



U.S. DEPARTMENT OF  
**ENERGY**



# Overview of the SRS Environmental Management System

*A Tool To Improve Environmental Performance*

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*SRS Citizens Advisory Board Meeting*

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# Purpose

To fulfill a 2018 Facilities Disposition and Site Remediation Committee Work Plan Commitment by providing an overview of the Savannah River Site (SRS) Environmental Management System (EMS)



ENVIRONMENTAL MANAGEMENT SYSTEM

*Embracing the Environment*



## SRS Environmental Policy

### Leadership in Environmental Excellence

#### We do it to

protect our families and future generations,  
promote sound **Environmental Stewardship** of our community and the site, and  
continue the **National Security** mission at SRS.

#### We accomplish this by

complying with environmental laws and regulations,  
conducting **Science and Energy** research,  
maintaining conduct of operations principles, and  
communicating with our workforce, the public and SRS stakeholders.



ENVIRONMENTAL STEWARDSHIP • NATIONAL SECURITY • SCIENCE AND ENERGY

# Presentation Outline

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## Overview of Environmental Management System

- Definitions
- Drivers
  - DOE Order 436.1
  - ISO 14001 Standard
- Implementation
  - Plan
  - Do
  - Check
  - Act
- Communication
- Summary

# Environmental Management System Definitions and Drivers

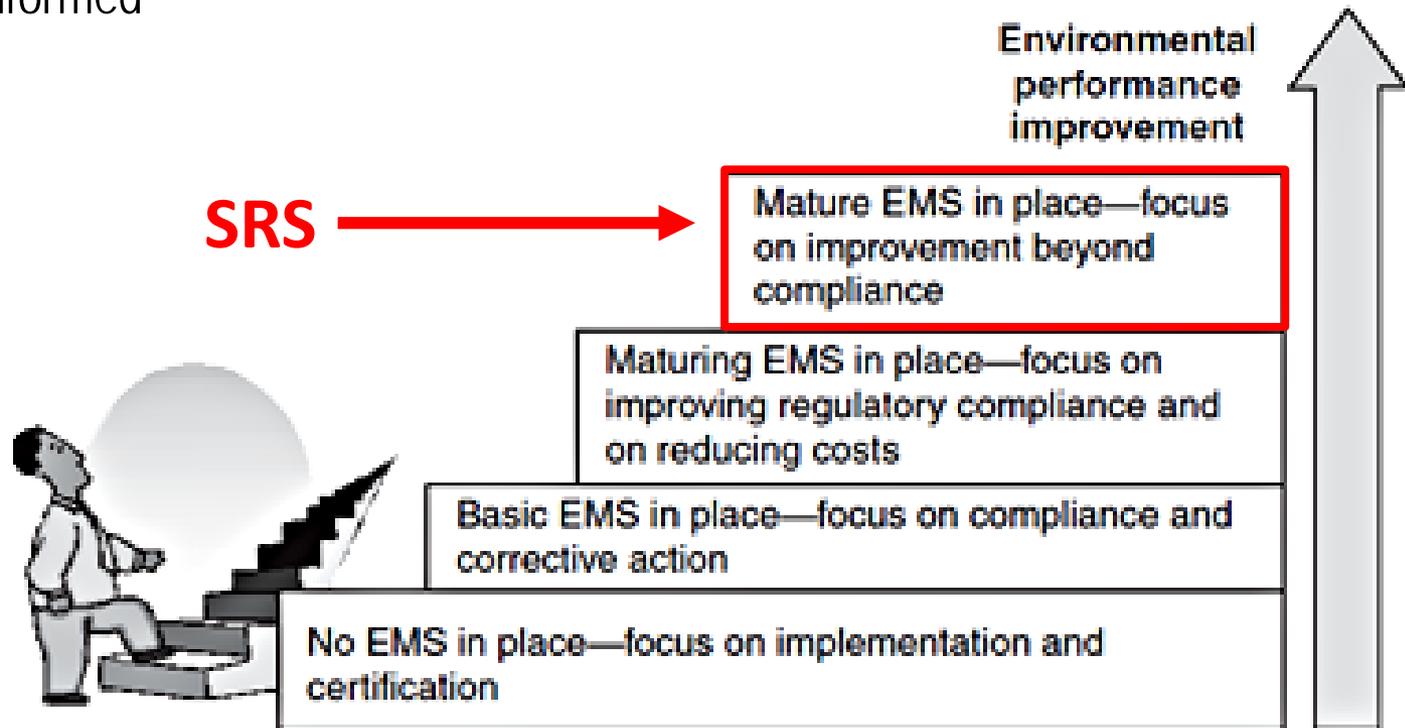
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- **Environmental Management System**
  - A strategic framework to help
    - *ensure environmental compliance (laws, regulations, and permits)*
    - *and to achieve Federal Sustainability goals*
- **DOE Order 436.1, Departmental Sustainability**
  - DOE performs oversight on contractor's implementation of the EMS onsite
- **ISO 14001 Environmental Management System**
  - is guidance developed by the International Organization for Standardization
  - ISO 14001:2015 specifies the requirements for an EMS that an organization can use to enhance its environmental performance

# Implementation

## Oversight by DOE

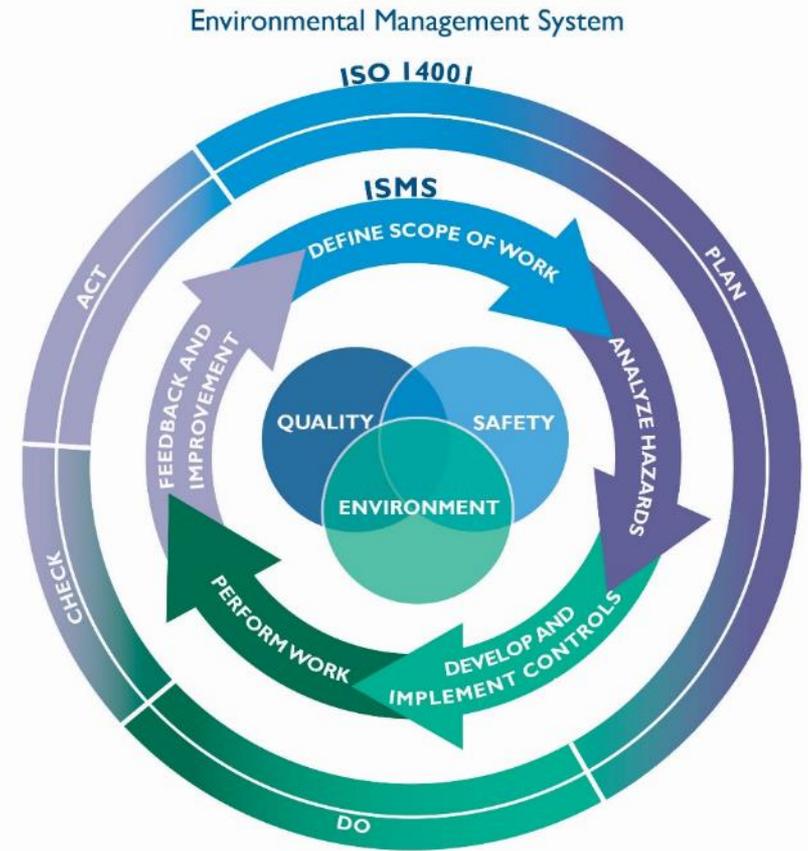
- Ensure contractors execute EMS
- Identify and manage lessons learned and corrective actions
- Coordinate new or changing requirements, policies, and guidance
- Keep the public informed



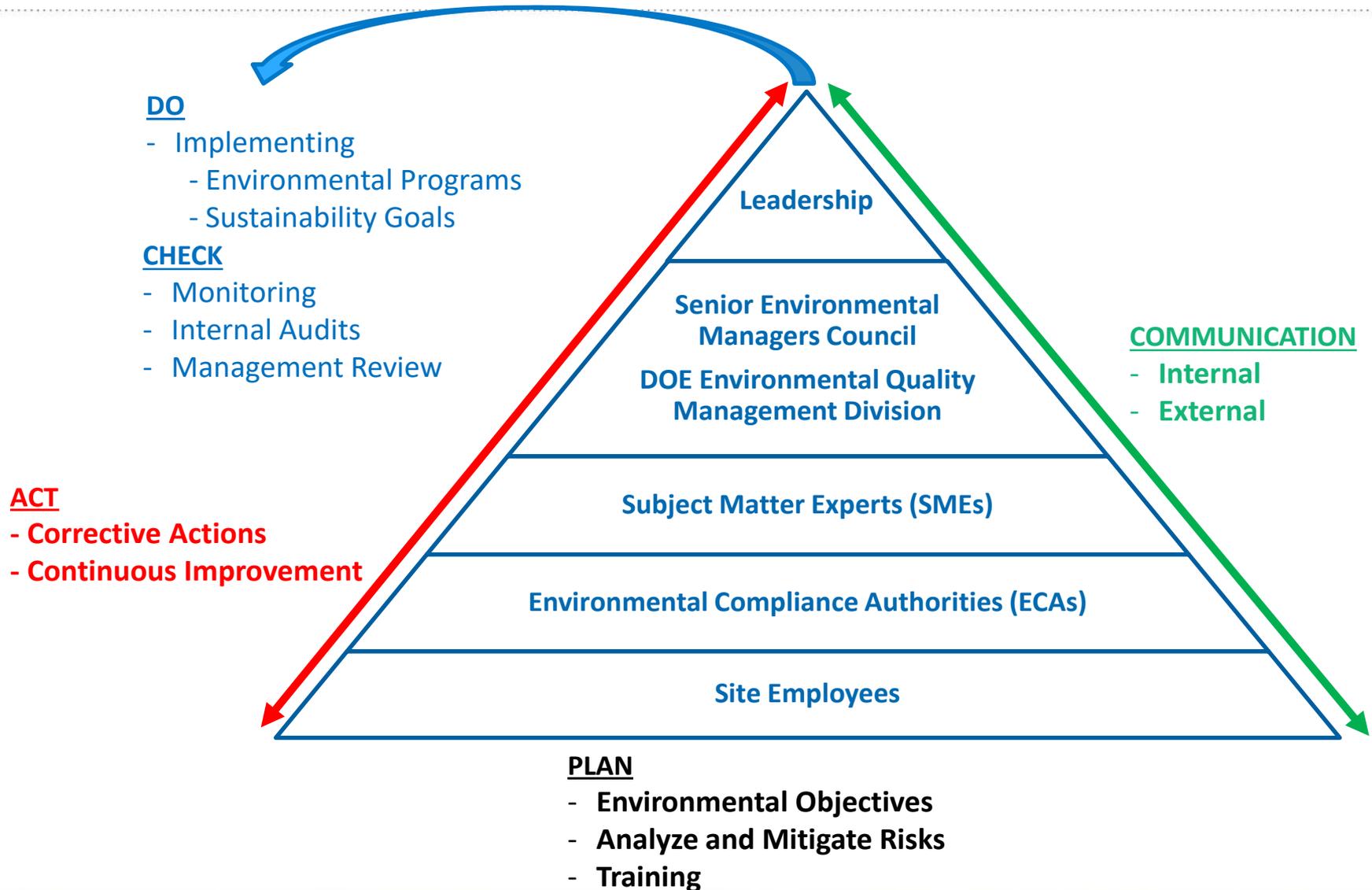
# Implementation (continued)

## ISO 14001 Environmental Management System

- EMS framework provides an iterative process using the Plan-Do-Check-Act approach
  - **Plan:** Establish the objectives and processes in accordance with the environmental policy
  - **Do:** Implement the processes
  - **Check:** Monitor and measure processes against the plan
  - **Act:** Take actions to continually improve the performance



# EMS Implementation (continued)



# PLAN

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Establish the objectives and processes in accordance with the environmental policy

- **Environmental Objectives**

- Identify how SRS activities, products, or services interact (or potentially interact) with the environment
- Identify regulatory requirements and commitments

- **Analyze and Mitigate Risk**

- Develop controls to mitigate risks such as unplanned releases to the environment/worker exposure

- **Training**

- **Implementing Environmental Programs**

- Fulfill requirements of applicable federal and state environmental laws and regulations, DOE Orders, policies and directives
  - *Clean Water Act, Clean Air Act*

- **Implementing Sustainability Goals**

- Reduce Greenhouse Gas
- Increase Energy Efficiency
- Reduce Water Use
- Increase Use of Ethanol Fuel and Transition to Alternate Fueled Vehicles
- Increase Pollution Prevention and Waste Minimization
- Promote Sustainable Acquisitions

- **Examples of Environmental Compliance and Sustainability Efforts**

- Using Wireless Devices for Stormwater Sampling
- Transitioning from Active to Passive Remediation
- Treating Stormwater with Oyster Shells
- Using Drone Technology for Waste Units
- Reusing Road Millings



**Road Work Associated with Reuse of Road Millings**



**SRNS Employees Applying Oysters to Treat Stormwater**



**Wireless Devices for Stormwater Sampling**

# CHECK - Performance Evaluation

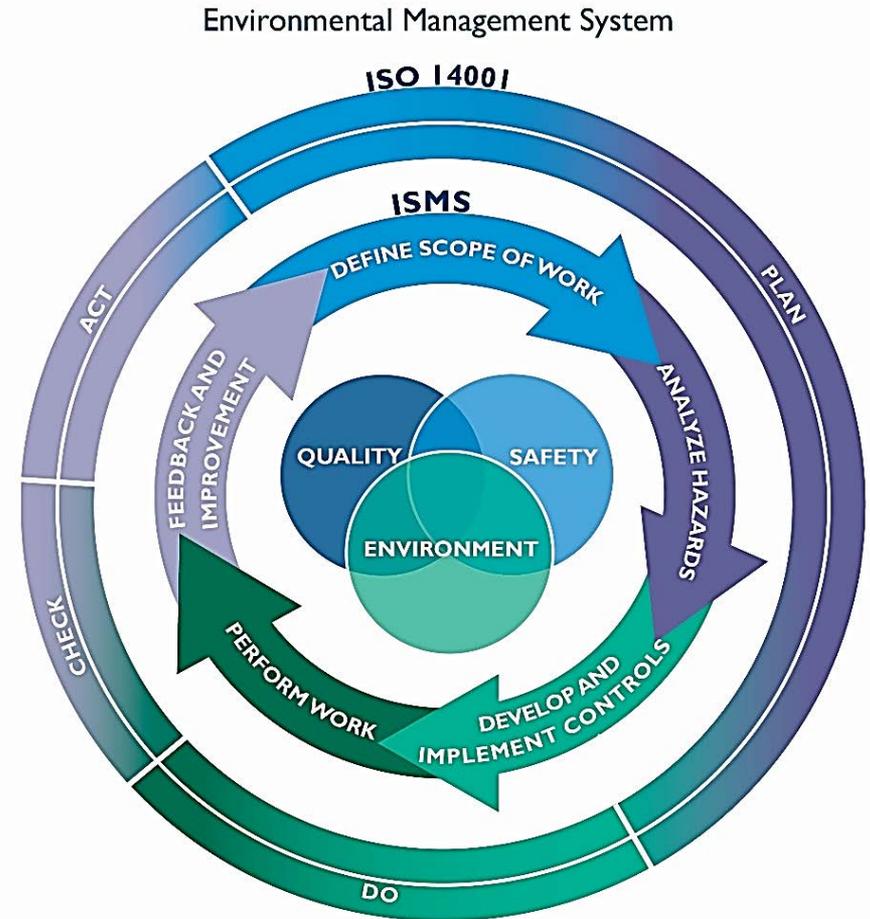
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- **Monitoring, Measurement, Analysis and Evaluation**
  - Environmental monitoring against regulatory requirements
- **Internal Audits**
  - Regular self assessments of environmental programs and facilities, and
  - Annual self assessments of the EMS program are conducted with oversight by DOE
  - Audits by an independent board
- **Management Review**
  - Senior management engagement throughout the process

# ACT

## Take actions to continually improve performance

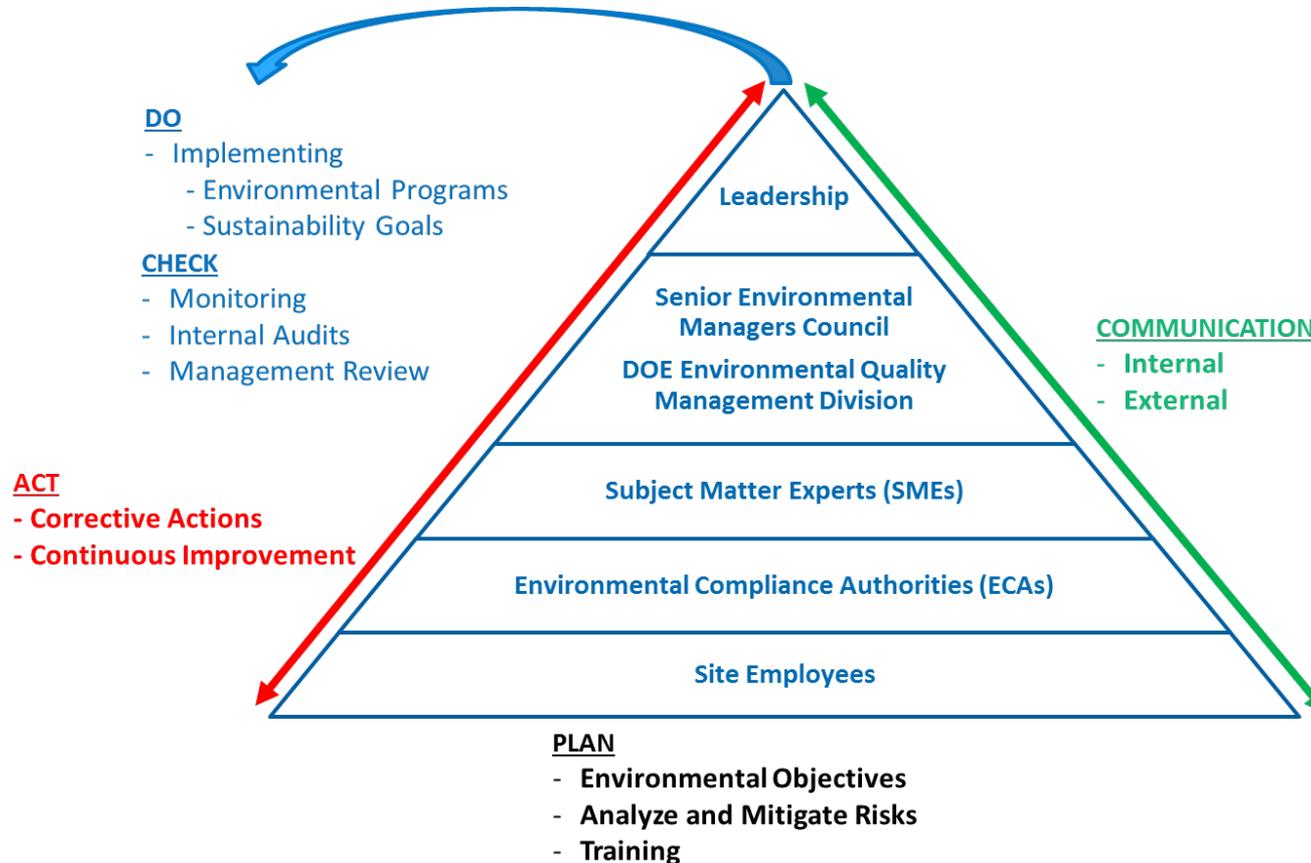
- **Continuous Improvement**
  - Maintains the effectiveness of the EMS program
- **Corrective Action Program**
  - Corrects and improves deficiencies to prevent environmental impacts
  - Maintained to deal with actual and potential adverse conditions



# Communication

## • Communication

- Internal Communication (e.g. Consolidated Annual Training, 1 Simple Act of Green)
- External Communication (e.g., ASER, Social Media, CAB)



# Example of External Communication

The screenshot shows the Energy.gov website header with navigation links: ENERGY.GOV, Office of MANAGEMENT, About Us, SERVICES, OPERATIONAL MANAGEMENT, and MISSION. Below the header is the Sustainability Performance Office logo. The main content area features a large green banner with the text "2017 U.S. Department of Energy Sustainability Award Winners". Below the banner is a white box containing the following text:

Home » Awards » 2017 U.S. Department of Energy Sustainability Award Winners

In 2017, the U.S. Department of Energy (DOE) Sustainability Performance Office recognized one individual and three teams representing DOE sites and national laboratories. These winners were recognized for their outstanding sustainability contributions, including accomplishments in recycling, sustainability, energy efficiency, and waste reduction.

## Waste Reduction and Pollution Prevention

### SAVING OUR WATER: SAVANNAH RIVER SITE

Savannah River Remediation, LLC, is saving millions of gallons of well water while ensuring safe regulatory water discharges and avoiding an expensive treatment system.

A new Rhombo ball cover and a biological digester were added to the 281-8H retention basin to reduce the levels of pH and algae build up during the warmer months. This resulted in an annual decrease of 55 million gallons of well water at a savings of \$24,000 per year.



# Summary

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- **EMS is a guide for how we plan and do our work at SRS**
  - to make sure we comply with environmental requirements and
  - to ensure we wisely use our natural resources
  
- **Our EMS is valuable because it**
  - increases worker participation and awareness of environmental sustainability and requirements
  - fosters safe and effective work practices at SRS
  
- **SRS continues to communicate environmental management efforts with interested parties**
  - Citizens Advisory Board
  - USEPA and SCDHEC
  - DOE-HQ



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