

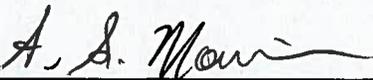
STANDARDS/REQUIREMENTS IDENTIFICATION DOCUMENT

FUNCTIONAL AREA 08.0

CONSTRUCTION PROGRAM (U)

March 11, 2015
REVISION 14-04

This document was approved by DOE-SR on the above date.



Manager, Contractor Assurance



Date

Savannah River Remediation LLC
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08.00 CONSTRUCTION PROGRAM

Standards/Requirements Identification Document (S/RID) Functional Area 00, S/RID Purpose and Development, contains general information on the development (including the type of source documents considered), assessment, approval, and maintenance of the WSRC S/RID which is pertinent to the understanding of this functional area S/RID. The reader should refer to S/RID FA 00 for a complete understanding of this functional area S/RID.

Construction Management at the Savannah River Site directs the construction of new facilities and the modification, or disposition, of existing facilities. This includes planning and selecting direct hire or sub-contract construction strategies as necessary to perform the scope of work in a cost effective manner that is consistent with; (1) ES&H Federal and State Regulations and (2) DOE Orders.

This document addresses the Environmental, Safety and Health (ES&H) requirements related to Construction activities undertaken by WSRC on behalf of the Department of Energy (DOE) at the Savannah River Site (SRS). The requirements included in this functional area reflect standard construction practices. The Construction Program functional area outline numbering presented in the Revision 0, July 30, 1993 version of the DOE-HQ ES&H Configuration Guide has been maintained for reference.

Requirements such as the use of a particular code, standard or process which are derived from design basis or output documents, e.g. use of ASME or AWS welding codes, are not included in this document. These codes and standards are specified in project or program-specific design output documents and the Construction program requires adherence to whatever code or standard is specified.

08.01 MANAGEMENT AND ADMINISTRATION

It is the policy of Construction Management that safety and quality in construction and startup testing is achieved through the use of skilled personnel, adequate planning, suitable tools and procedures, proper definition of job requirements, appropriate craft supervision and technical direction. Aspects of these elements directly related to construction activities are addressed in Section 08.02. All other elements are addressed through other S/RID functional areas as identified in Section 08.03.

08.01.01 Policies and Procedures

ES&H requirements directly related to construction activities are addressed in Section 08.02. All other ES&H construction related requirements are addressed through other S/RID functional areas as identified in Section 08.03.

08.01.02 Authority and Responsibility

ES&H requirements directly related to construction activities are addressed in Section 08.02. All other ES&H construction related requirements are addressed through other S/RID functional areas as identified in Section 08.03.

08.01.03 Staffing and Training

ES&H requirements directly related to construction activities are addressed in Section 08.02. All other ES&H construction related requirements are addressed through other S/RID functional areas as identified in Section 08.03.

08.02 PROGRAM ACTIVITIES

This section contains requirements which form the basic program structure for construction management. Construction places the highest priority on the five Savannah River Site imperatives of Safety, Disciplined Operations, Continuous Improvement, Cost Effectiveness and Team Work. Construction activities will be managed with a consistent set of requirements and standards derived from the applicable DOE Orders, Federal and State Law, Industry Codes and Standards and WSRC requirements. Responsibilities shall be clearly defined and activities shall be managed, organized and conducted to assure a world class level of safety and quality is achieved and maintained. Construction will use a graded approach in the application of requirement and guidance documents to assure the depth of detail required and magnitude of resources expended are commensurate with the potential environmental, safety and health, and quality impact, of each activity, or individual activities.

08.02.01 Planning

The Construction Program S/RID Functional Area interfaces with the required disciplines to perform the necessary planning, scheduling, cost estimating, design reviews, material and storage, contract selection, construction, inspection testing and evaluation. The codes, standards and requirements specified by the Engineering Program and the requirements specified in the Maintenance or Decommissioning Program are used to implement construction.

08.02.02 Scheduling

ES&H requirements directly related to construction activities are addressed in Section 08.02 (Program Activities). All other ES&H construction related requirements are addressed through other S/RID functional areas as identified in Section 08.03.

08.02.03 Cost Estimating

ES&H requirements directly related to construction activities are addressed in Section 08.02 (Program Activities). All other ES&H construction related requirements are addressed through other S/RID functional areas as identified in Section 08.03.

08.02.04 Constructibility/Maintainability/Value Engineering

ES&H requirements directly related to construction activities are addressed in Section 08.02 (Program Activities). All other ES&H construction related requirements are addressed through other S/RID functional areas as identified in Section 08.03.

08.02.05 Material and Equipment Storage

ES&H requirements directly related to construction activities are addressed in Section 08.02 (Program Activities). All other ES&H construction related requirements are addressed through other S/RID functional areas as identified in Section 08.03.

08.02.06 Contract Selection

ES&H requirements directly related to construction activities are addressed in Section 08.02 (Program Activities). All other ES&H construction related requirements are addressed through other S/RID functional

areas as identified in Section 08.03.

08.02.07 Construction Program Controls

ES&H requirements directly related to construction activities are addressed in Section 08.02 (Program Activities). All other ES&H construction related requirements are addressed through other S/RID functional areas as identified in Section 08.03.

08.02.08 Walkthroughs of Construction Sites

ES&H requirements directly related to construction activities are addressed in Section 08.02 (Program Activities). All other ES&H construction related requirements are addressed through other S/RID functional areas as identified in Section 08.03.

08.03 KEY INTERFACES

Construction activities, performed in support of SRS initiatives, can range from new projects to the modification, or disposition, of facilities. This broad scope of work has the potential to impact operating structures, systems, or components (SSC's). To ensure ES&H requirements are met, management must make sure the duties, responsibilities, interfaces, hazards, requirements, and performance expectations associated with each scope of work are clearly communicated and understood before commencing work.

When modification or disposition activities change a facility's fit, form, or function, additional management and engineering controls are required to ensure this work is accomplished in a safe and cost effective manner. Construction is an integral part of a Project, Engineering and Construction management process designed to work in conjunction with Safety, Quality, Conduct of Operations and Maintenance programs to provide these controls. The scope of services provided by construction requires communication and interface with most of the other S/RID Functional Areas.

08.03.01 Management Systems

The Construction Program interfaces with S/RID Functional Area (FA) 01 (Management Systems) in the areas of policy and procedures development, organizational structure, assignment of authorities and responsibilities, project control and reporting systems. Refer to FA 01 for the specification of related requirements.

08.03.02 Quality Assurance

FA 02 (Quality Assurance) is an essential element of the construction program. Construction managers and supervisors are expected to manage by walking around and performing routine observations of construction activities on a continuing basis. In addition, construction personnel perform peer inspections, periodic self-assessments and, when specified, Quality Control performs independent inspections. Also, on a periodic basis, other SRS functional groups and government agencies perform audits and assessments of construction activities. Construction Quality Assurance activities are governed by the requirements specified in FA 02 and are not repeated here.

08.03.03 Configuration Management

The Construction Program interfaces with FA 03 (Configuration Management) for control of changes to technical, cost and schedule baselines. Refer to the FA 03 for the specification of such requirements.

08.03.04 Training and Qualification

The interface with FA 04 (Training and Qualification) requires ensuring the Construction staff is trained in occupational safety and health, construction management, government contracting, and contract administration requirements. Also, to verify specific training and or accrediting programs are established, to ensure the availability of qualified construction craft personnel. Refer to FA 04 for the specification of such requirements.

08.03.05 Safeguards and Security

This outline element is maintained for continuity with the DOE ES&H Configuration Guide. There are no requirements presented in FA 06 (Safeguards and Security).

08.03.06 Engineering Program

The Construction Program is responsible for implementing design documents and specifications prepared in accordance with the requirements in FA 07 (Engineering Program). Extensive interfacing must occur between the two functional areas, particularly for the following:

- + Identifying temporary utility needs;
- + Construction inspection activities;
- + Permitting and licensing efforts;
- + Planning and execution of startup;
- + Review and approval of vendor drawings;
- + Record maintenance and retention.

Refer to FA 07 for the specification of such requirements.

08.03.07 Operations

This area requires the coordination, planning and scheduling of operations support for construction and startup testing activities. Basic requirements for these activities are included in FA 09 (Conduct of Operations). When an operating facility requires changes that alter the fit, form or function of SSC, additional management and engineering controls are required to ensure the work is accomplished in a safe and cost effective manner.

08.03.08 Maintenance

The Construction organization often performs routine or corrective maintenance at facilities. This work is performed under the work control system of the facility's maintenance organization. All maintenance requirements are specified in FA 10 (Maintenance). When corrective maintenance activities change the fit, form, or function of facilities, the activity becomes a modification and additional management and engineering controls are required to ensure the work is accomplished in a safe and cost effective manner. When the scope of corrective maintenance becomes a modification, the maintenance functional area must interface with Management, Operations, Safety, Project Management, Engineering and Construction. As a minimum the requirements of this functional area and the Engineering functional area must be reviewed prior to authorizing modification.

08.03.09 Radiation Protection

Interfacing with FA 11 (Radiation Protection) is required for the protection of personnel. Refer to FA 11 for the specification of such requirements.

08.03.10 Fire Protection

Interfacing with FA 12 (Fire Protection) is required for the planning, installation and test of temporary and permanent fire protection systems. Refer to FA 12 for the specification of such requirements.

08.03.11 Research and Development and Experimental Activities

This outline element is maintained for continuity with the DOE ES&H Configuration Guide. However, there are no unique requirements that apply to FA 17 (R&D Experimental Activities).

08.03.12 Occupational Safety and Health

The Construction Program has extensive interface with FA 19 (Occupational Safety and Health (OS&H)). Construction personnel pre-plan construction activities to be safe through work planning, job task analysis, and the application of safety and health procedures. Construction management, working with the procurement staff, implements OS&H requirements for subcontractors through incorporation of appropriate clauses in construction subcontracts. Construction subcontract technical representatives monitor subcontracts to ensure contractor conformance to such requirements. Specific requirements for construction safety are contained in FA 19.

08.03.13 Environmental Protection

The Construction Program interfaces with the FA 20 (Environmental Protection) for permitting and pollution control activities. Depending on the potential environmental impact, of construction activities, additional requirements from FA 20 may apply.

08.03.14 Facility Disposition

When requested the Construction organization may perform transition, disposition, decommissioning and dismantling activities at facilities. This work is performed under the work control system of the facility, or within work control system specified by Construction. All decommissioning requirements are specified in FA 15 (Facility Disposition). When the scope of work within a facility transitions to disposition, decommissioning, and or dismantling activities the requirements of the Engineering Program, Maintenance, and Facility Disposition functional areas must be reviewed prior to authorizing work.

08.04 DOCUMENTS**08.04.01 Reference Documents**

IBC

INTERNATIONAL BUILDING CODE

TABLE 1 FORMAT AND CONTENT

S/RID Requirement Number	Unique number for each requirement that links the statement to the ES&H Configuration Guide
Source Document	Number of the source document
Source Document Requirement Number	Unique reference from the source document.
Requirement Text	Requirement statement

Facility Categories *

Requirement applicability is shown in relation to the following facility categories:

Nuclear HC-1,2,3	Representing nuclear hazard category 1, 2 and 3 facilities (as defined by DOE Standard 1027-92) and includes any facility(s) required to support a nuclear facility(s).
Radiological	Representing facilities below Hazard Category 3 but still contain quantities of radioactive material at or above the Reportable Quantity value listed in 40 CFR 302.4.
High Hazard Chemical	Representing facilities with radiological hazards below 40 CFR 302.4 thresholds for radiological materials, but with any chemical hazard at or above threshold quantities listed in 29 CFR 1910.119 or 40 CFR 68. These facilities may also contain nuclear materials exempt from the nuclear facility definition, e.g., check and calibration sources, radioactive sources in research and experimental and analytical laboratory activities, electron microscopes, and x-ray machines, as defined by 10 CFR 830.3.
Low Hazard Chemical	Representing facilities with radiological hazards below 40 CFR 302.4 thresholds, but with chemical hazards both below 29 CFR 1910.119 or 40 CFR 68 thresholds and at or above reportable quantities in 40 CFR 302.4. These facilities may also contain nuclear materials exempt from the nuclear facility definition, e.g., check and calibration sources, radioactive sources in research and experimental and analytical laboratory activities, electron microscopes, and x-ray machines, as defined by 10 CFR 830.3.
Other Industrial	Representing facilities with all radiological and chemical hazards below 40 CFR 302.4 thresholds. These facilities may also contain nuclear materials exempt from the nuclear facility definition, e.g., check and calibration sources, radioactive sources in research and experimental and analytical laboratory activities, electron microscopes, and x-ray machines, as defined by 10 CFR 830.3.
Facility Specific	These are requirements that are applicable to specific facilities. Facility identification is included in this column, when applicable.

Phase I Compliance Approach

Common	Implementation of these requirements is covered by common procedures and policies.
Facility Specific	Implementation of these requirements is covered by facility specific procedures.

* Refer to the "SRR Facilities List" contained in Functional Area 00 for the category for specific SRS facilities/ bldgs.

TABLE 1 - S/RID FUNCTIONAL AREA 08 (CONSTRUCTION PROGRAM) REQUIREMENTS

S/RID Requirement Number	Source Document	Source Document Reqt Number	Requirement Text	SRR Applicability						Phase I Compliance	
				Nuclear HC-1.2.3	Radi-ological	High Hazard Chemical	Low Hazard Chemical	Other Industrial	Facility Specific	Common	Facility Specific
08.02.007	IBC	104.4	Successful contractors shall comply with rules, regulations and inspections made applicable by their governing contract and the standards, codes and specifications made applicable by design. Construction progress inspections shall not be less than the minimum required inspections stated in the International Building Code. Note: The wording of this requirement has been modified from IBC 104.4 for SRS application.	X	X	X	X	X		X	
08.02.008	IBC	110	Construction activities shall not commence on areas involving building occupancy changes until all required electrical, gas, mechanical, plumbing, and fire protection systems have been inspected for compliance with the technical codes that will govern the revised occupancy. The technical code compliance requirements for revised occupancy shall be documented in approved design documents. Once authorized, Construction activities shall be conducted in a manner that assures work is preformed in accordance with the codes and standards made applicable by design documents. Note: The wording of this requirement has been modified from IBC 110 for SRS application.	X	X	X	X	X		X	