout/Tagout, you must have SRS Initial Hazardous Energy Control training (TREGHEC0).
 - b) Only authorized and trained personnel can attach, remove, or modify Danger-Do Not Operate (DNO)-Hazardous Energy Control tags.

3. 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.

C. Basic Electrical Safety Rules

1. These basic electrical safety rules comply with the OSHA Standards:
 - a) Do not work on or near any electrical conductors or equipment while they are energized unless authorized and trained.
 - b) Do not remove or open receptacle covers, switch plates, or covers which enclose energized conductors unless authorized and trained.
 - c) Treat all electrical wires or equipment as if they are energized until proven otherwise.
 - d) Personnel should keep themselves and any material they may be handling at least ten feet away from overhead power lines.
 - e) Observe and heed all warning signs regarding dangerous voltages.
 - f) Use the Lockout/Tagout procedure, as applicable, when working on electrical equipment.
 - g) Avoid contact with grounded metal objects or water sources when handling energized insulated conductors.
 - h) Do not work on, near, or with electrical equipment without adequate lighting.
 - i) Do not wear conductive accessories when working near energized parts.
 - j) Visually inspect the electrical equipment before each use.

EO 3.08 LIST the types of Personal Protection Equipment available at SRS and the sources of their requirements.

A. Requirements for Personal Protective Equipment

1. General Requirements

a) Defining the scope of work and identifying hazards are essential to ensuring work is performed safely. This is the preferred hierarchy of controls:

- Eliminate the hazard
- Engineering controls to mitigate the hazard
- Administrative controls to mitigate the hazard
- PPE

2. Specific Requirements

a) Employees have several resources where they may find the personal protective equipment requirements before starting a job.

- Area safety rules
- Work procedures
- Work Release Form (WRF) from the Assisted Hazard Analysis (AHA)
- Employee Safety Manual (8Q)
- Industrial Hygiene Manual (4Q)
- Radiological Control Manual (5Q)
- Supervisor
- Material Safety Data Sheets

Remember . . . all protective equipment is to be inspected by the user before each use.

B. Personal Protective Equipment (PPE)

1. Eye and Face Protection

a) Must be worn when potential hazards from flying objects or chemical splash are present.

- b) Clear face shields are used for splash and impact protection. They are secondary protection and must be worn in conjunction with safety glasses or goggles.
- c) Guidance is provided in Manual 8Q (Employee Safety Manual), Procedure 61, Attachment 2.
- d) All eye and face protection must meet requirements outlined in ANSI Z87.1 and must be marked accordingly.

NOTE: ANSI is the acronym for the American National Standards Institute, a nonprofit organization that serves as administrator of the United States private sector voluntary standardization system.

NOTE: The ANSI Z87.1 standard sets forth requirements for the design, construction, testing, and use of eye protection devices, including standards for impact and penetration resistance.

- e) All safety glasses must have side shields.
- f) Sunglasses or "photo-gray" lenses may not be worn while working indoors due to the darkening effect not allowing adequate light to perform work safely.
- g) Must fit snugly, be properly adjusted, be kept in clean and sanitary condition, be maintained in good repair; defective or damaged equipment must be removed from service and replaced.
- h) Prescription safety glasses are provided to SRNS and SRR employees when needed.

2. Head Protection – Hard Hats

- a) Worn where specified by signs and as specified on work authorization documents, such as Work Release Forms (WRFs) and Radiological Work Permits (RWPs). Hard hats are required in all construction work areas on the site, and where overhead hazards exist.
- b) Worn squarely on the head, not tilted.
- c) Do not leave hard hats in hot areas or in direct sunlight such as on vehicle dashboards or rear windows. This breaks down the plastic and reduces the degree of safety originally provided.
- d) Do **NOT** modify hard hats.

- e) Inspect hard hats before wearing them.
- f) Hard hats found with dents, cracks, deep scratches or gouges, frayed suspensions, damaged suspension lugs, fine cracking or crazing on the surface, dull or chalky appearance or other damage must be removed from service and replaced.
- g) Hard hats may be cleaned by dipping in a mild solution of soapy water and rubbing with a soft brush or cloth.

3. Hand and Finger Protection – Gloves

- a) Protective gloves must be worn whenever potential hazards to the hands and fingers are present and are required on jobs involving material handling or operating equipment unless their use would be unsafe or there is no hazard to the hands.
- b) Always wear gloves that provide the best protection from the hazard.
- c) Gloves are available through SRS Stores that will provide protection from abrasions, cuts, puncture, electrical shock, heat/cold, contamination, as well as chemical exposures.

4. Foot Protection - Safety Shoes

- a) With the exception of office and administration areas, sturdy work shoes or safety shoes are required depending on the area accessed or the work you are performing.
- b) Use of safety shoes shall be required in areas where there is a possible danger of injury from impact of falling objects.
- c) Personnel involved in backfilling/compacting operations using a jack hammer or other similar activities using pneumatic equipment must use toe and arch covers in addition to safety shoes.

5. Hearing Protection - Earplugs, Ear Muffs

- a) Used to minimize the risk of hearing loss due to noise exposures.
- b) Ear plugs and ear muffs are required in work areas with noise levels of 85 decibels (dB) and above.
- c) Transit through a high noise area without hearing protection is allowed, provided no work is performed.

- d) Ear plugs must be properly inserted into the ear canal to ensure adequate noise suppression.
- e) New E-A-Rsoft SuperFit ear plugs are available through SRS Stores that have an indicating ring to show when the plug is providing the best fit and noise protection. These plugs provide a noise reduction rating of 33 dB.
- f) Other specialized PPE may be required where specific hazards or environmental conditions warrant additional protection.
- g) If you do not have the necessary PPE, STOP and do not proceed until the equipment is secured and you have been briefed on its proper use.
- h) Do not use defective or improperly fitting PPE for any task. Notify your on-site contact immediately. You are responsible for securing appropriate and serviceable equipment.
- i) Always confirm up front with your supervisor or your on-site contact what PPE is required for your work, activity, or in the area you will be visiting. If you later have questions, STOP work – safely – and reconfirm what is required.

6. Proper Work Attire/Clothing

If your task involves manual work in the field, your work clothes should consist of full-length pants or trousers and a shirt or blouse with sleeves that extend at least three inches below the shoulder and that does not expose any portion of the torso from the neck to the waist.

EO 3.09 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 harmful 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.

4. Annual Training

Employees exposed to occupational noise are required to wear hearing protection and are provided annual training.

5. Personal Protective Equipment (PPE)

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.

6. Signs and Markings

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:
 - a) Fainting (Heat Syncope) – dizziness, lightheadedness, and unsteadiness when walking
 - b) Heat Cramps – painful cramping and spasms in abdomen and arms and legs
 - c) Heat Exhaustion – sudden tiredness, dizziness, nausea
 - d) Heat Stroke – extremely high oral temperatures (103°F or higher)
 - e) Get Medical help immediately for any of these conditions.
2. Some prevention techniques:
 - a) Get 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. 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.

EO 3.10 IDENTIFY safe practices for using ladders.

A. Safe Use of Ladders

1. A ladder can be a helpful tool. Used incorrectly, it can be a hazard. Several ladder accidents and one fatality occurred at DOE sites over the past few years. Most causes were inattention to detail and/or poor planning.
2. Ladders must be used in accordance with the manufacturer's recommendation (e.g., a stepladder cannot be used as a straight ladder).
3. Tag defective ladders immediately with a "DANGER – UNSAFE CONDITION" tag and arrange for repair or replacement as soon as possible.
4. Ladders not being used must be stored to avoid damage.
5. Ladders shall be used only on stable and level surfaces, unless secured to prevent accidental displacement.
6. Use properly inspected, color-coded, and approved ladders. Users must carefully inspect ladders, including tie-off and hoisting ropes, prior to **each** use to ensure safe conditions.
7. All straight ladders, extension ladders and stepladders greater than eight feet tall must be secured before climbing. "Secured" means held in place by another employee and/or tied in a manner to prevent displacement.
8. Use only nonconductive ladders when performing electrical work, welding or where there is danger of contact with electrical conductors. Fiberglass is the preferred ladder material on site.
9. Only one person at a time is permitted on a ladder.
10. Face the ladder when ascending or descending.
11. Do not carry tools or equipment in your hands when ascending or descending a ladder. Use a hand line and a bucket.

12. The top platform and top step of all stepladders and the top two rungs of all straight and extension ladders must not be used to stand or climb upon. These rungs must be painted red or marked with "STOP-DANGER-DO NOT STAND" OSHA warnings as provided by the manufacturer. Step stools three feet high or lower are excluded from this rule.

NOTE: "OSHA" stands for Occupational Safety and Health Administration

13. When ladders more than 10 feet long are manually transported, two employees must carry the ladder, walking near the ends and on opposite sides.

14. Some key questions to answer before you use a ladder:

- a) Can I keep my body within the plane of the ladder, or am I going to have to reach outside?
- b) Am I setting the extension ladder up at the proper angle? If it is a step ladder, can I fully extend the ladder? Can I lock the braces?
- c) Am I going to have to work on the ladder over 30 minutes?
- d) Am I going to have to wear a plastic suit or some other protective equipment?
- e) Am I going to have to use power tools?

15. Make sure you have the proper training; identify and discuss all hazards with your supervisor before using a ladder.

16. If a stepladder or a straight ladder cannot be used safely, consider other alternatives, such as a Ballymore-type ladder, a scissors lift, or a scaffold.

17. If you are not sure you have the right training, the right type of ladder, or an unexpected condition occurs, call a Time Out!

EO 3.11 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. The space must be large enough for **BODILY ENTRY** to be classified as a confined space. It is then considered an entry into the confined space as soon as any part of the body breaks the plane of entry. A space that is not large enough to physically enter with the entire body is not a confined space.
3. Examples of confined spaces include tanks, vessels, storage bins, hoppers, vaults, etc.

NOTE: 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 (e.g., 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 padlocked 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.

4. General site employees are **NOT** permitted to enter confined spaces in an attempt to rescue fellow employees. The SRS Fire Department is the authorized Rescue Service for the site. Only properly trained Fire Department employees are permitted to enter a Confined Space in an attempt to rescue employees.

	<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. 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. Identify the unsafe item prohibited at SRS.
 - A. Prescription drugs
 - B. Two ounce canister of mace
 - C. Pocketknife with locking blade
 - D. Strike-anywhere matches

6. 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 3-3911 and the Rescue Team will rescue the employee
 - C. Contact the area Safety Engineer
 - D. Contact your supervisor for a Confined Space Entry Permit.
7. 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
8. 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.
9. 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.
10. 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

Operating Experience Program

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

Operating Experience Program

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
- Conditions causing degradation of operations and equipment
- Conditions capable of negative impact on the environment and public confidence

The review and application is undertaken for both internal and external experiences.

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

The review and application is undertaken not only for events, but also for near misses (actions or conditions that had the potential for an occupational injury/illness or property damage when an unplanned event occurred).

B. Examples of Lessons Learned

Hanford 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 Hanford 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.

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 the container is microwave-safe. Subsequent research found a similar Starbucks plastic coffee mug. One of its product features indicated that the coffee mug was not microwavable.
- Select the correct temperature and time settings.
- Remain at the microwave until completion.
- Be careful removing the heated item.

C. Roles of Key Operating Experience Personnel

1. The Site Operating Experience Group administers the program for the site by screening and distributing applicable lessons learned information.
2. Organization/Project Operating Experience Coordinators implement and direct their own Organization/Project Operating Experience Programs.
3. The SRNS Operating Experience Program Coordinator tracks the evaluations and corrective action implementations that the Organization/Project Operating Experience Coordinators record in the Site Tracking, Analysis, and Reporting (STAR) system. The SRNS Operating Experience Program Coordinator also provides oversight for all Organization/Project Operating Experience Programs.

4. Responsibilities of All Site Employees

- a. Avoid an attitude of “we’ve always done it this way” (not a sound approach to fulfilling tasks).
- b. Be alert to abnormal conditions in the workplace and report these conditions to management.
- c. 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.)
- d. Management, in turn, needs to initiate efforts to have abnormalities corrected.
- e. Develop a mind-set of questioning consequences of an action before initiating it.

REMEMBER: If you discover a situation or a problem with equipment that others can learn from, tell your supervisor or your STR.

Summary

The purpose of the SRNS Operating Experience Program is to identify and distribute lessons learned by others and share with fellow employees lessons from our experiences, including “near misses,” in an attempt to prevent occurrence and reoccurrence.

SRS HAZARD COMMUNICATION PROGRAM

Enabling Objectives:

EO 4.01 IDENTIFY the purpose of OSHA's Hazard Communication Standard.

EO 4.02 IDENTIFY the five elements of OSHA's Hazard Communication Standard.

EO 4.03 IDENTIFY the factors regarding how chemicals will affect the body.

EO 4.04 IDENTIFY the precautions for avoiding chemical exposure.

EO 4.05 IDENTIFY the information associated with MSDS's.

EO 4.06 LIST the information found on a chemical hazard rating label.

IV. Hazard communication Program

Savannah River Site, like any other large industrial complex, has numerous chemicals present which are necessary for the day-to-day operations of the various 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 which 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 here at the Savannah River Site.

<p>EO 4.01 IDENTIFY the purpose of OSHA's Hazard Communication Standard.</p>

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. This "Employee Right-to-Know Law" was revised by OSHA in 1987 to include all employees.
3. OSHA's Hazard Communication Standard protects the employee's right to work in a safe and healthful environment.
4. All employees will be trained on hazards that are present in the work area.
5. Chemicals present potential health and physical hazards when they are mishandled, improperly used, or the worker is unaware of the potential hazard associated with the chemical.

6. Working safely with chemical materials is a **TEAM EFFORT**. One person can endanger an entire work group, if he mishandles or improperly stores chemical materials.
7. SRS is working to keep employees safe and healthy on the job and to reduce the risk of injury and illness. Accomplishing these goals requires information and communication about hazardous materials in the workplace.

B. Chemical Hazards

1. OSHA's definition of a hazardous chemical is any chemical which is a physical hazard or a health hazard.
 - a) **Physical hazards** are chemicals that can cause explosions, fires, violent chemical reactions, or other hazardous situations.
 - b) **Health hazards** are chemicals that can cause illness or injury when inhaled, swallowed, touched, or absorbed.

PHYSICAL	HEALTH
Explosives	Irritants
Unstable/reactive Chemicals	Cryogenics
Flammables	Corrosives
Compressed Gases	Sensitizers
	Chemicals
	Chemicals that damage target organs
	Carcinogens
	Reproductive Toxins

C. Chemical Forms

1. All chemicals exist in one of three basic forms:
 - a) **Solids** have a definite shape and can become airborne as dust or fume particles.

- b) **Dust** is made up of tiny solid particles. Mechanical operations like grinding produce dust.
 - c) **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.
4. Chemicals have two kinds of effects:
- a) **Acute:** Characterized by rapid exposure to a harmful material in a short period of time.
 - b) **Chronic:** Characterized by exposure to harmful material in small doses over a long period of time.
5. No one can predict how a particular chemical will affect a specific individual. Material Safety Data Sheets (MSDSs) tell only what happens to groups of people.

EO 4.02 IDENTIFY the five elements of OSHA's Hazard Communication Standard.

A. Hazard Communication Program

1. **Components of OSHA's Hazard Communication (HAZCOM) Standard**
Per 29 CFR 1910.1200, at SRS, the HAZCOM Standard consists of five components:
- 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 Contracts and 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, for construction employees

C. Purpose of Material Safety Data Sheets (MSDS)

1. Reading the container label is a starting place for obtaining product information, but it is not enough. The purpose of Material Safety Data Sheets (MSDSs) is to supply more detailed information concerning the physical and health hazards of the chemical.
2. A Material Safety Data Sheet is a technical bulletin for a pure chemical or a product containing a mixture of chemicals.

D. Product Warning Labels

1. Every chemical container must be labeled with a manufacturer's label. The label must contain:
 - a) Product name that is 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.

E. 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 InSite or employees may contact their Chemical Coordinator.

F. 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 4.03 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

1. 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.
2. 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.
3. 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. But 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

1. Toxicity is relative and depends on:
 - a) The living organism involved

- b) Dose, rate, method, and site of absorption
 - c) General state of health, individual differences, tolerance, diet, and temperature
2. **Low toxicity** – minor symptoms that go away when the exposure stops
 3. **Medium toxicity** – requires medical attention; may be permanent
 4. **High toxicity** – can cause death or severely disabling conditions

D. Dosage

1. Dosage depends on:
 - a) How **MUCH** you are exposed to each time
 - b) How **LONG** each exposure lasts
 - c) How **OFTEN** you are exposed

E. Worker's Individual Differences

1. 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:
 - a) Your work practices
 - b) Your age and size
 - c) Your general physical and emotional health
 - d) Allergies and sensitivities you may have
 - e) Your level of exertion
 - f) 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

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

- a) Hepatotoxins produce liver damage, such as ethanol and chloroform.
 - b) Nephrotoxins produce kidney damage, such as mercury, antifreeze and lead.
 - c) Neurotoxins attack the central and/or peripheral nervous system, such as mercury, ethyl alcohol, and chlorine gas.
 - d) Hemotoxins affect the blood, such as benzene, lead and carbon monoxide.
 - e) Pulmonary toxins attack the lungs, such as asbestos and silica.
 - f) Cardiotoxins affect the heart rates, such as ethyl alcohol, carbon monoxide, and lead.
 - g) Reproductive toxins affect the reproductive system, such as lead, glycol ether, and carbon disulfide.
 - h) Cutaneous hazards affect the skin, such as greases, acids, PCBs, and fiberglass.
 - i) Eye hazards affect the eye, such as lime, cement and mace.
3. In addition to sensing the chemical itself, you can detect exposure hazards by:
- a) Spotting equipment failures, such as a ventilation system that stops working, damaged chemical containers, or faulty PPE.
 - b) Spotting leaks, spills, fires, explosions, uncontrolled chemical reactions, or other emergency situations.
 - c) Recognizing health effects, such as headache, dizziness, coughing, irritation, or nausea.
 - d) Watching for anything unusual.

EO 4.04 IDENTIFY the precautions for avoiding chemical exposure.

A. Workplace Controls

1. There are three basic methods of controlling chemical hazards.

a) 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)

b) Administrative Controls

- **Documentation, information, and training** (e.g., warning labels, Hazardous Chemical Inventory, written Hazard Communication Program)
- **Work practices** (e.g., using all available controls correctly, reporting uncontrolled hazards promptly)
- **Housekeeping** – containing and removing hazards (e.g., vacuuming toxic dusts, proper storage and handling, correct disposal of chemical wastes)
- **Monitoring** – checking the effectiveness of other controls (e.g., 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.

2. Personal Protective Equipment (PPE)

- a) 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.
- b) Examples of PPE include:
 - Protective gloves and clothing (e.g., hats, hoods, boots, impervious gloves, cloth gloves, rubber aprons, lab coats, impervious boots)
 - Eye and face protection (e.g., safety glasses, splash goggles, and face masks and shields)
 - Air-purifying respirators (e.g., respirators with a cartridge or filter that removes contaminants from the air you breathe)
 - Air-supplied respirators (e.g., self-contained units that supply air from a tank carried on the back or air-line units that provide air from a remote source)
- c) 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.

B. 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:**
 - a) **DO NOT** attempt to neutralize the acid with a base (or vice versa).
 - b) Irrigate with **LARGE** amounts of **WATER** until medical help arrives.
 - c) Contact medical personnel.
3. Many chemicals produce vapors, fumes, tastes or odors which are discernable to the worker. You should always be aware that these senses are warning you of potential danger. If the job you are performing produces vapors, fumes, tastes or odors, you could be exposing yourself to hazardous chemicals. Contact your supervisor or the Area Industrial

Hygienist for proper personal protective equipment or respirator requirements.

4. Spills

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

EO 4.05 IDENTIFY the information associated with MSDS's.

A. Material Safety Data Sheets

1. 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. MSDSs are readily accessible through InSite

2. Locations of MSDS

- a) InSite is the primary source for MSDSs at SRS. Manufacturers' MSDSs have been scanned into a computer database.
- b) MSDSs must be readily available for each employee at any time during the work shift. A material should **NEVER** be used without an MSDS on file.
- c) You can obtain an MSDS from your Department Chemical Coordinator.
- d) There is one set of MSDS master binders in 704-1N, Document Control. This set is available for 24-hour emergency use and contains all of the MSDSs for the site.
- e) Each area should have placards posted that list:
 - Where the MSDSs are located for the area.

- The name and phone number of the facility or departmental Chemical Coordinator.

3. Point of Contact for MSDS

- a) The Chemical Coordinator should be the **FIRST** point of contact when a material is brought into the work area without an MSDS. The Department Chemical Coordinator will provide the Material Safety Data Sheet, product warning label, and hazard communication training information.
- b) In addition, MSDSs are available through InSite at anytime of the day or night. Simply type “MSDS” in the menu filter on the InSite home page.

4. Information Contained in the MSDS

- a) Manufacturer’s name – identifies the chemical and the manufacturer.
- b) Hazardous ingredients – lists what’s in the chemical that can harm you and the airborne exposure limits.
- c) Physical characteristics – describes the chemical’s appearance, odor, and other characteristics.
- d) Fire and explosion data – indicates the chemical’s potential to catch fire or explode and what puts out the fire safely.
- e) Health hazards – lists toxicity information, effects of overexposure, the product’s carcinogenicity and target organ effects.
- f) Reactivity data – lists materials the chemical should not come in contact with and conditions that would cause a dangerous reaction.
- g) Precautions – lists special precautions to follow. At SRS, Personal Protective Equipment is prescribed by the Area Industrial Hygienist.
- h) Control measures – Manufacturer recommends protection, ventilation, or other equipment. At SRS, respiratory protection is prescribed by the Area Industrial Hygienist.
- i) Special precautions – here you can find a list of any PPE you need to work safely with the chemical.
- j)

B. Employee Responsibilities

1. Employees are responsible for:
 - a) Reviewing the chemical label and MSDS prior to using the product.
 - b) Asking your manager/supervisor if you have questions.
 - c) Notifying your Chemical Coordinator if you:
 - Plan on bringing new chemicals into the work area.
 - Find chemical containers with labels that are damaged/unreadable.
 - Cannot find the MSDS for a chemical in your work area.
2. Applying the SRS Chemical Hazard Rating label to any secondary (non-manufacturer) containers or manufacturers' containers that have missing, faded, or damaged labels. Contact your Chemical Coordinator for assistance.
3. Contacting your Area Industrial Hygienist to determine chemical Personal Protective Equipment (PPE) requirements for chemicals that are not covered by procedures or work documents.
4. Wearing PPE as prescribed when using chemicals.

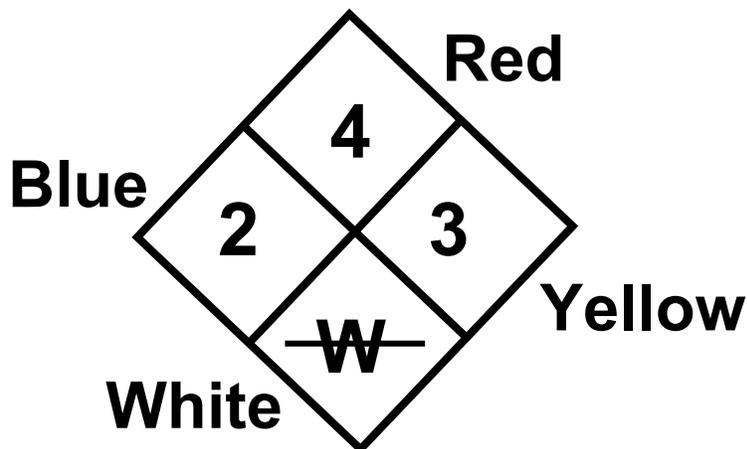
EO 4.06 LIST the information found on a chemical hazard rating label.

SRS Chemical Hazard Rating Label

1. Chemical hazard ratings are classified by using the National Fire Protection Association (NFPA) standards adapted for use at SRS.
2. 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).
3. 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.

Example:



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

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

Instability

4	Danger	Will explode
3	Danger	May explode
2	Warning	Violent chemical change possible
1	Caution	Normally stable unless heated
0	Stable	Normally stable

Special Notice

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

	<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 five elements of the OSHA's Hazard Communication standard?
 - A. Written program, Material safety Data Sheets (MSDS), container labeling, Hazardous chemical inventory and training
 - B. Safe work practices
 - C. Work Release Form
 - D. Automated hazard analysis.

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

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.

Beryllium Associated Worker Training may be completed online at your desktop.

Chronic Beryllium Disease Prevention Program at SRS

Federal law 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.

Beryllium and Its Uses

Beryllium is a metallic element that occurs naturally in about 30 minerals. It is lightweight (lighter than aluminum), but stiffer 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 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 are:

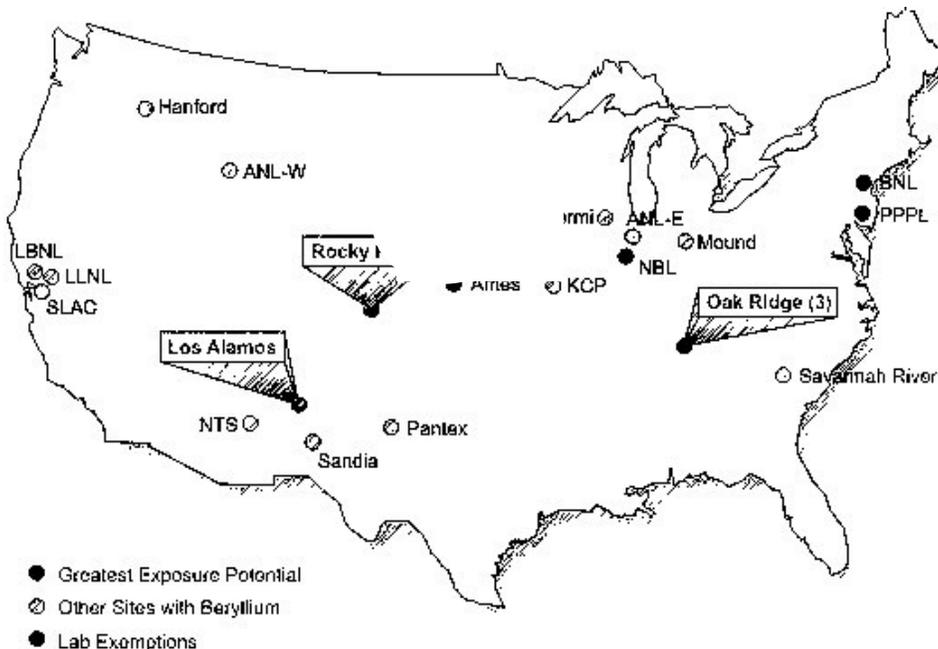
- Bicycles (more expensive models)
- Golf clubs
- Jewelry
- Computer parts
- Air bags in automobiles
- Dental bridges

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

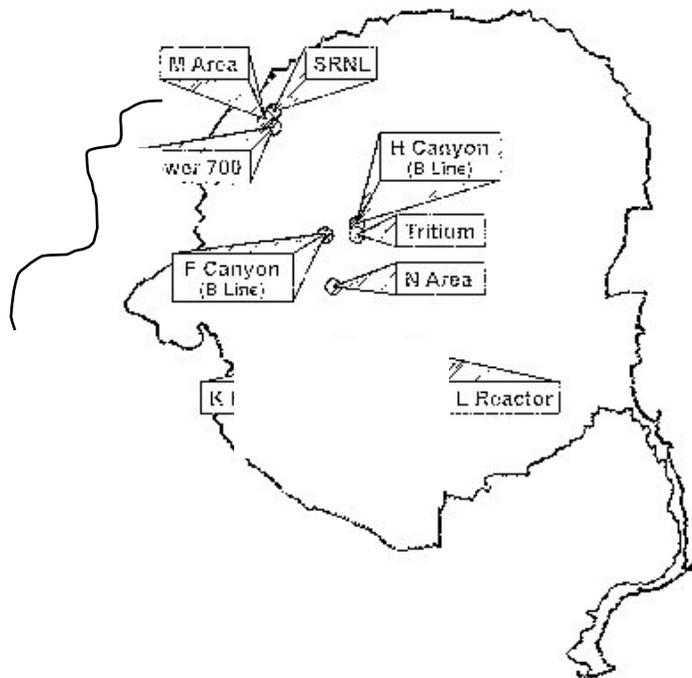
missions involve processing of waste materials from across the complex that may contain trace quantities of beryllium.

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

Potential Beryllium Areas at SRS



Beryllium Hazards

Inhalation of beryllium particles may lead to:

- Beryllium Sensitivity

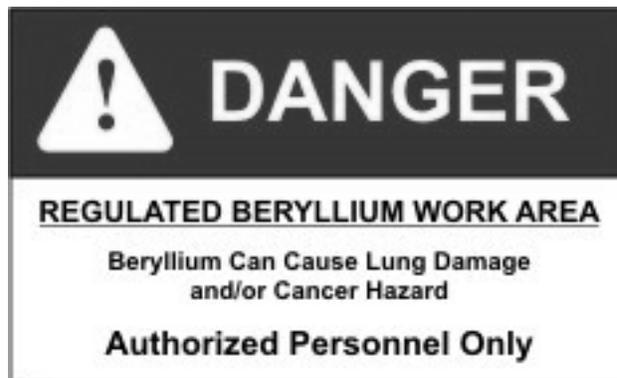
- Acute Beryllium Disease
- Chronic Beryllium Disease
- Lung Cancer

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 at http://shrine01.srs.gov/eshqa/eshqa/ih/hazsubstances_files/beryllium.html

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 803-952-9650 or through email.

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.**

V. Emergency Management Program

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

1. 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.

B. Elements of the Emergency Management Program

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

1. Emergency Plans

- a) 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.
- b) Area/Facility Emergency Plan defines how a specific area will implement these requirements.

2. 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.

3. Facilities

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

4. Off-site Agencies

- a) SRS must work closely with many federal, state, and local agencies to ensure the health and safety of the public.
- b) 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.

5. Training

Members of the ERO participate in annual training.

6. Drills/Exercises

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

7. Emergency Phone Numbers – SRS Operations Center (SRSOC)

- a) Onsite: 3-3911

- b) From a cell phone: 803-725-3911

C. SRS Emergencies

1. Emergencies that impact the health and safety of workers are specifically defined and categorized by DOE Order 151.1C.
2. Causes of emergencies include:
 - a) Industrial accidents resulting in personnel injury or contamination.
 - b) Faulty or incorrectly operated equipment such as valves, pump motors, etc.
 - c) Releases of radiological or toxic materials such as benzene, tritium, etc.
 - d) Natural phenomena such as tornadoes, floods, earthquakes, etc.
 - e) Technological disasters such as transportation crashes, fires, explosions, etc.
 - f) Security-related events such as bomb threats, intruders, sabotage, etc.

D. Emergency Classification System

1. Emergencies involving a hazardous material release may be further classified as:
 - a) **Alert**

There is an actual or potential substantial reduction in safety. Individuals who would need to take protective action are generally those within the facility boundary or within 100 meters of the spill.
 - b) **Site Area Emergency**

There is a major failure of functions that are needed to protect on the site personnel, public health, safety and the environment. Individuals on the site who are near or downwind of the emergency need to take protective actions.
 - c) **General Emergency**

There is an actual or imminent substantial reduction of the safety system. Site conditions are beyond design characteristics and protective actions are warranted for on the site and off the site populations.

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

A. Emergency Alarms and Proper Responses

1. 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 (Including warnings) Alarm tornado	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 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

1. 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.
2. There are four types of protective actions:
 - a) **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.
 - b) **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.”

c) Evacuate

- Personnel will be directed to go to a rally point: primary, alternate or ad hoc. (“Ad hoc” is a location other than the normal or alternate rally point.)

e) Relocation

- Personnel may be moved out of the affected facility/area to an unaffected location on the site.

C. Rally Points

1. 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.
2. Rally points support accountability and centralize personnel in a single area, away from the emergency situation.

D. Emergency Response Maps

1. Emergency Response Maps are posted at all entrances to the areas and in buildings throughout the areas. These maps identify shelters and rally points within the areas. Maps may also be found on InSite/Emergencies/JPAs.

E. Emergency Information – Online

1. Identifies key telephone numbers and checklists for the different areas.
To access:
 - a) Go to the InSite homepage.
 - b) Click on “Emergencies” in the left corner.
 - c) 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) 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.
 - b) 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:

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

5. Remote Worker Responsibilities

- a) Test communications equipment before taking it to the field.
- b) Ensure communications equipment is turned on and working at the job site.
- c) Ensure communications equipment can be heard.
- d) Report to dispatcher (if applicable) **PRIOR** to going to the work area and when **EXITING** the work area.
- e) Report to the dispatcher anytime the remote work location changes.
- f) Contact your Remote Worker Dispatcher, or 803-725-CALL (803-725-2255) or the SRSOC (803-725-3911) to report location and status in response to an emergency notification broadcast.

6. Remote Worker Reporting Requirements

- a) Report to your Remote Worker Dispatcher (if applicable) or the SRSOC (803-725-3911) when work is completed and you have returned from the job site for the day.
- b) Report to your dispatcher (if applicable) or the SRSOC anytime the remote work location changes.

7. Remote Worker Communication Requirements

- a) Remote workers must carry a site 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.

- b) 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.

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

A. Security Emergency

1. Respond to an emergency alarm signal or voice announcement given by Wackenhut Services Inc., (WSI) Protective Force personnel.
2. Protective actions may include relocation to a nearby facility or area.
3. If **no instructions are given**, here is what employees in proximity to the event should do:
 - 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.

B. Bomb Threats

1. The proper response to a bomb threat received at SRS is to:
 - a) Remain calm; most bomb threats are hoaxes, but need to be treated as real.
 - b) 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 the back of this study guide.
 - c) Notify the SRS Operations Center (SRSOC) at **3-3911** (from a site phone) or **803-725-3911** (from a cell phone).
 - d) All bomb threats should be taken seriously and reported to the SRSOC.

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

1. Protective Actions that may be implemented for on-site employees could include:
 - a) A general announcement may direct personnel to check their work spaces and look for anything suspicious.
 - b) Direction to evacuate the entire building or just part of the building.
 - c) When you evacuate a building, you will be directed to assemble at an “ad hoc” rally point. (An “ad hoc” rally point is a location other than the normal or alternate rally point.)
 - d) 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. Credible Threat Indicators for Suspicious Packages

- a) 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.

b) Credible Threat Indicators for Mail:

- Excessive postage
- Unexpected suspect mail
- Oily stains, discoloration, leaks or spills appear on package
- 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 tinfoil
- Return address and postmark don't correspond

c) Credible Threat Indicators 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.

d) Credible Threat Indicators 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.

	<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 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

FIRE SAFETY PROGRAMS

Enabling Objectives:

EO 6.01 IDENTIFY the components, phases, and classifications of a fire.

EO 6.02 LIST the systems and fire prevention techniques in use at SRS.

EO 6.03 IDENTIFY the appropriate response to a fire alarm in a halon suppression area.

EO 6.04 STATE the actions to take if you discover a fire or smell smoke.

EO 6.05 STATE the considerations for fighting fires using a fire extinguisher.

VI. Occupant Fire Safety

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 components, phases, and classifications of a fire.

A. Components of a Fire

1. Before a fire can start, these four components must exist together.
 - a) **Fuel** – (something that will burn)
 - b) **Heat**
 - c) **Oxygen**
 - d) An uninhibited **chemical chain reaction**
2. The best way to prevent fires is to keep all of these components from being in the same place at the same time.
3. The easiest component to keep track of is the **fuel**.

NOTE: Many of the things that you work with every day are **combustible** (i.e., they can burn). Some examples of **combustible items in the workplace** are wood, paper, cloth, some liquids (like oil and grease), and certain metals (such as sodium and magnesium).

B. Three Phases of a Fire's Development

1. 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:
 - a) **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.
 - b) **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.
 - c) **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.

C. Classes of Fire

1. To ensure proper use of extinguishers on different classes of fires, fires have been classified into the following four categories:
 - a) **Class A Fires** involve ordinary combustibles such as paper, wood, cloth and some plastics. An extinguisher with a green triangle and the **A** symbol, or a trash can graphic, should be used on this kind of fire.
 - b) **Class B Fires** involve flammable/combustible liquids, gases and greases, such as gasoline, fuel oil, grease, oil-based paint, and lacquer. An extinguisher with a red square and the **B** symbol, or a gasoline can graphic, should be used.
 - c) **Class C Fires** involve **energized** electrical equipment, such as wiring, fuse boxes, and circuit breakers. Water should not be used on these fires because water conducts electricity. An extinguisher with a blue circle and the **C** symbol, or electric plug graphic, should be used on electrical fires.
 - d) **Class D Fires** involve combustible metals such as magnesium, sodium, and potassium, and metal dust. Dry powders are used to put these out. Anything else could increase the chemical reaction or be ineffective. An extinguisher with a yellow star and the **D** symbol should be used on metal fires. **DO NOT USE WATER!!!**

2. If you know what the class of the fire is, then you will be able to choose the correct fire extinguisher.

EO 6.02 LIST the systems and fire prevention techniques in use at SRS.

A. Fire Protection Systems

1. Most SRS buildings have equipment or features for detecting, containing, and/or suppressing fires. The fire protection system installed in each building will contain some combination of:
 - a) **Automatic Suppression Systems** – sprinklers, Halon, foam, or gaseous agents
 - b) **Manual Suppression Equipment** – portable fire extinguishers
 - c) **Automatic Detection Systems** – smoke, heat, or flame detectors
 - d) **Alarms** – warn the occupants of the building and signal the fire department
 - e) **Fire Barriers** – walls, ceilings, floors, doors, windows and air duct dampers designed to keep a fire from spreading
2. Every employee has a responsibility to immediately report open or inoperable fire barriers to the facility administrator for corrective action.

B. Fire Prevention

1. Many fires can be prevented. Some of the ways you as an SRS employee can help to prevent fires and avoid unnecessary injuries from a fire are:
 - a) Limit the amount of ordinary combustibles, such as paper, wood, plastic and cloth that are stored in the workplace.
 - b) Limit the amount of flammable and combustible liquids, such as fuel oil, grease, paint, and gasoline that may be used in the workplace.
 - c) Control ignition sources and use the permit system for Hot Work, such as welding.

- d) Keep aisles clear of office machinery, packages and other items which, in the event of an emergency, may limit the means of exiting the facility.
- e) Keep building exits clear of machinery, packages, boxes and other items which may limit the means of exiting the facility.
- f) If you smoke, do so in designated smoking areas on Site.
- g) Always discard cigarettes in marked receptacles.

NOTE: Nothing may be stored in stairwells.

- h) Keep fire systems, such as fire doors and sprinklers, free from obstacles (e.g., trash bags, recycling boxes, electrical cords, delivery boxes, etc.), so that in the event of a fire, these systems will function properly and help to prevent the spread of fire.

NOTE: Do NOT prop open fire doors and fire exits. Do NOT block sprinkler heads or valve assemblies with any form of material.

- 2. In these and other ways, we at SRS can help to prevent fires and make SRS a safer place to work. These same practices can help prevent fires at home, also.

EO 6.03 IDENTIFY the appropriate response to a fire alarm in a halon suppression area.

A. Carbon Dioxide (CO₂) and Halon Fire Suppression Systems

- 1. After the 1998 fatality at Idaho National Engineering and Environmental Laboratory (INEEL), due to an inadvertent activation of a carbon dioxide (CO₂) fire suppression system, SRS removed the two CO₂ systems that had been installed in areas on the site where they posed a possible hazard to personnel.
- 2. There are locations on the site where a different gaseous agent, Halon, has been in use for many years. Some of these systems are activated

manually and some are activated automatically. **The release of Halon, at fire suppression total flooding design concentrations of 5 – 7%, has little effect on humans.** However, personnel who may be present in areas where Halon could be released need to know what to expect and what they should do.

a) Halon Signs and Postings

Areas protected by Halon suppression systems are clearly marked.

b) Where Halon Systems Are Located

- Computer rooms
- Control rooms
- Under floor areas
- Contaminated cells
- Electrical rooms and cabinets

c) Responding to a Fire Alarm in a Halon Suppression Area

- The release of Halon creates a light mist, but there should be little hazard created because of reduced visibility.
- The Halon will make a loud hissing sound as it discharges.
- If the Halon is **automatically** activated or **manually** activated at a building pull station, an evacuation alarm – fast warble – will sound.
- There is a minimum **30-second delay** before the Halon is discharged, to allow safe evacuation.

d) If the Halon is **manually** activated at the bottles by pulling the pin and pushing the plunger, Halon is **instantly** released. All Halon cylinders are located outside the hazard area. If you manually activate the Halon cylinder, go to your designated rally point after activation.

3. If You Are in the Area of the Halon Discharge

a) Here is what to do if you cannot exit the area before Halon discharges:

- Stop your activities.

- **DO NOT PANIC.**
- Cover your eyes with your hands to shield them from any flying debris, such as paper or dust, caused by the sudden release of Halon from ceiling nozzles.
- Remain still with your eyes covered until the discharge is over – approximately 10 seconds. The Halon will make a loud hissing noise as it discharges.
- Be aware that flying debris may linger on in the air. Continue to protect your eyes as necessary.
- Once the discharge is complete, quickly and orderly exit the area.
- Close all doors behind you completely.
- Go to your designated rally point.
- **Immediately** report your exposure to Halon to management.

EO 6.04 STATE the actions to take if you discover a fire or smell smoke.

A. Employee Actions Upon Discovering a Fire or Smelling Smoke

1. Get help on the way first and then alert your co-workers.

a) Telephone

- Call the SRSOC at 3-3911 or 803-725-3911. Use a phone outside the building, if possible. Do not use a phone in the vicinity of the fire.
- If you are outside, and there is no phone available, go to the nearest building or the nearest barricade or go to the nearest road and flag down a vehicle. Stay near the road to direct the Fire Department to the fire.

- Provide the dispatcher with the fire's location, nature of the fire, if known, and any additional information requested.
- Stay calm, speak clearly, and let the dispatcher end the conversation.
- Request someone to wait, or you can wait for and direct emergency responders to the facility or area involved.

b) Building Pull Station

- Locate and activate a building pull station, if your building has them, only if it is safe to do so. These will normally be located at the exits.

B. Employee Actions Upon Hearing a Fire Alarm

1. When you hear a fire alarm, evacuate the building using the nearest exit away from the fire and move to an upwind location, or a designated rally point.
2. Once you are outside the building, watch for the fire trucks and stay out of the way.

C. Successful Use of Portable Fire Extinguishers

1. If the class of fire can be identified and a suitable portable fire extinguisher is available, then an individual may choose to try to extinguish a fire in its incipient phase, if safe to do so. The fire extinguisher is only the initial line of defense against a fire. **ALWAYS** make notification and get help on the way first.
2. Portable fire extinguishers are located throughout the facilities on the site. Successful use of portable fire extinguishers depends on the following conditions:
 - a) The extinguisher is the proper type for the fire.
 - b) The person is ready, willing, and possesses the knowledge to properly use the extinguisher.

Note: You may want to check the fire extinguishers in your work area so you will know where they are located and what class of fire they are approved to be used on. Remember, you may

volunteer to fight a fire on the site in the incipient phase **ONLY**,
and, **ONLY** if you feel comfortable doing so!

EO 6.05 STATE the considerations for fighting fires using a fire extinguisher.

A. Multi-Purpose Extinguishers

1. Multi-purpose extinguishers are the most common type provided in facilities.
2. Extinguishers with the symbols **A, B, C**, or trash can, gasoline can, and electric plug graphics, may be used only on Class **A, B, or C** fires.
3. Extinguishers with the symbols **A, B**, or the trash can and gasoline can graphics, may be used only on Class **A or B** fires.
4. Extinguishers with the symbols **B, C**, or the gasoline can and electric plug graphics, may be used only on Class **B or C** fires.
5. Extinguishers with the symbol **D** may be used only on Class **D** fires. These extinguishers are usually yellow.

B. Fire Extinguisher Operation

1. 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 make notification and get help on the way **first**. You can use a fire extinguisher properly by following the steps represented by the acronym "**P.A.S.S.**"
 - **Pull** the pin
 - **Aim** the nozzle at the base of the fire
 - **Squeeze** the handle completely
 - **Sweep** the nozzle rapidly from side to side, beginning at the front of the fire and working toward the back of the fire.

C. Safety Rules for Fighting a Fire

1. 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:
 - a) Never turn your back on a fire.
 - b) 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.
 - c) Always keep an exit behind you. If the fire gets out of control, you will have a means of escape.
 - d) If your extinguisher starts to run out of agent, you should continue to sweep the fire and back away from the flames.
 - e) 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.
 - f) If you started 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!!!**

	<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 four components necessary for a fire to exist.
_____, _____, _____, and a _____
_____.

2. An office trash can fire is a Class ____ fire.

3. What is the most common alarm tone for a fire?
 - A. Bell
 - B. Fast Warble
 - C. Slow Warble
 - D. Horn

4. What does the acronym PASS stand for?
_____, _____, _____, and _____.

5. Which extinguisher should you use on an electrical fire?
 - A. A, B
 - B. D
 - C. B, C
 - D. E

6. 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

GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT)

Enabling Objectives:

- EO 7.01 Define radiation, radioactive material, radioactive contamination and the ALARA principle.**
- EO 7.02 STATE the biological effects, risks and sources of radiation.**
- EO 7.03 STATE the SRS radiation dose limits and how radiation doses are tracked.**
- EO 7.04 STATE the types of radiological signs and barriers in use at SRS and the Radiological Area Access Restrictions placed on General Employees.**
- EO 7.05 IDENTIFY the proper techniques for using the PCM-1B and the PCM-6A.**
- EO 7.06 LIST the employee's responsibilities for the SRS Radiological Protection Program.**

VII. General Employee Radiological Training (GERT)

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.

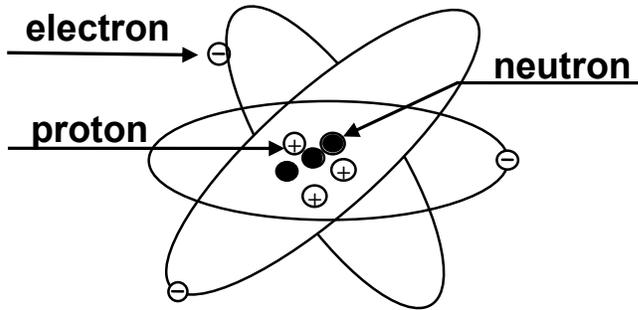


That is to say, through identification of the materials emitting radiation, training of the Savannah River Site personnel to work around these materials safely, and ensuring that there are procedures and protective equipment available to employees doing this work, all such work is conducted in a safe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

EO 7.01 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.



Parts of the Atom

Ionizing radiation is energy released from unstable atoms that may remove electrons from neutral atoms.

There are four basic types of

ionizing radiation: alpha particles, beta particles, neutron particles, and gamma rays.

Non-ionizing radiation does not have enough energy to remove an electron from an atom. Types of non-ionizing radiation include microwaves, radio waves, visible light, heat, and infrared radiation.

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

- a) 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).

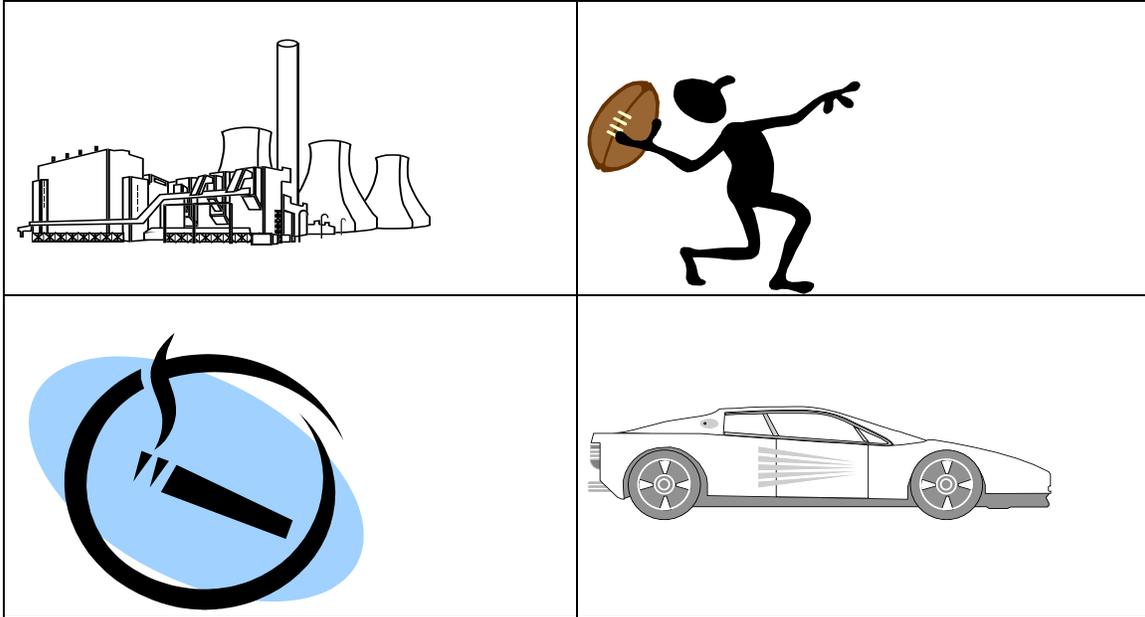
EO 7.02 STATE the biological effects, risks and sources of radiation.

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

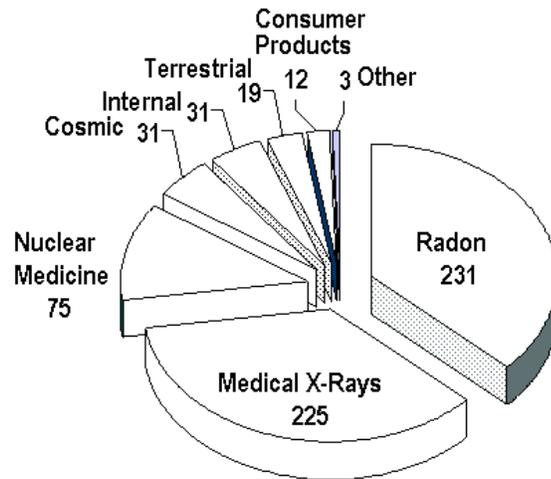
- Cosmic radiation – the sun and outer space
- Radon – a gas
- Earth's crust – rocks and soil
- Human body

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
- Sources in the earth's crust 19 mrem/year
- Cosmic radiation 31 mrem/year

a) Other sources

- Domestic round trip flight 5 mrem
- Smoke detectors 0.0001 mrem/year
- Chest x-ray 8 mrem
- Cigarette smoking (1 pack a day) 1300 mrem/year

- Living in a brick house 7 mrem/year
- Watching TV < 1 mrem/year
- Daily dose from natural background 1 mrem/day

EO 7.03 STATE the SRS radiation dose limits and how radiation doses are tracked

A. Personnel Dose Limits

1. 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

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

C. Embryo/Fetus

1. 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

1. 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)

Occupational doses at SRS are measured and documented. Individuals who must enter certain areas controlled for radiological purposes wear a device called a thermoluminescent dosimeter (TLD). The TLD is used to measure the amount of radiation an individual has received. A TLD is not required in the Controlled Area.



2. Wearing a TLD

When a TLD is required, it is worn in the chest area and is attached to the security badge.



3. Obtaining a TLD

Personnel can obtain a TLD from Radiological Protection personnel prior to entering an area where a TLD is required. The TLD is returned to Radiological Protection personnel when no longer needed or during the end of the quarterly TLD monitoring cycle badge change out.

F. ProRad System

1. ProRad is a database that allows personnel to sign in and sign out of radiological areas electronically. It provides documentation that the individual has read, understood, and will comply with the requirements of the Radiological Work Permit (RWP). It also provides a method to record the time worked and track the exposure received by the workers.



G. Site ID/ProRad Badge

1. Individuals needing access to radiological areas use the Site ID/ProRad badge to obtain dosimetry and enter the radiological areas.



H. Other Types of Dosimetry

1. Criticality Neutron Dosimeters (CNDs) are used to measure dose from neutron and gamma radiation in the event of a criticality accident. CNDs are worn by personnel who enter areas where nuclear incident monitoring is required. Nuclear incident monitoring is required when handling and storing fissile material. Examples of fissile material are uranium and plutonium. Radiological Protection personnel will issue a CND to you if you need one.
2. Employees are advised not to take CNDs home. If taken home, the CND should be kept where children cannot access it. The CND contains materials that could be hazardous if ingested or inhaled. CND contents may cause skin or eye irritation or burns if direct contact occurs.



I. 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.
 - a) 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."
 - b) Upon request, an employee may receive a current radiation exposure report by contacting Radiological Protection personnel.
 - c) Monitored personnel will receive an annual report of their exposure.
 - d) 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.

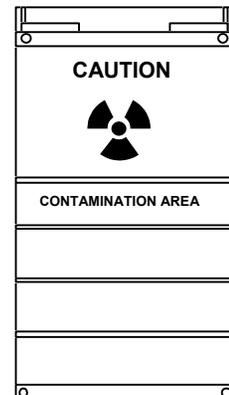
EO 7.04 STATE the types of radiological signs and barriers in use at SRS and the Radiological Area Access Restrictions placed on General Employees.

A. Methods Used to Control Radiological Material

1. 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.

a) 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.



b) 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.**

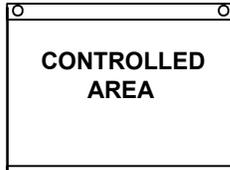
c) Designated Storage Areas

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.

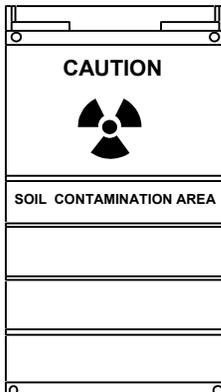
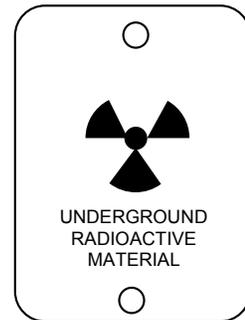
B. Areas a General Employee CAN Enter Unescorted

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



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.

An area that is established to indicate areas that may contain underground radioactive items. You may enter this area if it is outside the **Radiological Buffer Area (RBA)**.



An area where surface or subsurface contamination levels exceeded specified limits. You may enter this area if it is outside the **Radiological Buffer Area (RBA)**. Any work that disturbs the soil requires RW II training.

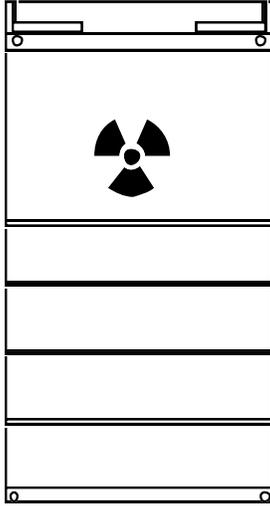
2. Radiological Buffer Area (RBA)

A Radiological Buffer Area is an intermediate area established to:

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

Remember, if the URMA and SCA are located inside the RBA, you must be escorted by someone who can enter the RBA unescorted.

3. Areas a General Employee CANNOT Enter Unescorted



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

4. Escorted Access

You may be permitted to enter some of these areas with an escort. If you need to enter these areas with an escort, here is what you must do.

Area	Approval Requirements for Escorted Access
RBA RMA Radiation Area Contamination Area	For observations and recording of data, you must be continuously escorted and follow all entry requirements. Access to an RA or CA shall be approved in advance by the Area Radiological Protection Manager. Any "hands-on" work in all these areas shall be approved in advance by the Area Radiological Protection Manager or Radiological Control Staff.
High Radiation Areas High Contamination Areas Airborne Radioactivity Areas	Prior approval from the Radiological Protection Manager or the Radiological Control Staff is needed.
Very High Radiation Areas Radiography Areas	Under no circumstances can you, as a general employee, enter a Very High Radiation Area or a Radiography Area.

EO 7.05 IDENTIFY the proper techniques for using the PCM and the PCM-6A

A. Contamination Monitoring Equipment

1. In certain areas, or situations, it may be necessary for you to use contamination monitoring equipment. The purpose of this equipment is to detect contamination on personnel. In some cases, you will be required to use a PCM or PM. These are used at exits to various areas to help control the spread of radioactive material. Both monitors provide a quick and reliable level of external contamination detection.

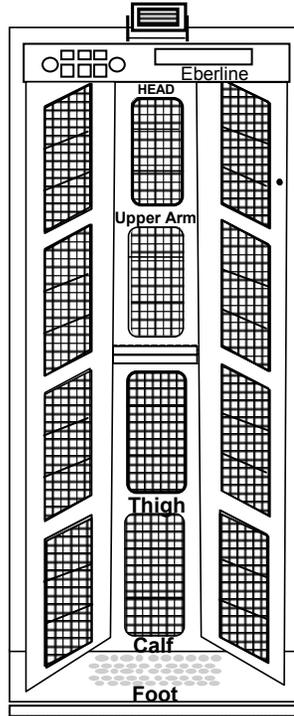
2. PCM-1B

The PCM-1B is engineered to perform two counts: a right-sided count and a left-sided count. Follow these guidelines for using a PCM

1. Read the instructions before stepping into the machine.
2. Verify the machine is ready by looking at the overhead panel. It will indicate that the monitor is ready.
3. Position body correctly. Make sure the body is positioned so any material emitting alpha radiation can be detected.
4. Do a complete cycle. A cycle is complete when both sides have been counted.

- Monitor right side first.
- Make sure body is completely in the machine.
- Make sure foot is on detector.
- Keep your body and face as close to the detectors as possible.
- Lean body in toward the detectors.
- Lean or turn face toward the detectors.

PCM



a) Alarm Condition in a PCM

If you are contaminated, the PCM will alarm. You will hear an audible signal – a continuous beep – and see an alarm display on the overhead panel.

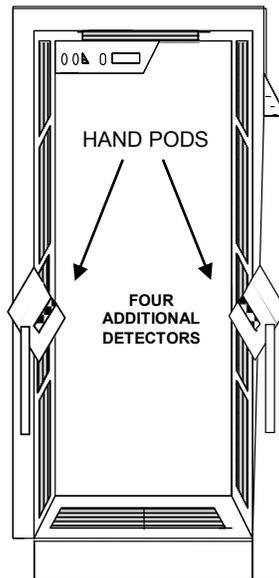
b) Response to Alarm in a PCM

- Complete the entire cycle.
- Re-monitor on an alternate PCM or the same PCM two additional times. If an alarm sounds on either two re-monitorings, then contact Radiological Protection or the Radiological Control Staff immediately.

3. PM

a) Another type of contamination monitor is the PM. The PM is engineered to perform one count versus two counts. The following guidelines should be used.

- Read the instructions before stepping into the machine.
- Verify the machine is ready by looking at the overhead panel. It will indicate that the monitor is ready.
- Place hands in hand pods and make sure your feet are on the detectors. Keep hands still in the hand pods.



b) Alarm Condition in a PM

- If you are contaminated, the PM will alarm. You will hear an audible sound – a continuous beep – and see an alarm display on the overhead panel.

c) Response to an Alarm in a PM

- Complete the count.
- Re-monitor on an alternate PM or the same one two additional times. If an alarm sounds on either two re-monitorings,

then contact Radiological Protection or the Radiological Control Staff immediately.

EO 7.06 LIST the General Employee's Responsibilities for the SRS Radiological Protection Program.

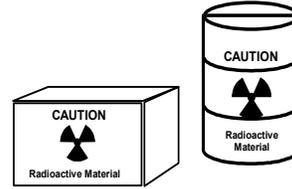
A. Responsibilities

1. 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. Everyone must develop a sense of pride and ownership toward our daily activities and have a healthy respect, not a fear, for the type of work performed at SRS.

a) Employee Responsibilities

- Read and obey all signs and postings.
 - Comply with all radiological and other safety rules.
 - Do not enter any area controlled for radiological purposes unless escorted or trained.
 - Know where and/or how to contact RP or Radiological Control Staff personnel in your work area.
 - Comply with emergency procedures for your work area.
 - Keep exposures to radiation and radioactive materials ALARA.
 - Know your dose history.
 - Be alert for and report unusual radiological situations. An unusual situation might be finding radiological material outside a designated area or finding a compromised radiological barrier.
- b) If you discover radiological material that appears to be unattended (e.g., discarded in a trash receptacle or loose outside or in a building corridor), take the following actions:**

- **DO NOT** touch or handle the material. Warn other personnel not to approach the area. Guard the area. Have someone notify Radiological Protection (RP) personnel. Wait for RP or Radiological Control Staff personnel to arrive before leaving the scene.



c) Here are some rules if you are being escorted in a Radiological Area:

- Obey the instructions of your escort. Your escort will inform you of any entry procedures requiring a Whole Body Count (WBC), submitting bioassay samples, or signing in on a Radiological Work Permit (RWP). The WBC and bioassay samples are used to find out if any radioactive material is inside your body.
- Use ALARA techniques while in the area to minimize your exposure. These would include minimizing your time in the area or maximizing your distance from a source of radiation.

	<i>Answer the self-check questions below. The answers are in the back of this study guide.</i>	
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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. While you were using the PM the alarm sounded. What action should you take?
 - A. Complete the count and report to your supervisor
 - B. Re-monitor two additional times in the monitor
 - C. Immediately contact Radiological Control personnel
 - D. Monitor at the nearest Count Rate Meter

5. 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

6. 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. Wear the TLD when you go to the Training Center, 766-H
 - D. Complete radiological Worker I Training

7. Billy is a subcontractor who assists with site landscaping. He is not a radiological worker. With the General Employee Radiological Training he received in GET, what area can be entered without radiological worker escort?
 - A. Radiological Buffer Area
 - B. Inactive Contamination Area
 - C. Controlled Area
 - D. Radiation Area

8. 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 fro, your Environmental Compliance Authority
 - C. Tell your supervisor so he can arrange radiological Worker escort for you
 - D. Contact the Industrial Hygiene office fro permission to enter the area.

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

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

10. Name four sources of natural background radiation?

_____, _____, _____ and _____.

ENVIRONMENTAL MANAGEMENT SYSTEM

Enabling Objectives:

EO 8.01 STATE the purpose and resources of the SRS Environmental Management System.

EO 8.02 IDENTIFY the four types of waste and the requirements for their proper handling.

EO 8.03 IDENTIFY the elements of the Pollution Prevention (P2) Program.

EO 8.04 LIST your responsibilities for reducing waste at SRS.

VIII. Environmental Management System

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 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 8.01 STATE the purpose and resources of the SRS Environmental Management System.

A. Purpose of the Environmental Management System (EMS)

1. Many things we do at SRS can impact the environment. To ensure that these things are done properly, SRS has established an Environmental Management System. Our Environmental Management System (EMS) helps to ensure that what the we do maximize the safety of employees, the public, and the environment while complying with all relevant laws and regulations.
2. All personnel – contractors and subcontractors – must comply with all laws and site procedures pertaining to the environment at SRS.

B. Primary Environmental Regulatory Resource at SRS

1. 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:

2. Coordinate the development and implementation of sitewide environmental programs to meet SRS policy and regulatory requirements.
3. 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.
4. Interpret environmental regulations.
5. Provide compliance-based oversight of SRS environmental activities.
6. Coordinate environmental audits conducted by DOE, state and federal regulatory agencies and other organizations.

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

C. Primary Line Organization Contact

1. 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.
2. The primary line organization contact for environmental matters is the ECAs. Each major SRS organization has an ECA.

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

EO 8.02 IDENTIFY the four types of waste and the requirements for their proper handling

A. Management of Solid and Hazardous Waste

1. Solid waste must be managed in accordance with federal and state regulations. Guidance is provided by your ECA.
2. Solid wastes are discarded items subject to specific regulatory requirements for handling and disposal. A solid waste is either:
 - a) **Non-hazardous**
 - b) **Hazardous**
 - c) **Radioactive, or**
 - d) **Mixed (both hazardous and radioactive)**
3. Care must be taken to handle these wastes appropriately to assure proper disposal. Contact your management or ECA for guidance on disposal of solid waste.
4. Hazardous waste must be managed in accordance with federal and state regulations. Many common items, such as paint or aerosol cans, or rags used for cleaning up, may be classified as hazardous waste, and must not be placed in dumpsters. Contact your ECA for guidance.
5. **Separate** waste into non-hazardous, hazardous, or radioactive waste for proper treatment (compaction), packaging, and disposal.
6. Before pouring waste or chemicals out or down a drain, an employee must consult the building custodian (the manager of the building) or the Department ECA. Drains that flow into any surface water on or off the site are strictly controlled by state and federal regulation permits.

EO 8.03 IDENTIFY the elements of the Pollution Prevention (P2) Program.

A. Pollution Prevention (P2)

1. SRS is required to have programs in place to minimize waste and pollutants in order to comply with federal, state, and local regulations and DOE Orders. The Pollution Prevention (P2) Program manages waste minimization and the reduction and/or elimination of pollution across the site.
2. P2 occurs when:
 - a) Resources are used more efficiently
 - b) Less harmful substances are substituted for hazardous ones
 - c) Toxic substances are eliminated from the production process
3. SRS employees are responsible for implementing waste minimization through:
 - a) **Source Reduction** -- avoiding or reducing the generation of solid hazardous or radioactive waste by:
 - Substituting less toxic materials
 - Using reusable non-disposable products
 - Practicing good housekeeping
 - Correctly estimating for materials in the planning process
 - Purchasing and using only what the job requires
 - Unpacking products before entering a Radiological Buffer Area (RBA)
 - b) **Recycling** materials through site recycling and excess programs

**NOTE: There is a Pollution Prevention website on InSite.
Type "P2" in the filter.**

4. The three primary waste minimization programs used at SRS are:
- a) **Site Excess Program** for items that are still useful. Examples include: equipment, tools, computer hardware and software, furniture, office supplies, uniforms, etc. The items are only for business use on the site.

NOTE: This program is for SRNS and SRR employees. Subcontractors, suppliers and vendors are not permitted to participate in this program.
 - b) **Site Salvage Program** for scrap materials. Examples include: scrap metal, lead-acid batteries, tires, wood, etc.
 - c) **Recycle Program** for such items as white office paper, cardboard, aluminum cans, printer toner cartridges, antifreeze, paint solvents, lead, etc.

EO 8.04 LIST your responsibilities for reducing waste at SRS.

A. What Can You Do to Reduce Waste?

- 1. Waste minimization is integrated into policies, operating procedures, daily activities, and business decisions. Some examples of what you can do to reduce waste include:
 - a) Designing facilities and processes for efficient operations that generate little or no waste.
 - b) Using non-hazardous, non-toxic materials.
 - c) Considering and planning for the material, equipment, and waste storage that may be created during construction, operations and eventual shutdown of a process or facility.

B. RCRA/CERCLA Units

1. 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 have been designated as **"Resource Conservation and Recovery Act and Comprehensive Environmental Response, Compensation and Liability Act (RCRA/CERCLA) Units"** and are in the process of being cleaned up.
2. These units are clearly **marked with orange balls and/or signs.**
3. An employee or subcontractor should not enter, begin work in or around, or disturb the area, unless contact has been made with the SRNS Soil and Groundwater Closure Projects custodian or SRNS Environmental Services (ES).

C. Employee's Responsibilities

1. The employee has a responsibility **to comply** with SRS environmental regulations.
2. Employees should always **consider the effects** their jobs have on the environment by making sure their work habits and conditions comply with environmental policies.
3. If there is a non-compliance issue, an employee should report the incident or finding to his immediate supervisor or manager, and the proper organization.
4. Notification of spills is very important. To report a spill, contact your supervisor/manager, or your Environmental Compliance Authority. You may also call the Savannah River Site Operation Center (SRSOC) at 3-3911 (from a site phone) or 803-725-3911 (from a cell phone).
5. **All hazardous spills and releases to the environment must be reported immediately.**
6. Employees may be held liable for non-compliance.

	<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 four 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. The waste minimization program used for scrap materials such as lead-acid batteries and tires is the _____ .

4. How are RCRA/CERCLA Units identified?

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

5. The technique of limiting or avoiding the generation of hazardous or radioactive waste is called _____ .

A. Recycling
B. Compacting
C. Waste Solidification
D. Source Reduction

ADDITIONAL SRS POLICIES AND PROCEDURES

Enabling Objectives:

- EO 9.01 IDENTIFY the responsibilities of the Subcontract Technical Representative (STR).**
- EO 9.02 IDENTIFY your responsibilities regarding SRS Procedures and Government Telephones.**
- EO 9.03 IDENTIFY your responsibilities under the Stop Work Program.**
- EO 9.04 STATE the purpose of the SRS Quality Assurance Program.**
- EO 9.05 Define the Price-Anderson Amendments Act.**
- EO 9.06 LIST the elements of the SRS Fitness for Duty Program.**
- EO 9.07 IDENTIFY the components of the SRS Employee Concerns Program.**
- EO 9.08 STATE the appropriate method for dealing with an Employee Concern and or differing professional opinion.**

IX. Additional SRS Policies and Procedures

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 9.01 IDENTIFY the responsibilities of the Subcontract Technical Representative (STR).

A. Subcontract Technical Representative (STR)

1. The Subcontract Technical Representative (STR) is an individual who is nominated by a Level 3 Manager and then appointed by the buyer to serve 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:**
 - a) Serves as the technical liaison
 - b) Monitors subcontractor performance
 - c) Inspects work for acceptability
 - d) Reviews invoices and comments on chargeability
 - e) Establishes and tracks cost and schedule
 - f) Analyzes subcontractor progress from cost and technical perspectives
 - g) Prepares written evaluation of subcontractor's performance

EO 9.02 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

1. SRS employees are permitted to use government telephones for local personal business.
 - a) Calls should be limited in both frequency and duration.
 - b) Charge personal long-distance calls to your calling card, credit card or home phone.
 - c) SRS employees should not accept collect calls.
2. Site employees are to make use of the 800 toll free number (**800-278-5009**) instead of calling the site collect. Examples of legitimate uses for the 800 number are:
 - a) Calling work to report a personal emergency affecting your work attendance when the call is long-distance.
 - b) Calling work while on business travel when you cannot use another approved method of calling.

3. Do **not** use the 800 number if:
 - a) You are not a site employee (**vendors may not use this number**).
 - b) The call is a “local” call for you to make. **Note: Augusta, North Augusta and Aiken are local calls.**
 - c) The call is personal business with co-workers.
 - d) The call is personal business with site groups, such as SRS Employee Association (SRSEA), SRP Federal Credit Union, Savings Investment Plan, etc.

4. To use the 800 service (legitimate calls ONLY), follow these instructions:
 - a) Dial **1-800-278-5009**. This call will be answered by the SRS Auto Attendant System. If you have an authorization code, the call can be processed directly. Authorization codes can be obtained from your telephone administrator.
 - b) If you do not have an authorization code, then follow instructions and enter “0.” You will be routed to the SRS operator at which time you will inform the operator that you are using the 800 number.
 - c) Provide the operator with your name and organization.
 - d) Request to be transferred to the person you need to speak with by stating, “Please transfer me to telephone number x-xxxx.” The operator will only transfer you to a valid SRS telephone number (prefixes 725, 557, 952, or 208).

EO 9.03 STATE the purpose of the SRS Quality Assurance Program.

A. Quality Assurance Program

1. The SRS Quality Assurance Program is a management system that provides the controls for managing, performing and assessing work.

2. It is designed to protect workers and the public. This program holds individuals responsible for the quality of their work; it applies to everyone.
3. The purpose of the QA Program is to provide 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
3. The QA Program is consistent with, and an integral part of, the SRS Integrated Safety Management System (ISMS). The Quality Assurance Manual, 1Q, describes the Quality Assurance Program.
4. It is management's obligation to ensure that employees understand what is being asked of them. However, each employee must take responsibility for the work he performs. Everyone contributes to quality and to meeting the performance objectives established by management.
5. Management must provide employees with the necessary information, tools, training, and support to perform their tasks properly. Employees must possess the knowledge of management's expectations, the knowledge of why the task is being performed, and empowerment to carry out assigned tasks.
6. Management encourages individuals to look for better, safer, and more efficient ways of accomplishing their work. Through empowerment, employees have a personal stake in the organization's success and, as a result, products and services will improve.

EO 9.04 IDENTIFY the SRS Employee's responsibilities under the Stop Work Program.

A. Stop Work Program

1. The Stop Work Program is a formal program.

2. Personnel shall stop work if an activity would result in one or more of the following:
 - a) Nonconforming or indeterminate item
 - b) Conditions outside of normal limits or technical specifications
 - c) Hazardous conditions to personnel
 - d) Damage to equipment or facilities
 - e) Equipment or items with a QA Hold Tag are in use
3. Work that has been stopped by a written Stop Work Order shall not be resumed until the problem is corrected and verified by the Cognizant Quality Function (CQF). The CQF is the person or group designated responsibility for quality assurance support to a business unit, department, or other organizational unit.
4. Any employee who identifies conditions adverse to quality shall notify his supervisor or his Subcontract Technical Representative as soon as possible.

All employees have the right and responsibility to stop work if a condition or activity is harmful to safety, health or the environment!

5. Remember, you are expected to fully understand the scope of your work and to be aware that working outside that scope is unsafe.
6. Do not violate a Stop Work Order or perform any actions outside the scope of work.
7. Take a Time Out if continuing a task is unsafe or will create an unsafe condition.
8. Report unsafe conditions immediately to your supervisor or STR.

EO 9.05 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:
 - a) Failure to document problems involving nuclear safety
 - b) Violations of Technical Safety Requirements (TSRs)
 - c) Not complying with nuclear safety procedures
 - d) Not complying with Radiological Work Permits (RWPs)
 - e) Using radiological monitors that are out of calibration
4. The single most important lesson learned from a review of the site's violations is to conduct all work in accordance with established procedures and stop work or take a time out if work cannot be conducted safely or in compliance with established procedures.
5. 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.
6. Therefore, contractors are normally held responsible for the acts of their employees and subcontractor employees in the conduct of activities at DOE facilities. Accordingly, this policy should not be construed to excuse personnel errors.
7. A civil penalty is a monetary penalty that may be imposed for violations of applicable DOE Nuclear Safety Requirements, including Compliance Orders.
8. DOE will impose different base level civil penalties, considering the Severity Level of the violation(s), and a categorization of DOE facilities operated by Price-Anderson indemnified contractors.

Severity Level Base Civil Penalties

Severity Level	Base Civil Penalty Amount
I	100%
II	50%
III	10%

B. Severity Levels

1. The most significant violations (Severity Level I) are defined as those which involve actual or high potential for adverse impact on the safety of the public or workers at DOE facilities.
2. Severity Level II violations represent a significant lack of attention or carelessness toward responsibilities of DOE contractors for the protection of public or worker safety which could, if uncorrected, potentially lead to an adverse impact on public or worker safety at DOE facilities.
3. At the other end of the scale, Severity Level III violations are less serious but are more than a minor concern (i.e., if left uncorrected they could lead to a more serious concern).

C. You Should:

1. Continue to do what you have been doing. Follow established programs, policies, and procedures.
2. Ask questions if you don't understand a policy or procedure.
3. Notify your management immediately if something goes wrong, so that it can be reported in the appropriate manner.

EO 9.06 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:
 - a) 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.
 - b) Informing their supervisor if taking any medication which could adversely affect safety or performance.
 - c) Identifying and reporting workers suspected of not being fit for duty.

4. Chemical Testing

- a) The substance abuse chemical testing program applies to all SRS-badged employees.
- b) The following four conditions will result in an employee being chemically tested:
 - **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 chemical 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.
- c) Reasonable suspicion must be based on a clearly formulated belief that an employee uses illegal drugs or abuses alcohol or prescription drugs, drawn from particularized facts and reasonable inferences from those facts.
- d) Chemical testing may be necessary for an individual involved in an occurrence that is required to be reported to DOE. An occurrence may be a behavior deviation or event which may have potential environmental protection, public health or safety, or national security protection significance.
- 5. 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.
- 6. Disciplinary Action**
- a) An employee who fails a random or For-Cause Chemical Test is subject to disciplinary action up to and including termination of employment.

- b) Refusal to take the chemical test may result in the employee's termination for insubordination.
- c) Personnel are prohibited from using, possessing, selling, distributing, or manufacturing illegal drugs while on the site. Anyone who is detected using, possessing, selling, distributing, or manufacturing illegal drugs on the site is ineligible for further unescorted access to site facilities.
- d) Personnel who are currently serving a felony probation or parole are prohibited from SRS. Personnel who violate the provisions of this procedure also are subject to appropriate disciplinary actions in accordance with SRS Policies and Procedures.

EO 9.07 IDENTIFY the components of the SRS Employee Concerns Program

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. Employees are expected and encouraged to report their concerns to their immediate supervision or management and in general, achieve resolution by interacting with management. However, in support of open communication, SRS Contractors also provide additional avenues, programs and services through which employees can express and seek resolution of such matters. Examples of additional avenues that may be used are Human Resource Representatives, Employee Counselors, the Ethics Office, and the Employee Concerns Program, to name a few.
4. Employees must completely understand the available communication channels for expressing their concerns. Managers must fully understand their role in addressing and resolving concerns and their responsibility for providing feedback to the employees that expressed them.
5. 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.
6. Open communication ensures that problems are addressed quickly and accurately. **Open communication is your right and your responsibility. Voice your concerns!!**

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 official employee concern issues related to the Environment, Safety, Health, Waste, Fraud, and other matters.
 - Promoting the use of existing programs and avenues which are available to help employees seek resolution for 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
 - The ECP is available for all employees and subcontractors employees.
2. DOE-SR, WSI, SRR, SRNS, and Mox Project each have an Employee Concerns Program.
 3. DOE-SR ECP personnel can assist concerned employees in determining which process could be used to evaluate and resolve their concerns regardless of the issues raised. This may result in the ECP Office facilitating resolution, referring or transferring a concern, or investigating the concern itself.
 4. MOX Project employees may also raise their concerns to the NNSA Service Center Employee Concerns Program.
 5. The SRS Employee Concerns Program provides assistance in concerns related to environmental; safety and health; quality; security; mismanagement; waste, fraud and abuse; intimidation or reprisal; and other matters that have a potential to adversely impact the safe, efficient and effective operation of SRS.

EO 9.08 SELECT the appropriate method for dealing with an Employee Concern and/or differing professional opinion.

A. Reporting Concerns to ECP

1. You may report a concern to the Employee Concerns Program by calling, emailing, or submitting a completed ECP form.
2. You may report a concern by **calling**:

- SRNS ECP Hotline 803-725-3244
- SRR ECP Hotline 803-952-4354
- DOE-SR ECP Hotline 803-952-8320
(outside of CSRA) 800-749-5991
- WSI-SR ECP Hotline 803-952-7670
- MOX Project ECP Hotline 803-819-2327
- NNSA Service Center Hotline 800-688-5713
- Parsons ECP Hotline 803-643-7112

3. SRNS and SRR maintain **email accounts for reporting concerns:**

- SRNS - Employee-Concerns@srs.gov
- SRR – SRR-EmployeeConcernsProgram@srs.gov

4. Complete the Employee Concern Form OSR 5-220A (available from InSite or from Stores) and send it to the respective Employee Concerns Program office.

5. You may also report a concern externally to the DOE Inspector General:

- DOE Inspector General Local Office 803-725-4720
- DOE Inspector General Hotline 800-541-1625
- DOE Inspector General email ighotline@hq.doe.gov

Remember, you are expected and encouraged to report your concerns and achieve resolution of your concerns. Reprisals are illegal, and should be reported!

B. Differing Professional Opinion (DPO) Process

1. 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
- Facilitates dialogue and resolution for technical issues
- Encourages employees to first try to resolve issues through normal peer and management review.

2. Employee Concern Program Alternative Dispute Resolution

The Alternative Dispute Resolution (ADR) process provides mediation as 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.

3. Employee Concern 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 closing 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.

Employees may request a formal DPO review using OSR 25-149, DPO Resolution Form. Submit the form to the Internal Oversight Director (IOD).

	<i>Answer the self-check questions below. The answers are in the back of this study guide.</i>	
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1. What does it means 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

SRS CODE OF BUSINESS ETHICS AND CONDUCT

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

The SRNS Ethics Code and the SRR Ethics Code are available on the Site's Intranet.

SRS Codes of Business Ethics and Conduct

It is not expected that every employee or manager will be fully versed in every law affecting his responsibilities. However, it is required that all employees will have a working knowledge of permissible activities involved in their work. The SRNS Ethics Code and the SRR Ethics Code are available on the Site's Intranet. Employees will seek guidance from the appropriate General Counsel's Ethics

Office concerning any matter in which there is any question. Subcontractor personnel should check with their Subcontract Technical Representative (STR).

All employees are responsible for performing their work in compliance with the laws and standards of ethical and moral conduct. All managers are responsible for enforcing and complying with this policy, including communicating this policy to their employees to ensure employee knowledge and compliance.

A. Ethics Principles

1. Three principles are found in the SRS Codes of Business Ethics and Conduct:
 - a. Contractor and subcontractor employees shall comply with all applicable laws governing SRS operations.
 - b. Business shall be conducted in accordance with the highest moral, legal, and ethical standards.
 - c. Compliance with the law not only means following the law, but conducting business in a manner that reflects positively on SRS personnel as good and law-abiding citizens; we avoid impropriety and the appearance of impropriety.
2. SRNS and SRR employees are bound by the SRS Codes of Business Ethics and Conduct. For interpretations, call the appropriate Ethics Office.

3. Subcontract employees are bound by the terms of their contract with the site. Usually, the contract will require compliance with site administrative policies, which includes the appropriate Code of Business Ethics and Conduct. If so, then subcontract personnel would be bound by their own ethics policy and the appropriate Code of Business Ethics and Conduct, with the appropriate Code taking precedence if it has stricter requirements.

B. Guidelines for Specific Ethical Issues

1. Supplier relationships

- a. Only discuss business-sensitive information that is required to get the job done under the contract.
- b. Do not provide any inside information. Do not accept or exchange gifts. Do not ask for or accept any kickbacks. A kickback is defined as anything of any value given in return for improper favorable treatment under a contract. Kickbacks are illegal and could result in dismissal and criminal prosecution. If you become aware of a situation involving a kickback, report it. You may report it anonymously, if you prefer!
- c. Off the site, there should be no discussions about non-public business, financial information, personnel, or technological information, plans, programs, or other confidential business data acquired during employment at Savannah River Site.

1. Customer relationships

Be honest regarding proposals, costs, records, expense reports, and time cards; fill out all forms honestly and completely.

2. Government resources

“Resources” includes all office equipment; tools, machinery, and instruments used in the field; buildings; and real and personal property. Employees using any electronic system while employed at SRS have a personal responsibility to maintain the privacy and integrity of each system and refrain from accessing information or otherwise using these systems except for legitimate government authorized purposes.

Employees may use their Site computers for limited incidental personal purposes, consistent with guidelines that include the following:

- a. Use involves de minimis (insignificant) expense to the government.
- b. Use does not interfere with completion of the daily duties of the employee.
- c. Use does not facilitate an employee’s outside, personal business.

- d. Use does not allow for the creating, downloading, viewing, storing, copying or transmitting sexually-explicit or sexually-oriented materials.
- e. Online gambling is strictly prohibited.
- f. Use does not include social networking by any means, including the following or any similar networking tool: Facebook, My Space, Twitter, LinkedIn, YouTube, and blogs (except technical or scientific blogs).

Every time an employee logs on to a government system, you are reminded that you have no expectation of privacy. The incidental personal use does not change this rule.

See your Human Resource Manual (SRNS, 5B manual; SRR, 5BA manual) for a complete discussion of what constitutes acceptable personal use of Site internet and email.

3. **Political activities**

Political activities must be conducted on your own time and with your own resources. Do not display campaign literature, buttons, etc., in the workplace. There is no ban on political bumper stickers on vehicles.

4. **Conflicts of interest**

If you have an outside business interest, it must not divert too much time and attention from your SRS responsibilities.

If you used to work for a subcontractor to the site, but accept a job with SRNS or SRR, you may not be put in a position of responsibility (oversee, inspect, audit, etc.) over your former subcontractor company for two years.

If you leave employment with SRNS or SRR to work for a subcontractor to the site, you must inform your management or your STR. This must be reviewed by your respective Ethics Office.

5. **Insider Trading**

Beware of insider trading. It is against the law for an SRNS or SRR employee, or anyone, to trade in any company's stock while in possession of material nonpublic information ("insider information").

C. Compliance and Disclosure

- 1. You are responsible for your ethical behavior and for reporting suspected violations of the Ethics Code to your supervisor and/or the appropriate Ethics Office
- 2. The SRNS Ethics Office Help Line is **803-725-8181**. The SRR Ethics Office Help Line is **803-557-8000**. The offices maintain a 24-hour

answering machine service. The telephones have no caller ID capacity and the calls are not taped. If you call the Ethics Help Line during work hours, you will be referred to an Ethics Officer. After work hours, you may leave a message and you will be contacted the following work day. You may report anonymously, if you prefer.

D. Potential Disciplinary Actions

1. Disciplinary measures may be applied to all employees who fail to comply with applicable laws and the appropriate Code of Business Ethics and Conduct.
2. Disciplinary action may be taken not only against individuals who authorize or participate directly in violations of the applicable Ethics Code or other policy, but also against:
 - a. Any employee who may have deliberately failed to report a violation.
 - b. Any employee who may have deliberately withheld relevant and material information concerning a violation.
 - c. The violator's managers, to the extent that the circumstances of the violation reflect inadequate supervision or lack of diligence.
 - d. Any supervisor who attempts to retaliate or encourage others to retaliate, directly or indirectly, against an employee who reports a suspected violation.
3. Consequences:
 - a. Reprimand
 - b. Probation
 - c. Suspension
 - d. Demotion
 - e. Dismissal

Summary

Remember, we are all responsible for performing our jobs in compliance with the applicable laws and standards of ethical and moral conduct. Address your questions about ethics to the SRNS Ethics Office at 803-725-8181 or the SRR Ethics Office at 803-557-8000, anonymously if you prefer. Report noncompliance to your supervisor or the appropriate Ethics Office.

**Rules of Conduct From the Human Resources Manual 5B Procedure 1-4,
Section 5.1, Rev. 22 Effective Date 5-12-2010**

Proper conduct, both on and off the job, is expected of all employees. Improper conduct at Savannah River Site is not tolerated. The Rules of Conduct are not intended to be all-inclusive and do not cover every situation that may arise.

1. Any conduct that violates common decency or threatens the maintenance of safety, efficiency, effectiveness, and/or productivity in the workplace is cause for disciplinary action, even if such conduct is not specifically defined in the Rules of Conduct.
2. These rules are published for employees' information and protection. Ignorance of work rules is not an acceptable excuse for violation.
3. Violations of the Rules of Conduct may warrant disciplinary action, up to and including termination of employment:
 - A. Insubordination or deliberate refusal to comply with reasonable requests or instructions.
 - B. Engaging in a fight, or in an activity that could provoke fighting.
 - C. Horseplay.
 - D. Organizing, operating, conducting or participating in gambling, specifically including sports pool betting.
 - E. Using or divulging, without M&O Contractor consent, any Sensitive Unclassified Information (SUI), for example, Unclassified Controlled Nuclear Information (UCNI) and Official Use Only (OUO), acquired through employment.
 - F. Willful disregard of safety rules and procedures, including tampering with equipment, alarms, locking devices, Radiological Protection (RP) instruments, Thermo-Luminescent Dosimeter (TLD) badges, and bioassay samples.
 - G. Failure to use or wear designated safety equipment.
 - H. Willful action or inaction resulting in injury to personnel.
 - I. Damage or loss of government-owned or leased property.
 - J. Unauthorized absence and/or excessive excused/unexcused absences from work assignment.
 - K. Unsatisfactory job performance.
 - L. Any action or inaction based on race, color, religion, gender, age, national origin, parental status or sexual orientation of an employee, former employee or applicant which affects the individual's rights, privileges, benefits, dignity, equality, or economic opportunity.
 - M. Actions of a sexually harassing nature.
 - N. Making false, unfounded or highly irresponsible statements against other employees, management, or subordinates.

- O. Illegal conduct, conduct unbecoming an M&O Contractor employee, or conduct damaging to the company, the Site and/or the Department of Energy's public image.
- P. Failure to fully cooperate and/or provide requested information, making false statements, or intentionally misleading investigators or management during the course of a company investigation.
- Q. Use, possession, or threatened use of weapons, ammunition or explosives.
- R. Taking or receiving, without authorization, leased property or property belonging to M&O Contractor, fellow employees, or the government.
- S. Improper protection, handling, and safekeeping of all leased or government-owned equipment.
- T. Unauthorized disposition, dismantling, or removal of parts from leased or government-owned equipment.
- U. Dishonest acts and falsification of procedures, records or reports, including the giving of false information when hired, cheating on tests, etc.
- V. Unauthorized use, possession, sale or distribution of alcohol, drugs or controlled substances at M&O Contractor facilities or on the Savannah River Site.
- W. Concealing or producing defective work through willfulness, carelessness or negligence.
- X. Sleeping.
- Y. Failure to report an on-the-job injury to management and Medical on the day it occurs or failure to promptly report all other injuries or suspected injuries.
- Z. Tampering with bulletin boards, defacing government property, or posting unauthorized notices and non-business related material.
- AA. Improper parking or operation of vehicles.
- BB. Unauthorized use or abuse of government property, including computers, telephones, etc.
- CC. Inappropriate or improper actions or gestures that could cause an adverse reaction on the part of other employees, management, or subordinates.
- DD. Unauthorized activities such as hunting, fishing, swimming, boating, social outings, etc.
- EE. Acts of intimidation, discrimination, harassment, or retaliation against any individual who has voiced a concern in accordance with the M&O Contractor Open Communication Policy.

SRNS Employee Dress Code

This policy is applicable to SRNS employees and its subcontractors whenever they are within SRNS facilities or attending company-sponsored functions (other than recreational and company-sponsored "housekeeping days").

The perception of our performance by our customer and others is strongly influenced by our appearance. Therefore, employees shall complement professional behavior by reporting to work with their personal appearance appropriate for their position and job assignment.

Employees should be well-groomed and not present an unkempt appearance. Bulk and length of hair, including facial hair, shall be such that it will not interfere with the proper fit of headgear, respiratory equipment and all other operating equipment as required by the facility.

The policy is intended to help cultivate and promote a "common sense" approach.

The following attire is considered inappropriate:

- Articles of clothing (including headgear) with writing, diagrams, etc., that are vulgar, profane, or otherwise offensive

Note: Clothing shall not contain contents that alienates or discriminates, such that it breaks down the core competency of teamwork.

- Jeans in work spaces which require more professional attire
- Abbreviated clothing such as shorts, tank tops (muscle shirts), tube tops and crop tops or any apparel that creates inattention in the workplace and /or a safety concern, also included are: halters, low-cut, or midriff-style shirts or dresses
- Clothing, of any kind, that is dirty, sloppy, ragged, torn, revealing, or tight fitting.
- Sandals or open-toed shoes in areas where they constitute a safety hazard
- Slippers and flip-flop sandals in any area, except when required for medical reasons
- Apparel such as very short skirts and other articles of clothing that may cause inattention in the workplace
- Hats worn in control rooms, offices and other areas where they serve no functional purpose
- Modesty clothing, other than when dressing out for radiological work activities. Employees are expected to wear appropriate work clothing when reporting to and leaving work. Modesty Clothing will only be worn when

dressing out for radiological work activities. Modesty clothing shall be defined at the site level.

- Sweat suits, jogging suits and warm-up attire except when engaged in physical activity (i.e. running, jogging, etc.)

Note: While on site, employees are expected to use their best judgment regarding appropriate attire while engaging in activities on personal time (i.e. exercising during the lunch period.).

- Slippers in any area, except when required for medical reasons
- Sandals, flip flops, or foam shoes
- Shoes that do not firmly attach to the foot (lack supportive straps around the ankle or back of the shoe).

Footwear should be selected according to the type of work performed, keeping safety, comfort, and professional appearance in mind. Employees are expected to wear properly-fitted, well-constructed shoes. Open-backed, strapless, and high-heeled shoes are prominent contributors to slips, trips, and falls in the workplace. While acknowledging the wide range of shoe styles available, it is expected that employees will select shoes appropriate for their safety in compliance with the guidelines addressed above.

Employees will be accountable for compliance with this policy. Management ensures this policy is adhered to. It is expected that management, at all levels, take appropriate action to ensure employees are dressed safely and appropriately for the specific work conditions for that day.

When management determines that an employee has violated this Dress Code, management shall notify the individual of the violation(s) and ensures the applicable requirements are understood. Management is required to document violations, accordingly, and the employee will be requested to immediately correct the violations. If the problem is unable to be addressed at the worksite, the employee should be sent home and allowed to return to work when dress is considered appropriate.

Failure to comply with this policy, including manager's enforcement thereof, may lead to disciplinary action up to and including termination.

Any exceptions to the Dress Code Policy will require a documented justification submitted by the responsible Vice President; and approved by the Vice President of ESH&Q.

Manual 10Q, 602, Rev. 4, *Cyber Security Code of Conduct*

This document provides the code of conduct that has been developed to define appropriate activities associated with the use of computer systems under the cognizance of the Savannah River Site (SRS), and to eliminate inappropriate computer use which may expose SRS to risks, which includes compromise of information, networks and services, and legal issues.

1.0 CODE OF CONDUCT

1.1 *Monitoring and Expectation of Privacy*

1. Federal computer systems used by SRS are the property of the United States Government. These systems are for limited use only.
2. Users (authorized and unauthorized) have no explicit or implicit expectation of privacy. Any and all use of such systems and all files on such systems may be intercepted, monitored, recorded, copied, audited, inspected or disclosed to authorized SRS, Department of Energy (DOE) and law enforcement agencies, as well as authorized officials of other agencies, both domestic and foreign.
3. By using these systems, the user consents to such interception, monitoring, recording, copying, auditing, inspecting or disclosure at the discretion of authorized personnel.
4. Unauthorized or improper use of these systems may result in administrative disciplinary action, and civil and criminal penalties.
5. Non-federal computer systems approved for use by SRS are subject to the same monitoring and inspection requirements as stated for federal computer systems.

1.2 General Use

1. Government computer resources are only for government business and must only be used in accordance with the terms of this Code of Conduct and the requirements in the DOE – Savannah River Operations Office (SROO) Policy 08-07, Manual 10Q, *Cyber Security Manual*, or the Wackenhut Services Incorporated-SRS Standard Procedure 1-2253, as applicable.
2. Foreign Nationals must obtain special written approval from DOE-SR prior to accessing each computer system.
3. Users, or their line manager, must notify the resource owner of any change in status that will affect their access (e.g., organization, clearance, employment status).
4. Computer systems, software or other associated media are not to be released from SRS' control without sanitization or receiving Scientific & Technical Information (STI) approval by submitting the appropriate documents as each applies to the parent organization, e.g., US Department of Energy Document Review Sheet SR-60, or OSR 14-357 (Request for Information Review and Release).
5. Report any known, unprotected sensitive or classified information, or any violation of this Code of Conduct, to the system manager or a representative of Cyber Security.

6. Immediately report all suspected or actual loss, compromise or theft of protected Personally Identifiable Information (PII), to include any computing resource devices, to line management immediate manager, and to the Savannah River Site Operations Center (SRSOC), 725-1911.

1.3 System Protection

1.3.1 Prohibited Actions

1. Use of a computer to actively engage in acquisition, transmission, or to display material that is in violation of SRS' sexual harassment or hostile workplace policy.
2. Utilizing government resources to conduct private and/or personal business activities.
3. Installation of privately-owned software or unauthorized/controlled software on government resources.

For a list of unauthorized/controlled software, refer to the Cyber Security web pages.

4. Using Privately-Owned Electronic Equipment (POEE) to perform official site business or to connect to SRS-operated systems (e.g., desktops, laptops, and networks) without Cyber Security's approval (CPC-17).

Possession of data storage devices with no additional capabilities does not require a CPC-17.

5. Connecting an SRS computer to non-SRS computers or networks without Cyber Security authorization (CPC-17).
6. Reconfiguring or disabling any remote access protective measure (e.g. firewall, anti-virus, SRS Virtual Private Network (VPN) client).
7. Circumventing user authentication or security of any host, network or account.
8. Effecting security breaches and/or disruptions of any network communications, including use of any resource as a staging ground to gain unauthorized access to other systems.
9. Introducing malicious programs into the network or computing systems (e.g., viruses, worms, Trojan horses, unauthorized "hacking software" etc.).
10. Executing any form of unauthorized network monitoring that has potential to intercept data.
11. Creating or forwarding "chain letters", "Ponzi" or other "pyramid" schemes of any type.
12. Presenting untrue representation for purpose of gaining identification and authentication credentials.

1.3.2 Required Actions

1. All systems, including stand-alones and mobile systems, shall comply with cyber security programs that enforce applicable SRS security controls and provide continuous monitoring capabilities.
2. Radio frequency devices (wireless) devices must follow applicable SRS organizational policy and procedures.
3. The following required actions are associated with Portable and Mobile Devices:
 - A. Off-site uses of portable and mobile devices are subject to justification with formal authorization.
 - B. Property passes must be obtained for those devices inventoried by Asset Management Inventory System.

Each user must possess a valid property pass for the resources used off-site.
 - C. Remote access to SRS systems must be from an authorized SRS point of entry (only), e.g., the Managed Virtual Private Network Broadband (VPNBB).
 - D. Mobile computer resources must utilize the SRS standard site load with both full-disk and file-based encryption installed, or have an approved cyber management exception.
 - E. Adequate measures must be taken to ensure the portable and mobile devices are protected from unauthorized access, alteration, modification, disclosure, transmission, destruction or theft as prescribed in SRS organizational security program specifics.
 - F. Approvals must be granted by Export Control, Counterintelligence, and Cyber Security before mobile media computing resources may be transported into any foreign country.

NOTE: For additional guidance, refer to the Cyber Security web pages.

1.4 Information Protection

1.4.1 Prohibited Actions

1. Violations of copyright, trade secret, patent or other intellectual property, or similar laws or regulations, including, but not limited to, the installation or distribution of "pirated" or other software products that are not appropriately licensed for use by SRS.
2. Violations of SRS organizational procedures that ensure media is adequately protected according to its classification level and sensitivity level.
3. Checking government owned mobile computing resources in as baggage at an airport, train depot, taxi, and hotel valet, etc.
4. Sharing personally-assigned credentials (i.e., personal pin codes and passwords, private encryption keys).

5. Transmitting sensitive information over unprotected public networks (e.g., internet) without use of a DOE-approved encryption method.

1.4.2 Required Actions

1. Know the classification level and sensitivity category of the information before computer processing.
 - Only process information on computers approved for that information.
 - If unsure of the data classification, contact a Derivative Classifier/Reviewing Official (DC/RO) for guidance.
2. Electronic sensitive information must be properly protected according to SRS organizational polices and procedures.
 - Access to sensitive information must be limited based upon clearance/authorization, and need-to-know.
 - Protection can be accomplished using a variety of methods, including password (e.g., screen saver, start-up), encryption, or physical security measures.
 - All media containing sensitive information must be properly labeled.
3. Sensitive information transmitted over unprotected public networks (e.g., internet) must be encrypted using the approved method associated with the sensitivity level of the information.

NOTE: For encryption guidance, refer to the Cyber Security web pages.

4. Passwords are to be protected to at least the level of protection required for the data.
5. Passwords are not to be auto-entered or auto-saved by any application (e.g., log-in scripts, Internet Explorer (IE) dialogs).
6. Suspected or known compromises of personally-assigned passwords or credentials require the credentials to be changed immediately, or the account to be disabled.
7. Passwords for information systems that do not enforce password requirements (length and complexity of) must comply with the following rules:
 - A. Passwords contain at least eight non-blank characters.
 - B. Passwords contain a combination of letters, numbers, and at least one special character within the first seven positions.
 - C. Passwords contain a nonnumeric in the first and last position.
 - D. Passwords do not contain the user ID.
 - E. Passwords do not contain any common English dictionary word, spelled forward or backwards (except words of three or fewer characters).
 - F. Passwords do not employ common names.
 - G. Passwords do not contain commonly-used numbers associated with the user of the password.

- H. Passwords do not contain any simple pattern of letters or numbers.
- 8. The following requirements are associated with Portable/Mobile Devices:
 - A. Use of mobile data must be kept to a minimum necessary to perform job function.
 - B. In the event that Unclassified Controlled Information (UCI) or protected PII is created while off the site, it must be encrypted using approved DOE file-based encryption methods (i.e., Entrust, Guardian Edge, etc.).

NOTE: For additional guidance, refer to the Cyber Security web pages.

1.5 Exceptions

Exceptions to this Cyber Security Code of Conduct require approval by the SRS Organizational Cyber Security Manager and/or DOE-SR Information System Security Manager.

2.0 ACKNOWLEDGEMENT

I acknowledge and will comply with this Cyber Security Code of Conduct.

If I am unbadged, permission is given to SRS to conduct appropriate personal investigative screening to grant computer access.

_____		_____	
User Name (Print First, MI, Last)			
Company/Organization/Dept/Division			
_____		_____	
User Signature		ID (if available)	(Y / N)
US Citizen?			Date
_____		_____	
COR/STR/Host (Please Print)	User ID	Date	

3.0 REFERENCES

3.1 Department of Energy (DOE) and Savannah River Site (SRS) Policies and Standards

- DOE – Savannah River Operations Office (SROO) Policy 08-07
- US Department of Energy Document Review Sheet SR-60
- Wackenhut Services Incorporated-SRS Standard Procedure 1-2253

3.2 Manuals

Manual 10Q, *Cyber Security Manual*

3.3 Forms

- OSR 14-357LN, "Request for Information Review and Release"
- OSR 10-296LN, "CPC-17, Special Authorization Request for Use of Hard and Software"

-X-

APPENDIX

DOE Designated Sensitive Countries List

Algeria		Iran	Pakistan
Armenia		Iraq	Russia
Azerbaijan		Kazakhstan	Sudan
Belarus		Korea,	Syria
China,	People's	Democratic People's	Taiwan
Republic of		Republic of (North	Tajikistan
Cuba		Korea)	Turkmenistan
Georgia		Kyrgyzstan	Ukraine
India		Libya	Uzbekistan
Israel		Moldova	

All cleared employees must report all travel (business or personal) to any of these sensitive countries and also all travel to any non-sensitive country. Uncleared employees must report all travel (business or personal) to a sensitive country. Uncleared employees are encouraged to report personal travel to non-sensitive countries. Contact the Office of Counterintelligence, Savannah River Site at 803-725-5086 30 to 45 days in advance of travel. Contact the same office for further information regarding counterintelligence issues surrounding foreign travel.

ACRONYMS

ALARA	As Low As Reasonably Achievable	PM-6A	Portal Monitor 6A
AMS	Asset Management Specialist	POE	Point of Entry
CAT	Consolidated Annual Training	POEE	Personally-Owned Electronic Equipment
CI	Counterintelligence	PPA	Property Protection Area
CIF	Consolidated Incineration Facility	PPE	Personal Protective Equipment
CND	Criticality Neutron Dosimeter	QA	Quality Assurance
COI	Conflict of Interest	QAP	Quality Assurance Program
dB	Decibel	R&D	Research and Development
DNO	Do Not Operate	RBA	Radiological Buffer Area
DOE	Department of Energy	RCRA/	Resource Conservation and Recovery Act/
DOE-SR	Department of Energy-Savannah River	CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
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	SC	South Carolina
ERO	Emergency Response Organization	SCA	Soil Contamination Area
FOIA	Freedom of Information Act	SME	Subject Matter Expert
GA	Georgia	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	URMA	Underground Radioactive Material Area
NFPA	National Fire Protection Association	UCI	Unclassified Controlled Information
OSHA	Occupational Safety and Health Administration	UCNI	Unclassified Controlled Nuclear Information
OUO	Official Use Only	USFS	United States Forest Service
PC	Personal Computer	WBC	Whole Body Count
PCM-1B	Personnel Contamination Monitor 1B	WSI	Wackenhut Services, Inc.
PII	Personally Identifiable Information		

Action List for Threats/Accidents

Savannah River Site
Action List for Threats/Incidents

0251.104-1256 (Rev 11-5-99)

<p>Bomb Threat</p> <ol style="list-style-type: none"> When is the bomb going to explode? Where is it right now? What does it look like? What kind of a bomb is it? What will cause it to explode? Did you place the bomb? Why? Where are you calling from? What is your name? What is your address? 	<p>Stolen Nuclear Material Threat</p> <ol style="list-style-type: none"> What kind of material was stolen? How much material was stolen? What facility was it stolen from? Are identification markings on the container? If so, what are they? What will be done with this material? Where is the material right now? Why was the material stolen? What is your name? What is your address? 	<p>Caller's Voice</p> <p> <input type="checkbox"/> Calm <input type="checkbox"/> Angry <input type="checkbox"/> Excited <input type="checkbox"/> Slow <input type="checkbox"/> Rapid <input type="checkbox"/> Soft <input type="checkbox"/> Loud <input type="checkbox"/> Laughter <input type="checkbox"/> Crying <input type="checkbox"/> Normal <input type="checkbox"/> Distinct <input type="checkbox"/> Sturred If voice is familiar, who did it sound like? _____ _____ _____ _____ </p>	<p>Background Sounds</p> <p> <input type="checkbox"/> Street Noises <input type="checkbox"/> Crockery <input type="checkbox"/> Factory Machinery <input type="checkbox"/> PA System <input type="checkbox"/> Animal Noises <input type="checkbox"/> Music <input type="checkbox"/> Long Distance <input type="checkbox"/> Other </p> <p> <input type="checkbox"/> House Noises <input type="checkbox"/> Office Machinery <input type="checkbox"/> Motor <input type="checkbox"/> Voices <input type="checkbox"/> Clear <input type="checkbox"/> Static <input type="checkbox"/> Local <input type="checkbox"/> Phone Booth </p>	<p>NBC Weapons Incident (Nuclear, Biological, Chemical) Call 3-3911 or 725-1911</p> <p>Provide the following—</p> <ol style="list-style-type: none"> Location of incident or explosive device. Number of persons affected and their symptoms. Time of explosive detonation, if known. Any unusual odors? Any spills or vapor clouds? Spray or hissing sounds coming from device or package? Vehicles/containers involved and any special markings. Your name and phone number. Unusual number of fleas, ticks, mosquitoes, rodents in area where there are usually none. 	<p>Employee Response</p> <ol style="list-style-type: none"> If you see any strange liquid, spray or mist from device or package, do not touch, remove or cover anything. Leave the immediate area; cover your mouth and nose. Call 3-3911 or 725-1911 and report the incident. <p>Exact Wording of the Threat</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Sex of Caller: <input type="checkbox"/> Male <input type="checkbox"/> Female</p> <p>Number at Which Call was Received: _____</p> <p>Time Received: _____</p> <p>Age: _____</p> <p>Race: _____</p> <p>Length of Call: _____</p> <p>Date Received: _____</p> <p>Threat Language</p> <p> <input type="checkbox"/> Well Spoken (Educated) <input type="checkbox"/> Foul <input type="checkbox"/> Irrational </p> <p> <input type="checkbox"/> Incoherent <input type="checkbox"/> Taped <input type="checkbox"/> Message Read by Threat Maker </p> <p>Remarks _____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Report Stolen Nuclear Material Threats, Bomb Threats or NBC Weapons Incidents to SRSOC Immediately 3-3911</p> <p>Name _____ Date _____</p> <p>Position _____ Phone No. _____</p>					



Points of Contact

Badge Office

SRS.....803-725-3348

Classified Matter Protection and Control Program

DOE-SR.....803-952-7479

SRNS/SRR.....803-725-5073

WSI-SRS.....803-952-5808

Cyber Security

DOE-SR.....803-952-6821

SRNS/SRR.....803-725-7000

WSI-SRS.....803-952-5808

Counterintelligence Office.....803-725-5086

Employee Assistance Program

DOE-SR.....803-952-9478

SRNS/SRR.....803-725-8897

WSI-SRS.....800-968-8143

SRNS Personnel Security.....803-725-3186

WSI-SRS Personnel Security.....803-952-7628

Employee Concerns Program

DOE-SR.....803-952-8320

SRNS.....803-725-3244

SRR.....803-208-0921

WSI-SRS.....803-952-7670

MOX Project.....803-819-2327

NNSA.....800-688-5713

Parsons.....803-643-7112

Equal Employment Operations & Diversity

DOE-SR 803-725-8104
SRNS 803-725-7247
SRR 803-208-3879
WSI-SRS..... 803-952-7018

Ethics

DOE-SR (Office of Chief Counsel/Ethics) 803-952-7618
SRNS Ethics Hotline 803-725-8181
SRR Ethics Hotline..... 803-557-8000
WSI-SRS..... 803-952-7018

Export Control

DOE-SR Export Control Program Manager..... 803-952-7755
SRNS/SRR Export Control Officer 803-725-3906
WSI-SRS Information Security Officer 803-952-5808

Lock and Key Control

DOE-SR 803-952-6655
SRNS/SRR..... 803-725-2950
SRNS/SRR (alternate) 803-725-1707
WSI-SRS Locksmith..... 803-952-7616

Office of Civil Rights

DOE-SR 803-952-8515

OPSEC Program Manager

DOE-SR 803-952-6036
SRNS/SRR..... 803-725-3906
WSI-SRS..... 803-952-9124
MOX 803-819-2863
Parsons 803-643-1627

Records Management

DOE-SR 803-952-6328
SRNS/SRR..... 803-725-2185
WSI-SRS..... 803-952-7001

Security Awareness

DOE-SR.....803-952-7519
SRNS/SRR.....803-725-3151
WSI-SRS.....803-952-7597

Security Incident Program Manager

DOE-SR.....803-952-7479
SRNS/SRR.....803-725-3216
WSI-SRS.....803-952-8956

SRS Operations Center (SRSOC)

On Site3-3911
Off Site or Cell Phone803-725-3911

WSI Dispatch.....803-725-2310

My Points of Contact

Answers to Self-Check Questions

General Description of SRS

1. **(B)** Wackenhut Services, INC.
2. **(A)** Department of Energy-SR (DOE)
3. **(D)** Savannah River National Laboratory

SRS Security Program

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

Health and Safety

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

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/stability, Red – flammable and Blue - health

Emergency Management Program

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. Fuel, Heat, Oxygen and a Chemical Chain Reaction
2. Class A
3. (D) Horn
4. Pull, Aim, Squeeze and Sweep
5. (C) Class B or C

General Employee Radiological Training (GERT)

1. (A) The risk from working in the nuclear industry is lower
2. (D) Nuclear medicine, Exit signs, Smoke detectors
3. (D) 100 mrems/year
4. (B) Re-monitor two additional times on the same monitor
5. (B) Posting radiological signs colored yellow and Magenta
6. (A) Keep your radiation exposure As Low As Reasonably Achievable (ALARA)
7. (C) Controlled Area
8. (C) Tell your Supervisor so he can arrange a radiological worker escort for you
9. (B) PCM
10. Cosmic, Earth's Crust, Human Body, and Radon

Environmental Management System

1. Hazardous, Non-hazardous, radioactive and mixed
2. (B) Environmental Compliance Authority
3. Site Salvage
4. (D) Orange balls
5. (D) Source Reduction

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