1 of 3

WESTINGHOUSE HANFORD COMPANY

REQUIREMENTS

IDENTIFICATION

DOCUMENT

FACILITY:

**HIGH LEVEL WASTE STORAGE
TANK FARMS/242-A
EVAPORATOR**

FUNCTIONAL AREA:

Management Systems

REVISION 0

MASTER

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High-Level Waste Storage Tank Farms/242-A Evaporator Standards/Requirements Identification Document (S/RID), Vol. 1

Date Published
April 1994

Prepared for the U.S. Department of Energy
Office of Environmental Restoration and Waste Management

**Westinghouse
Hanford Company**

P.O. Box 1970
Richland, Washington

Hanford Operations and Engineering Contractor for the
U.S. Department of Energy under Contract DE-AC06-87RL 10930

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DISCLM-1.CHP (1-91)

Date Received: 4/28/94 KMB		INFORMATION RELEASE REQUEST		Reference: WHC-CM-3-4	
Complete for all Types of Release					
Purpose			ID Number (include revision, volume, etc.) WHC-EP-0750, Revision 0		
☐ Speech or Presentation ☐ Full Paper (Check only one suffix) ☐ Summary ☐ Abstract ☐ Visual Aid ☐ Speakers Bureau ☐ Poster Session ☐ Videotape			List attachments. None		
			Date Release Required April 29, 1994		
Title High Level Waste Storage Tank Farms/242-A Evaporator Standards/Requirements Identification Document (S/RID)			Unclassified Category UC-600		Impact Level N/A
New or novel (patentable) subject matter? ☒ No ☐ Yes If "Yes", has disclosure been submitted by WHC or other company? ☐ No ☐ Yes Disclosure No(s).			Information received from others in confidence, such as proprietary data, trade secrets, and/or inventions? ☒ No ☐ Yes (Identify)		
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CHECKLIST FOR SIGNATORIES					
Review Required per WHC-CM-3-4		Yes	No	Reviewer - Signature Indicates Approval	
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1.0 MANAGEMENT SYSTEMS

INTRODUCTION

The Management Systems Functional Area includes the site management commitment to environmental safety and health (ES&H) policies and controls, to compliance management, development and management of policy and procedures, to occurrence reporting and corrective actions, resource and issue management, and to the self-assessment process.

Effective management systems are required to develop and maintain ES&H controls, ensure adequate guidance and oversight for the implementation of these controls, and maintain a commitment of resources to perform the required ES&H functions. Management systems establish facility and site-wide programs that are typically applicable to all organizations at the facility and site. Management systems provide the policy, commitment, and resources to implement the ES&H programs and to ensure consistent and adequate management oversight.

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1.1 MANAGEMENT AND ADMINISTRATION

The effectiveness of ES&H programs at a facility depend on the visible and expressed commitment by site management to these programs. This commitment should be evident in the establishment of a written and communicated nuclear safety policy, a long-range plan for achieving ES&H goals, clear lines of accountability and responsibility in the organizations, adequate resources to perform the necessary functions, oversight and programs that ensure fitness for duty, adequate performance in monitoring, and tracking of key ES&H issues.

The administration of management systems should demonstrate this commitment to ES&H and should include the sub-elements described below. Each of these sub-elements provides the programmatic controls that should be applied, as appropriate, in the development of the management and administration for each of the other Functional Areas.

1.1.1 Policies

No requirements identified for this subelement.

1.1.2 Organization

No requirements identified for this subelement.

1.1.3 Staffing

No requirements identified for this subelement.

1.1.4 Training and Qualification

Responsibilities for personnel training reside jointly with the Training and Qualification (T&Q) Program and each of the functional areas. While General Employee Training is the responsibility of the T&Q Program, training plans specific to individual functional areas should be established within applicable programs. Training plans should be developed concurrently with organizational descriptions and staffing plans and should include site, program, facility and activity-specific training needs and requirements. Responsible authorities of the various functional areas should interface closely with those in the T&Q Program to coordinate development of training modules and determine how best the various types of training should be accomplished, e.g., what type of training would be most effective, which staff positions would benefit most from additional (non-required) training and which organization should develop and deliver the training.

Formal qualification and/or certification criteria should be established to define the education, experience, capability and training required to perform in a designated job, position or specific task. Medical examination requirements should be defined to specify the health and physical fitness necessary to enable personnel to safely perform their assigned tasks.

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.6.1

"Job qualification requirements are periodically reviewed,evaluated, and revised as necessary."

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1.2

ISSUES MANAGEMENT

PURPOSE

The purpose of this Requirements Identification Document (RID) section is to identify, in one location all of the facility specific requirements and good industry practices which are necessary or important to establish an effective Issues Management Program for the Tank Farm Facility.

SCOPE

Self-assessments, Tiger Team assessments, and other internal and external audits identify numerous issues (problems) which impact the ES&H programs at a facility. Also, internal site or facility generated problems arise and must be dealt with in a systematic manner. An issue management process is necessary to identify the important problems and to effectively focus resources on fixing the most important problems and ensuring the root causes are addressed. The prioritization of issues is essential to insure the problems with the highest ES&H risk are addressed first and to establish which problems can be addressed with the available resources.

Issue management includes the following: capture or identification of issues which require corrective action, identification of root causes and corrective actions, prioritization and resource management, and tracking and closure of corrective actions.

Issues management is often carried out by the top management at a facility or site by the so called "fire drill" approach and by management arbitrary decisions as to the relative importance of problems. A more efficient and logical approach is to appoint representatives at each facility to ensure that issues which are applicable to the facility are evaluated and ranked (prioritized) and provided to a facility or site top management evaluation team for final determination of resource allocations.

At this time, only one DOE Order relates to the evaluation of resources, DOE Order 4320.2, Capital Asset Management Program (CAMP). This order is only applicable to the evaluation of capital assets expenditures for DOE facilities and, therefore, does not apply specifically to issues management. However, it does provide information on one DOE approved method for prioritization of resources. This order does apply to Tank Farm capital asset expenditures, but it is administered at the site level.

Other departments within DOE have developed their own prioritization schemes. DOE-EH has developed its own program for the "Health and Safety 5-Year Plan." This planning process is not codified in a DOE Order as yet. Also, other DOE organizations are in the process of developing their own program for prioritizing issues, action plans and projects.

Currently, the Hanford Site has a risk-based prioritization scheme for prioritization of issues which was developed by WHC and a sub-contractor (TENERA) and promoted by DOE-RL. This scheme is entitled the Priority Planning Grid (PPG) and is applicable to the Tank Farm Facility. Most of the requirements herein are based on the PPG implementation requirements from DOE-RL and good practices identified by INPO documents.

DEFINITIONS

Issue. A problem identified for a facility which could adversely affect the health or safety of persons or the environment, the facility mission accomplishment, or the perception of the

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public regarding the ability of the contractor to operate the site safely, could jeopardize the site investments, business or productivity, or could jeopardize the compliance of the facility with applicable laws, orders and regulations.

Issues do not include any items which can be considered "quick fix" items or are covered under existing budgets such as maintenance.

Capital Asset. A tangible product of value, generally property or equipment, that has an anticipated service life of 2 years or more and a cost equal to or greater than \$5000.

INTERFACES

The Issues Management Program of the Tank Farm Facility interfaces with the site program through the TWRS (Tank Waste Remediation System) IM group or coordinator. Issues are identified at TFF or elsewhere which apply to TFF and are forwarded to TFF by the site corrective action system or through the site and TWRS Issue Management System. Since all of the activities identified for TFF cannot be accomplished with the current resources, the list of issues or activities must be evaluated by the TFF issues management team to place priority on those which are most important (based on risk) and can be accomplished with current resources. Direct interface of the TFF Issues Management Program with other site organizations such as Engineering, should be minimal except to request resources to assist in completion of corrective actions.

1.2.1 **Issue Management Organization**

No requirements identified for this subelement.

1.2.2 **Issue Identification and Capture**

No requirements identified for this subelement.

1.2.3 **Issue Prioritization**

No requirements identified for this subelement.

1.2.4 **Root Cause and Corrective Action Identification and Responsibility**

No requirements identified for this subelement.

1.2.5 **Resource Allocation**

Resource allocation comes about in application of the issue management/risk evaluation process after a set of activities (a project) have been identified to correct a problem identified by an issue. At the completion of the project, the evaluations of the risk may be employed as an initial guide for resource allocation.

In the requirements below, reference is made to the DOE Capital Asset Management Program (CAMP) which applies only to prioritization and allocation of capital assets. If capital assets are needed in conjunction with resolution of an issue, then CAMP could apply to this program; otherwise, it does not specifically apply to issue management.

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SITE REQUIREMENT SOURCE: DOE4320.2 Chapter IV, Section 1

"INTRODUCTION. Consistency throughout the Department in the prioritization, preparation, and submission of capital asset management resource requirements is a key element of CAMP. This consistency will contribute to the validity of the overall DOE budget plan and help justify funding requests to OMB and the Congress. To achieve the desired consistency, sites shall adopt the CAMP prioritization process discussed in this Chapter. The prioritization process is designed to rate and rank each project in the 5-year planning period. The priority lists shall be updated annually. This process shall be used as a tool to help prioritize projects on a sitewide, Field Office, and HQ program basis."

FACILITY REQUIREMENT SOURCE: SAGDR100 Section 5.7

"Five Year Plans: (Environmental Restoration and Waste Management; Safety and Health)

When implemented, self-assessment will result in the continual process of identifying deficiencies, root causes for these deficiencies, and the corresponding corrective actions for both. Many of these corrective actions should be prioritized for funding and scheduling purposes using the 5-year Plan methodologies. These items should be reflected in the Environmental Restoration and Waste Management 5-Year Plan or the Safety and Health 5-Year Plan, which in turn will serve as the vehicle to propose needed funds and also show progress on how funds are expended."

1.2.6

Tracking, Trending, and Verification

No requirements identified for this subelement.

1.3

DOCUMENT CONTROL AND RECORDS MANAGEMENT

Scope Statement

The scope of this Requirements Identification Document (RID) is to establish guidelines, applicable to the Tank Farm Facility, for a Document Control and Records Management System as defined by related DOE Orders, regulations, industry codes and standards, Hanford site specific documents and good industry practices. Defense Nuclear Facilities Board Recommendations 90-2 and 91-1, which require the strengthening of DOE facility activities through the identification and application of relevant standards which supplement or exceed requirements mandated by DOE guidelines will serve as the parent documents to direct the development of this RID.

This document is intended to be used as a baseline to compare the existing Tank Farm Facility Document Control and Records Management Program for a determination of current program completeness and effectiveness. The comparison of the RID and the current Tank Farm Facility programs will allow the determination that an overall Tank Farm Facility Program does exist, that a well established infrastructure has been developed, and interfaces with other relevant programs are clearly defined. The format of the RID, elements and sub-elements, will allow specific and concise definition of the variables that make up a functional area. With a definitive text, supported by DOE requirements, the activities at the Tank Farm Facility can be evaluated to determine if they are in alignment with current established requirements.

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1.3.1

Controls

The DC/RM Process should ensure the control over generation, identification, approval, update/corrections, indexing/filing and receipt/access of records and documents.

1.3.1.1

Organization and Administration

Formal organization of an Document Control and Records Management Program is necessary to ensure adequate and proper control of the preparation, review, approval, issuance, and use of facility policies, decisions, work activities, and essential transactions for future reference.

1.3.1.1.1

Program Policy

A Document Control and Records Management Program policy shall be issued to communicate managements philosophies, standards, goals and expectations regarding the control of facility documents, records, and other facility information. Programmatic controls applicable to the program include: Establishment of standards of excellence for performance and professionalism in the conduct of document Control and Records Management activities; Definition of goals and objectives quantifying management's commitments and expectations for the control of documents and records; and Development of implementing procedures integrating policy statements into a complete, consistent, and auditable set of controls and processes for the control of facility documents, records, and computer software documentation.

SITE REQUIREMENT SOURCE: DOE1324.2A Section 8.c

"Departmental records shall be:

- (1) Created, maintained, and used in an effective, efficient and authorized manner; and
- (2) Routinely disposed of in accordance with procedures in this Order."

SITE REQUIREMENT SOURCE: DOE1324.2A Section 9

"OBJECTIVES. The objectives of the Departmental records management program are to minimize the paperwork and recordkeeping burden in the Department and in the public sector; minimize the cost of records management activities; and, maximize the usefulness of Departmental records. Specific objectives pertaining to records disposition are to:

- a. Establish a system for inventorying, maintaining, and obtaining disposition authority for all Departmental records, including those created and maintained under contractual arrangements by managing and operating contractors and other contractors as specified in their contracts.
- b. Identify and plan for the preservation of records documenting the organization, functions, policies, decisions, procedures, and essential transactions, including records containing evidence or information necessary for the protection of the rights of the Government and individuals.
- c. Develop a planned approach to retire or transfer records no longer required for current activities to lower cost storage with a preference for use of Federal Records Centers over local records holding areas.

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- d. Actively pursue the disposition of records on a regular basis including transfer to lower cost storage, or to the National Archives for permanent records, and timely destruction of records in accordance with authorized dispositions, and to consider the application of technologies such as microfilming in the reduction of records holdings."

SITE REQUIREMENT SOURCE: DOE1324.5A Section 6.c

"Maintain an active continuing program for economical, efficient, and improved management of records."

SITE REQUIREMENT SOURCE: DOE1324.5A Section 8.c(1)

"Regulations implementing Departmental policies, procedures, and guidelines for records management program are developed and issued."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Chapter I, Section A

"The organization and administration of operations should ensure that a high level of performance in DOE facility operations is achieved through effective implementation and control of operations activities. Operations activities should recognize that environment, safety, and productivity are compatible goals. DOE facility policies should describe the philosophy of standards of excellence under which the facility is operated and clear lines of responsibility for normal and emergency conditions are established. Effective implementation and control of operating activities are primarily achieved by establishing written standards in operations, periodically monitoring and assessing performance, and holding personnel accountable for their performance."

SITE REQUIREMENT SOURCE: DOE5480.5 Section 8.j

"A formal documented system for the control and traceability of records and documentation specified herein."

SITE REQUIREMENT SOURCE: DOE5700.6C Attachment 1, Section A.4.b(1)

"Records

A process should be established and implemented to ensure that sufficient records (for example, records of design, environmental conditions, applied research and development, procurement, construction, data acquisition, assessments, inspection, testing, maintenance, and modification) are specified, prepared, reviewed, approved, and maintained to accurately reflect completed work. The maintenance of records should include provisions for retention, protection, preservation, traceability, accountability, and retrievability."

1.3.1.1.2

Responsibilities and Authorities

Formal definition and communication of organization structure, responsibilities, accountabilities, and authorities exists through the application of organization charts, functional organizational descriptions, and job descriptions.

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SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Chapter II, Section 17

"QUALITY ASSURANCE RECORDS Records that furnish documentary evidence of quality shall be specified, prepared, and maintained. Records shall be legible, identifiable, and retrievable. Records shall be protected against damage, deterioration, or loss. Requirements and responsibilities for record transmittal, distribution, retention, maintenance, and disposition shall be established and documented."

SITE REQUIREMENT SOURCE: DOE1324.2A Section 8

"POLICY.

- a. Use of the General Records Schedules, published by the National Archives and Record Administration (NARA) is mandatory. Those schedules, along with internally generated, NARA approved schedules, will be used for disposition of Departmental records.
- b. Managers are accountable for records management programs in their organizations.
- c. Departmental records shall be:
 - (1) Created, maintained, and used in an effective, efficient and authorized manner; and
 - (2) Routinely disposed of in accordance with procedures in this Order."

1.3.1.1.3

Organizational and Programmatic Interfaces

No requirements identified for this subelement.

1.3.1.1.4

Staff Selection and Training Controls

This attribute addresses the personnel selection and training processes necessary for consistent and effective performance of Document Control and Records Management activities. Specific programmatic controls applicable to this attribute include: Definition of criteria for minimum skills and knowledge of personnel responsible for program activities; Definition of content for initial and periodic training conducted under the Training Program to ensure personnel are aware of responsibilities, trained in methods for implementing responsibilities, and are kept aware of new or changed requirements.; Definition of controls to ensure training is systematically updated and conducted for appropriate individuals when changes to facility documents occur; and Establishment of processes for personnel selection and assignment to ensure information management activities are performed by highly qualified personnel.

SITE REQUIREMENT SOURCE: DOE1324.5A Section 8.b(4)

"Ensure that plans are developed and implemented for conducting continuous records management awareness and training to assure that DOE and DOE contractor personnel involved in managing, designing, developing, using, and maintaining records systems are aware of their responsibilities, know how to fulfill them, are kept aware of new requirements, and are trained in techniques to implement them."

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SITE REQUIREMENT SOURCE: DOE1324.5A Section 8.c(3)

"Personnel who participate in managing, designing, developing, operating, or maintaining records systems are trained to a level commensurate with the records management activity performed. Ensuring that employees know that official records may not be removed without authorization is a singularly important training objective."

SITE REQUIREMENT SOURCE: DOE1324.5A Section 8.d(5)

"Reference to a plan for continually providing records management program awareness and training to personnel who manage, design, develop, operate, maintain, or use records management. Plans for on-site personnel should include, as a minimum, training schedule, type of training, personnel attending, and date of attendance."

SITE REQUIREMENT SOURCE: DOE5480.19 Chapter XVI, Section C.1, Paragraph 3

"Procedure preparation, verification, and validation should receive high-level attention. Qualifications for procedure writers should be considered, including operating organization and experience. Review, verification, and validation should be formalized for written and software procedures."

1.3.1.1.5

Implementing Procedures

Written procedures shall be developed and used to specify and document consistent methods for managing and performing activities related to the control and preservation of facility documents and information. Examples of programmatic controls applicable include: Development of written procedures for program activities, such as: document preparation, review, and approval; document availability and protection; document change, revision, and cancellation; record generation and capture; record receipt and indexing; record correction and restoration; record storage, retrieval, and disposition; and document and record access.; Definition of controls to ensure personnel are made aware of and use the correct procedure versions.; and Incorporation of instructions and attachments for the recording of data and information generated during performance of the procedure.

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 17-1, Section 2.5

"Distribution

The records shall be distributed, handled, and controlled in accordance with written procedures."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 17-1, Section 4.1

"Storage

The records shall be stored in predetermined location(s) that meet the requirements of applicable standards, codes, and regulatory agencies.

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Prior to storage of records, a written storage procedure shall be prepared and responsibility assigned for enforcing the requirements of that procedure. This procedure shall include, as a minimum, (a) through (g) below:

- (a) a description of the storage facility;
- (b) the filing system to be used;
- (c) a method for verifying that the records received are in agreement with the transmittal document and that the records are legible;
- (d) a method of verifying that the records are those designated (see para. 3.2 above);
- (e) the rules governing access to and control of the files;
- (f) a method for maintaining control of and accountability for records removed from the storage facility;
- (g) a method for filing supplemental information (see para. 2.9 above) and disposing of superseded records."

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.7.4

"Instructions to the staff are kept current, and superseded or voided documents are removed from use."

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.7.7

"Policies and procedures specifying adequate controls over safety-related documents are in place and followed."

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.7.9

"A system is in place that assures safety-related documents are maintained in accordance with policies and procedures."

SITE REQUIREMENT SOURCE: DOE/EH0135 OP.3.11

"Procedures are readily available and clearly identified."

SITE REQUIREMENT SOURCE: DOE/EH0135 TS.2.12

"Procedures and documents require that adequate records are maintained on a timely basis for support services performed at each facility on the site."

SITE REQUIREMENT SOURCE: DOE1324.5A Section 8.c(1)

"Regulations implementing Departmental policies, procedures, and guidelines for records management program are developed and issued."

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1.3.1.1.6

Documents to be Controlled and Retained

The organization and administration of the Document Control and Records Management Program requires the identification of documents to be controlled to preclude the use of outdated or inappropriate information and to be retained for future retrieval. Programmatic controls include: Definition of criteria and processes for identification of important documents (paper copies, data on electronic media, or other sources of information), such as documents that: establish policies, prescribe work, specify requirements, or establish design; are used to design or operate a facility or make sound technical decisions; provide documentary evidence of events and support emergency response activities; prepare, review, approve, issue, and change other controlled documents; generate, capture, receive, index, store, retrieve, correct, restore, or disposition records; provide documentation and traceability of OSR administrative controls; provide personnel work, health, occupational safety, training, or qualification history; reflect or utilize facility configuration information; and are essential for continued operation of an organization (vital records).; Definition of criteria and processes for identification of new documents in sufficient time to prevent unauthorized change, loss, or use.; Definition of processes for development, maintenance, and control of lists of documents to be controlled and retained.

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Chapter II, Section 17

"QUALITY ASSURANCE RECORDS

Records that furnish documentary evidence of quality shall be specified, prepared, and maintained. Records shall be legible, identifiable, and retrievable. Records shall be protected against damage, deterioration, or loss. Requirements and responsibilities for record transmittal, distribution, retention, maintenance, and disposition shall be established and documented."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Chapter II, Section 6

"DOCUMENT CONTROL

The preparation, issue, and change of documents that specify quality requirements or prescribe activities affecting quality shall be controlled to assure that correct documents are being employed. Such documents, including changes thereto, shall be reviewed for adequacy and approved for release by authorized personnel."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 6S-1, Section 1

"GENERAL

This Supplement provides amplified requirements for a document control system. It supplements the requirements of Basic Requirement 6 of this Standard and shall be used in conjunction with that Basic Requirement when and to the extent specified by the organization invoking this Standard.

The documents which shall be controlled in accordance with this Supplement are only those documents which specify quality requirements or prescribe activities affecting quality such as instructions, procedures, and drawings.

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The term "document control" used throughout this Supplement is defined as the act of assuring that documents are reviewed for adequacy, approved for release by authorized personnel, and distributed to and used at the location where the prescribed activity is performed."

SITE REQUIREMENT SOURCE: DOE/EH0135 RP.3 PROCEDURES.8

"8. The procedures, standards and controls program elements are maintained in a centralized historical file. There is a designated period of time that such files must be maintained."

SITE REQUIREMENT SOURCE: DOE1324.2A Section 9.b

"Identify and plan for the preservation of records documenting the organization, functions, policies, decisions, procedures, and essential transactions, including records containing evidence or information necessary for the protection of the rights of the Government and individuals."

SITE REQUIREMENT SOURCE: DOE1324.6 Section 12.b

"Determine whether or not an electronic document is a record in sufficient time to prevent unauthorized erasure or change."

SITE REQUIREMENT SOURCE: DOE5500.7B Section 11.c

"Disposition of Records. Emergency Operating Records shall be maintained until they are superseded or replaced. Once superseded, these records revert to standard records disposition requirements."

SITE REQUIREMENT SOURCE: DOE5700.6C Attachment 1, Section A.4.a(2)

"The scope of the document control system should be defined. Examples of documents to be controlled include drawings, data files (including various media), calculations, specifications, computer codes, purchase orders and related documents, vendor-supplied documents, procedures, work instructions, operator aids, and data sheets."

SITE REQUIREMENT SOURCE: DOE5700.6C Section 9.b(1)(d)

"Criterion 4 - Documents and Records Documents shall be prepared, reviewed, approved, issued, used, and revised to prescribe processes, specify requirements, or establish design. Records shall be specified, prepared, reviewed, approved, and maintained."

1.3.1.2

Document Preparation, Review, and Approval

This element provides controls for document preparation, review, and approval to ensure accurate, complete, and usable documents are provided for use in management, performance, and support of facility operations.

1.3.1.2.1

Controls for Document Preparation

Controls and processes shall be developed for the preparation of controlled documents prior to their need for performance of facility activities. Programmatic controls specific to this subelement include: Definition of controls and processes for the preparation of each type of

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document, such as: document format and content; processes for integrating requirements, facility configuration, interfaces, and responsibilities to ensure accuracy, completeness, consistency, and usability; establishment of systems to clearly and uniquely identify each controlled document; and establishment of standard terminology for facility locations, systems, equipment, job positions, and work groups.

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 17-1, Section 2.2

"Generation of Records

The applicable design specifications, procurement documents, test procedures, operational procedures, or other documents shall specify the records to be generated, supplied, or maintained by or for the Owner. Documents that are designated to become records shall be legible, accurate, and completed appropriate to the work accomplished."

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.7.3

"Preparation, review, approval, and distribution for use of documents originated within the site or facility are properly controlled and timely."

SITE REQUIREMENT SOURCE: DOE/EH0135 TS.2.8

"The preparation, review, approval, and revision of procedures and documents are properly controlled and performed in a timely manner. Copies of the latest version are distributed promptly to all affected users."

SITE REQUIREMENT SOURCE: DOE5480.19 Chapter XVI, Section C.1, Paragraph 3

"Procedure preparation, verification, and validation should receive high-level attention. Qualifications for procedure writers should be considered, including operating organization and experience. Review, verification, and validation should be formalized for written and software procedures."

SITE REQUIREMENT SOURCE: DOE5700.6C Section 9.b(1)(d)

"Criterion 4 - Documents and Records Documents shall be prepared, reviewed, approved, issued, used, and revised to prescribe processes, specify requirements, or establish design. Records shall be specified, prepared, reviewed, approved, and maintained."

1.3.1.2.2

Controls for Document Review

Controls shall be provided for the review for adequacy of controlled documents prior to the approval and release for use. Adequacy of these documents shall be ensured through the use of a documented process as well as performance of reviews by qualified and independent personnel. Examples of programmatic controls that are applicable include:

- Criteria shall be established for initiating reviews of:

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New documents;
Changes and revisions to correct deficiencies;
Unusual incidents, errors, or other problems to prevent recurrence or mitigate consequences of recurrence;
Facility modifications;
Unreviewed safety question determination.
Access by reviewers to pertinent background information upon which to base the review.

- Definition of review criteria for new and revised documents, such as to verify:

- Applicability;
- Correctness;
- Completeness;
- Conformance with established requirements;
- Incorporation of appropriate human factors considerations.

- Definition of criteria and processes for review by an authorized classifier when it is reasonable to expect that a document includes classified information.

- Definition of controls ensuring review of document revisions to the same depth as the initial version.

- Identification of technical discipline, safety, quality, and other reviewers appropriate to the type of document.

- Definition of processes for review of documents received from vendors and other offsite sources.

- Definition of a documented process for collecting and resolving review comments prior to approval and issuance.

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 4.2

"Technical Review. The initial technical review of documents affecting plant operation such as operating, maintenance and test procedures should be performed within the originating department or organization. The purpose of this review is to ensure technical accuracy and to verify the originator's determination if the document constitutes a change to the Technical Specifications or an unreviewed safety question in accordance with 10 CFR 50.59 [2]. The reviewers should be other than the individuals who proposed the material to be reviewed. A review of the work by the preparers' supervisor may be considered a technical review provided all the requirements of this section are satisfied. The technical review is the first step in the formal review process. The reviewer shall determine if additional cross-disciplinary review is required to ensure all applicable technical disciplines are included. Conflicts that may develop between the reviewers and the originator shall be resolved prior to approval. Successful completion of the review shall be documented by the reviewer's signature on the original document."

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 1

"Review, Approval and Control of Documents. The administrative controls and quality assurance program shall control and coordinate the approval, issuance, and revision of documents which prescribe all activities affecting quality. Such documents include those which

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describe organizational interfaces, or which prescribe activities affecting structures, systems, or components. These documents also include administrative procedures and special orders, operating procedures, emergency operating and off-normal procedures, emergency plan implementing procedures, test procedures, equipment control procedures, maintenance or modification procedures, radiation control procedures, chemistry procedures, refueling procedures, and material control procedures. Documents, including revisions or changes, shall be reviewed for adequacy by appropriately qualified personnel. This review shall ensure that documents fully implement all requirements of the facility license. Particular emphasis should be placed on ensuring that previous regulatory commitments continue to be met. Documents shall be approved for release by authorized personnel and shall be distributed in accordance with current distribution lists and used by the personnel performing the prescribed activity. The use of out-dated or inappropriate documents shall be avoided. In addition, to ensure that the procedures in current use provide the best possible instructions for performance of the work involved, systematic feed-back and review of information based on actual use of the procedures shall be performed."

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 2

"Each procedure shall be reviewed and approved prior to initial use. Plant procedures shall be reviewed by an individual(s) knowledgeable in the aspects of the technical content and of human factors affected by the procedure within six months following startup after the first refueling outage of the unit to determine if changes are necessary or desirable. Applicable procedures shall also be reviewed following an unusual incident, such as an accident, an unexpected transient, significant operator error, or equipment malfunction, or following any modification to a system."

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 5

"Plant procedures shall be approved by the owner organization before initial use. Rules shall be established which provide for interdisciplinary review of procedures by knowledgeable personnel other than the originator and the approval of procedures and procedure changes by authorized individuals."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Chapter II, Section 6

"DOCUMENT CONTROL

The preparation, issue, and change of documents that specify quality requirements or prescribe activities affecting quality shall be controlled to assure that correct documents are being employed. Such documents, including changes thereto, shall be reviewed for adequacy and approved for release by authorized personnel."

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.7.2

"Receipt, review, and distribution of documents from sources outside the site of facility are properly controlled."

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.7.3

"Preparation, review, approval, and distribution for use of documents originated within the site or facility are properly controlled and timely."

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SITE REQUIREMENT SOURCE: DOE/EH0135 TS.2.8

"The preparation, review, approval, and revision of procedures and documents are properly controlled and performed in a timely manner. Copies of the latest version are distributed promptly to all affected users."

SITE REQUIREMENT SOURCE: DOE5480.19 Chapter XVI, Section C.1, Paragraph 3

"Procedure preparation, verification, and validation should receive high-level attention. Qualifications for procedure writers should be considered, including operating organization and experience. Review, verification, and validation should be formalized for written and software procedures."

SITE REQUIREMENT SOURCE: DOE5480.19 Chapter XVI, Section C.3.g

"The review process should involve verification and validation of the procedure using walkthroughs or similar methods."

SITE REQUIREMENT SOURCE: DOE5480.19 Chapter XVI, Section C.4, Paragraph 1

"Operating procedures should be approved by the operations supervisor. In addition, procedures that affect safety-related equipment and emergency procedures should be reviewed by the facility safety review committee or by another appropriate review mechanism. Procedure revisions should receive the same depth of review and level of approval as the initial versions. New and revised procedures should be approved prior to use."

SITE REQUIREMENT SOURCE: DOE5480.19 Chapter XVI, Section C.5

"New and revised operations procedures should be reviewed prior to issuance and at periodic intervals to ensure that the information and instructions are technically accurate and that appropriate human-factor considerations have been included. The frequency of subsequent reviews should be specified; it may vary with the type and complexity of the activity involved and with time as a given plant reaches operational maturity. Applicable procedures should be reviewed after an unusual incident (such as an accident, an unexpected transient, significant operator error, or equipment malfunction). During reviews, procedures should be compared to source documents to verify their accuracy. In addition, new procedures should be validated by walkthroughs in the facility or by operation on a facility-specific simulator to ensure workability."

1.3.1.2.3

Controls for Document Approval

Controls shall be provided governing the approval for release of controlled documents prior to their need for the performance of facility activities. The approval process ensures authorized and responsible management concurs that the document is adequately prepared and reviewed and is aware of and concurs with the release of the document for use. Programmatic controls include: Definition of the approval process for each type of document; and Approval of documents for release after completion of review and resolution of comments.

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SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 1

"Review, Approval and Control of Documents. The administrative controls and quality assurance program shall control and coordinate the approval, issuance, and revision of documents which prescribe all activities affecting quality. Such documents include those which describe organizational interfaces, or which prescribe activities affecting structures, systems, or components. These documents also include administrative procedures and special orders, operating procedures, emergency operating and off-normal procedures, emergency plan implementing procedures, test procedures, equipment control procedures, maintenance or modification procedures, radiation control procedures, chemistry procedures, refueling procedures, and material control procedures. Documents, including revisions or changes, shall be reviewed for adequacy by appropriately qualified personnel. This review shall ensure that documents fully implement all requirements of the facility license. Particular emphasis should be placed on ensuring that previous regulatory commitments continue to be met. Documents shall be approved for release by authorized personnel and shall be distributed in accordance with current distribution lists and used by the personnel performing the prescribed activity. The use of out-dated or inappropriate documents shall be avoided. In addition, to ensure that the procedures in current use provide the best possible instructions for performance of the work involved, systematic feed-back and review of information based on actual use of the procedures shall be performed."

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 5

"Plant procedures shall be approved by the owner organization before initial use. Rules shall be established which provide for interdisciplinary review of procedures by knowledgeable personnel other than the originator and the approval of procedures and procedure changes by authorized individuals."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Chapter II, Section 6

"DOCUMENT CONTROL

The preparation, issue, and change of documents that specify quality requirements or prescribe activities affecting quality shall be controlled to assure that correct documents are being employed. Such documents, including changes thereto, shall be reviewed for adequacy and approved for release by authorized personnel."

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.7.3

"Preparation, review, approval, and distribution for use of documents originated within the site or facility are properly controlled and timely."

SITE REQUIREMENT SOURCE: DOE/EH0135 TS.2.8

"The preparation, review, approval, and revision of procedures and documents are properly controlled and performed in a timely manner. Copies of the latest version are distributed promptly to all affected users."

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SITE REQUIREMENT SOURCE: DOE5480.19 Chapter XVI, Section C.4, Paragraph 1

"Operating procedures should be approved by the operations supervisor. In addition, procedures that affect safety-related equipment and emergency procedures should be reviewed by the facility safety review committee or by another appropriate review mechanism. Procedure revisions should receive the same depth of review and level of approval as the initial versions. New and revised procedures should be approved prior to use."

1.3.1.3

Availability and Protection

In order to ensure current documents are available for use to perform facility activities controls shall be established for issuance and distribution. Controls are also specified to ensure that documents are protected from unauthorized access and change.

1.3.1.3.1

Controls for Document Issuance, Distribution, and Removal from Use

Controls shall be provided for the prompt issuance and distribution of documents prepared onsite or received from offsite sources to ensure current and appropriate documents are available at work locations prior to the commencement of work. Applicable programmatic controls include:

● Establishment of criteria and processes for:

- Preparation and maintenance of document distribution lists. Issuance of work and information documents.
- Verification that current and correct documents have been provided for use.
- Definitions of controls for establishment and maintenance of tracking data base for issued controlled documents containing document identification and status information, such as:

Title
Number
Revision
Owning organization
Change notice identification and status.

- Establish controls for acknowledgement of document receipt and instructions for disposing of superseded or canceled documents.

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.7.2

"Receipt, review, and distribution of documents from sources outside the site of facility are properly controlled."

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.7.3

"Preparation, review, approval, and distribution for use of documents originated within the site or facility are properly controlled and timely."

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SITE REQUIREMENT SOURCE: DOE/EH0135 OA.7.4

"Instructions to the staff are kept current, and superseded or voided documents are removed from use."

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.7.5

"Necessary documents are readily available at appropriate locations in the facility and on the site."

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.7.6

"Instructions and other documents are properly stored and readily retrievable."

SITE REQUIREMENT SOURCE: DOE/EH0135 OP.3.11

"Procedures are readily available and clearly identified."

SITE REQUIREMENT SOURCE: DOE/EH0135 OP.3.12

"Documents, drawings, and other operator references are readily available, authorized, and properly controlled."

SITE REQUIREMENT SOURCE: DOE/EH0135 TS.2.8

"The preparation, review, approval, and revision of procedures and documents are properly controlled and performed in a timely manner. Copies of the latest version are distributed promptly to all affected users."

SITE REQUIREMENT SOURCE: DOE/EH0135 TS.2.9

"Up-to-date versions of procedures, manuals, and reference materials such as technical documents, drawings, and data sheets, are readily available, clearly identified, and technically accurate."

SITE REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter VIII, Section C.10

"Distribution and Control of Equipment and System Documents. A system should be established to ensure that the operations personnel receive and utilize the latest revisions of engineering drawings and specifications. Operations personnel should be made aware of all changes to these documents. The document distribution should include all operations related activities such as procedures review groups, maintenance groups, facility safety analysis groups, and testing groups."

SITE REQUIREMENT SOURCE: DOE5480.19 Chapter XVI, Section C.6, Paragraph 1

"A controlled copy of all operations procedures should be maintained in the control area for operator reference, and selected controlled procedures should be maintained at other

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appropriate locations. For example, controlled procedures for facility shutdown from outside the control area should be maintained at the remote shutdown location(s). It may be desirable to have procedures for routine evolutions available at local work stations."

SITE REQUIREMENT SOURCE: DOE5480.19 Chapter XVI, Section C.6, Paragraph 2

"Working copies of controlled procedures should be available for use during evolutions. However, since these documents have only a limited lifespan, working copies should be controlled and a system should be in place to ensure that outdated procedures are not used by mistake and that working copies are replaced according to approved procedures. For example, uncontrolled working copies could be verified by comparison to a controlled copy prior to use.

SITE REQUIREMENT SOURCE: DOE5480.19 Chapter XVI, Section C.6, Paragraph 3

"Controlled annunciator response procedure information should be easily accessible to the operators responsible for responding to alarms. Some facilities can provide annunciator response procedures at local control panels. If this is not done, annunciator response procedures should be provided at an alternate location convenient to the equipment operator."

SITE REQUIREMENT SOURCE: DOE5700.6C Attachment 1, Section A.4.a(4)

"Controlled documents should be distributed to and used by personnel performing work."

SITE REQUIREMENT SOURCE: DOE5700.6C Attachment 1, Section A.4.a(5)

"Control of superseded and canceled documents should include measures to ensure that only correct documents are in use. Record copies should be marked "superseded" or "canceled" and kept for a specified retention period."

1.3.1.3.2

Controls for Library Services

No requirements identified for this subelement.

1.3.1.3.3

Controls for Protection of Controlled Information

No requirements identified for this subelement.

1.3.1.3.4

Measures for Protecting Document Master Copies

Files shall be established with appropriate access, security, and design provisions to provide protection and retrievability of master copies of controlled documents. Controls shall be defined and implemented to prevent loss, damage, deterioration, or unauthorized changes to master copies.

SITE REQUIREMENT SOURCE: DOE5480.CM Chapter 1 Section 3.4.2(3)(b)

"A secure file of the original document master copies shall be established and retained with non-master copies distributed in accordance with the Controlled Document Distribution List.

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Appropriate access and security precautions should be established to ensure that the document master file is adequately controlled and maintained current."

1.3.1.4

Document Change Control

This element contains attributes which provide for control of document change and cancellation. The Document Control and Records Management Program establishes controls to ensure deficient documents are not used and proper review and approval of changes are obtained.

1.3.1.4.1

Controls for Document Changes

If a document deficiency is identified, a change shall be promptly initiated and processed. Controls shall be defined for review, approval, and issuance of changes based on the type of change and the urgency of its need. The change process shall be controlled to permit changes that are needed but prevent those that are inappropriate.

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 6

"Changes to documents shall be reviewed and approved by the same organizations that perform the original review and approval unless the owner organization designates another qualified organization."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 6S-1, Section 3

"DOCUMENT CHANGES

3.1 Major Changes

Changes to documents, other than those defined as minor changes in para. 3.2 below, are considered as major changes and shall be reviewed and approved by the same organizations that performed the original review and approval unless other organizations are specifically designated. The reviewing organization shall have access to pertinent background data or information upon which to base their approval.

3.2 Minor Changes

Minor changes to documents, such as inconsequential editorial corrections, shall not require that the revised documents receive the same review and approval as the original documents. To avoid a possible omission of a required review, the type of minor changes that do not require review, the type of minor changes that do not require such a review and approval and the persons who can authorize such a decision shall be clearly delineated."

SITE REQUIREMENT SOURCE: DOE5480.19 Chapter XVI, Section C.4, Paragraph 1

"Operating procedures should be approved by the operations supervisor. In addition, procedures that affect safety-related equipment and emergency procedures should be reviewed by the facility safety review committee or by another appropriate review mechanism. Procedure revisions should receive the same depth of review and level of approval as the initial

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versions. New and revised procedures should be approved prior to use."

SITE REQUIREMENT SOURCE: DOE5700.6C Attachment 1, Section A.4.a(3)

"Revisions to controlled documents should be reviewed and approved by the organization that originally reviewed and approved the documents. An alternative organization may be designated based on technical competence and capability. Timeliness guidelines should be implemented for distribution of new or revised controlled documents."

1.3.2

Storage

Storage controls should specify conditions and facilities necessary for active, semiactive and inactive records and documents and the transfer requirements to the Federal Records Center.

1.3.2.1

Records Storage, Retrieval, and Disposition

This element provides the controls to ensure the availability of records for future reference. Controls are also provided to ensure resources are not used to retain records beyond the expiration date of their retention period.

1.3.2.1.1

Controls and Facilities for Records Storage

The Document Control and Records Management Program shall include controls for the storage of both classified and unclassified records in predetermined locations where the records can be retrieved on a timely basis and are protected from loss, damage, deterioration, and unauthorized access.

Programmatic areas that pertain to records storage include: Design, construction, operation, and maintenance of records storage facilities.

Processes for determination of proper storage location for records: i.e., storage at local filing station or at as centralized facility.

Provisions for duplicate storage at sufficiently separated locations to preclude exposure to simultaneous hazards.

Controls to preclude the entry of unauthorized personnel and prevent record damage or loss due to larceny or vandalism.

Provisions for periodic review of records to determine if the records have suffered deterioration.

Determination of record volumes to understand future storage needs.

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 17-1, Section 4.1

"Storage

The records shall be stored in predetermined location(s) that meet the requirements of applicable standards, codes, and regulatory agencies.

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Prior to storage of records, a written storage procedure shall be prepared and responsibility assigned for enforcing the requirements of that procedure. This procedure shall include, as a minimum, (a) through (g) below:

- (a) a description of the storage facility;
- (b) the filing system to be used;
- (c) a method for verifying that the records received are in agreement with the transmittal document and that the records are legible;
- (d) a method of verifying that the records are those designated (see para. 3.2 above);
- (e) the rules governing access to and control of the files;
- (f) a method for maintaining control of and accountability for records removed from the storage facility;
- (g) a method for filing supplemental information (see para. 2.9 above) and disposing of superseded records."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 17-1, Section 4.2

"Preservation

Records shall be stored in a manner approved by the organization or organizations responsible for storage. In order to preclude deterioration of the records, the requirements of (a) through (c) below shall apply.

- (a) Provisions shall be made in the storage arrangement to prevent damage from moisture, temperature, and pressure.
- (b) Records shall be firmly attached in binders or placed in folders or envelopes for storage in steel file cabinets or on shelving in containers.
- (c) Provisions shall be made for special processed records (such as radiographs, photographs, negatives, microform, and magnetic media) to prevent damage from excessive light, stacking, electromagnetic fields, temperature, and humidity."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 17-1, Section 4.4.0

"Facility

Records shall be stored in facilities constructed and maintained in a manner which minimizes the risk of damage or destruction from the following:

- (a) natural disasters such as winds, floods, or fires;
- (b) environmental conditions such as high and low temperatures and humidity;

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(c) infestation of insects, mold, or rodents.

There are two satisfactory methods of providing storage facilities, single or dual."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 17-1, Section 4.4.1

"Single Facility. Design and construction of a single record storage facility shall meet the criteria of (a) through (i) below:

- (a) reinforced concrete, concrete block, masonry, or equal construction;
- (b) floor and roof with drainage control. If a floor drain is provided, a check valve (or equal) shall be included.
- (c) doors, structure and frames, and hardware shall be designed to comply with the requirements of a minimum 2 hr fire rating;
- (d) sealant applied over walls as a moisture or condensation barrier;
- (e) surface sealant on floor providing a hard wear surface to minimize concrete dusting;
- (f) foundation sealant and provisions for drainage;
- (g) forced air circulation with filter system;
- (h) fire protection system;
- (i) only those penetrations used exclusively for fire protection, communication, lighting, or temperature/humidity control are allowed; all such penetrations shall be sealed or dampered to comply with the minimum 2 hr fire protection rating.

The construction details shall be reviewed for adequacy of protection of contents by a person who is competent in the technical field of fire protection and fire extinguishing.

If the facility is located within a building or structure, the environment and construction of that building can provide a portion or all of these criteria."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 17-1, Section 4.4.2

"Alternate Single Facilities. The following are acceptable alternatives to the criteria of para. 4.4.1 above for a single facility:

- (a) 2 hr fire rated vault meeting NFPA 232-1986 or NFPA 232AM-1986 or both; < 1 >
- (b) 2 hr fire rated Class B file containers meeting the requirements of NFPA 232-1986 or NFPA 232AM-1986 or both; < 1 > or
- (c) 2 hr fire rated file room meeting the requirements of NFPA 232-1986 or NFPA 232-AM-1986 or both < 1 > with the following additional provisions;

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- (1) early warning fire detection and automatic fire suppression capability with electronic supervision at a constantly attended central station;
- (2) records storage in fully enclosed metal cabinets;
- (3) adequate access and aisle ways;
- (4) prohibition in the room of work not directly associated with record storage or retrieval;
- (5) prohibition in the room of smoking, eating, or drinking;
- (6) 2 hr fire rated dampers or doors in all boundary penetrations.

< 1 > NFPA 232-1986 and NFPA 232AM-1986 are published by the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 17-1, Section 4.4.3

"Temporary Storage. When temporary storage of records (such as for processing, review, or use) is required by an organization's procedures, the records shall be stored in a 1 hr fire rated container. The procedures shall specify the maximum allowable time limit for temporary storage. The container shall bear a UL label (or equivalent) certifying 1 hr fire protection or be certified by a person competent in the technical field of fire protection."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 17-1, Section 4.4.4

"Dual Facilities. If storage at dual facilities for each record is provided, the facilities shall be at locations sufficiently remote from each other to eliminate the chance of exposure to a simultaneous hazard. Each facility is not required to satisfy the requirements of either para. 4.4.1 or para. 4.4.2 above, but shall meet the other requirements of this Standard."

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.7.8

"Vital records are stored in fire proof vaults."

SITE REQUIREMENT SOURCE: DOE1324.5A Section 8.b(5)

"Ensure that all records, especially those having lengthy retention requirements, are provided protection in accordance with requirements to preserve them free of environmental agents or accidents that may cause deterioration or loss"

SITE REQUIREMENT SOURCE: DOE1324.5A Section 8.b(8)

"Ensure that records storage facilities meet requirements of NARA as provided in 36 CFR 1228.222."

SITE REQUIREMENT SOURCE: DOE1324.6 Section 15

"RECORDS PROTECTION, PRESERVATION, AND ACCESS RESTRICTION. Special

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precautions may need to be taken to ensure the safekeeping of electronically stored data. Before establishing safeguards, the sensitivity of the data should be determined, vulnerabilities identified, and the degree of risk considered. A primary method for identifying and determining the most cost-effective means of protecting such data is through risk assessment, i.e., an orderly process through which potential adverse events can be identified, evaluated, and controlled so as to minimize loss or harm to informational assets. Also, the following items need to be considered:

- a. The desirability of retaining a duplicate copy of data (records) as a backup in the event that a recovery should be necessary. Backup copies should be stored in a different area to prevent possible destruction by the same source that destroyed the originals. The organization that supplies software (e.g., application packages) must be consulted to ensure compliance with copyright provisions before any software can be copied.
- b. The necessity for requiring physical security, i.e., limiting physical access to the hardware, assuring fire protection, maintaining an inventory, prohibiting smoking, drinking, or eating near the hardware.
- c. Procedures for using the equipment and records may need to be examined to ensure that only authorized persons have access. Provisions of the Privacy Act require the protection of sensitive information. The use of passwords is one technical method of minimizing the possibility of unauthorized access. However, passwords must be adequately protected.
- d. Further protection may be afforded the data by using encryption equipment or software that can either transmit or store data in encoded form.
- e. Unclassified, sensitive electronic records shall not be processed without the express written approval of the Computer Protection Program Manager in accordance with DOE 1360.2, page 5, paragraph 6c(1), which states: "For new or significantly changed sensitive computer applications, protection specifications must be reviewed and approved in writing by the Computer Protection Program Manager prior to commencing acquisition or programming action." Consult him or her also for any specific requirements for processing unclassified data applications, e.g., color coded or specifically marked diskettes. In the Computer Protection Program Manager must certify "That new or significantly changed sensitive computer applications are designed reviewed and system tested prior to operational use... Upon successful completion of the system test, the Computer Protection Program Manager shall certify that the system meets the documented and approved system protection specifications; related applicable Federal policies, regulations, and standards; and that the results of the test demonstrate that the protection provisions are adequate to safeguard the sensitive data processed."

SITE REQUIREMENT SOURCE: DOE5700.6C Attachment 1, Section A.4.a(5)

"Control of superseded and canceled documents should include measures to ensure that only correct documents are in use. Record copies should be marked "superseded" or "canceled" and kept for a specified retention period."

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SITE REQUIREMENT SOURCE: DOE5700.6C Attachment 1, Section A.4.b(2)

"For records that require special processing and control, such as computer codes or information on high density media or optical disks, hardware and software required to maintain and access records should be controlled to ensure records are useable."

SITE REQUIREMENT SOURCE: DOE5700.6C Attachment 1, Section A.4.b(3)

"Records holding facilities are reserved for storage of inactive records and may not meet the physical requirements or have appropriate staff to maintain active records. Active records requiring special handling, storage, and processing should not be sent to records holding facilities. Users should refer to the General Records Schedule (GRS) or DOE 1324.2A for retention and disposition of records."

1.3.2.1.2

Controls for Records Retrieval

Specific controls shall be in place to ensure efficient and effective records retrieval. Systems should be in place that allow for rapid record retrieval that support the need for record review by the records importance level.

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 17-1, Section 5

"RETRIEVAL

Storage systems shall provide for retrieval of information in accordance with planned retrieval times based upon the record type.

A list shall be maintained designating those personnel who shall have access to the files. Records maintained by a Supplier at his facility or other location shall be accessible to the Purchaser or his designated alternate, e.g., the Owner."

SITE REQUIREMENT SOURCE: DOE1324.6 Section 11.a

"RETRIEVING ELECTRONICALLY STORED RECORDS.

Personnel should be able to easily retrieve electronically stored records until their authorized disposition. This requirement is important when an automated system is upgraded or replaced with a new one. Records stored on the old system should be converted or the new system should be designed so that the records continue to be usable until their authorized disposition date. One possibility is to design systems that are compatible with a variety of other systems. An alternative is to contract with a commercial service that will convert records from one format to another."

SITE REQUIREMENT SOURCE: DOE1324.6 Section 9

"LABELING REQUIREMENTS.

- a. To retrieve information created and stored electronically, the user is dependent upon external and internal labels. Accurate and complete labels are essential for two major reasons: to ensure that personnel identify the contents of individual disks and

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diskettes, and that they can retrieve the information stored on them. Inadequate labels complicate the process of identifying the contents of disks or diskettes. Labels such as "Smith" or "Jane 3" do not supply the user with any identification of the disk's contents.

- b. Personnel shall provide accurate and specific external labels for disks and diskettes. External labels shall include: title, dates, software, and file code and identification of the equipment on which the records were created. NOTE: For security purposes, it may be necessary to keep external labels physically separate from the media. In those cases, a cross reference to the external labels should be on the disks and diskettes.
- c. Personnel also shall use readily understandable and standard internal document labels so that they, their colleagues, and their successors can retrieve electronically stored information."

1.3.2.1.3

Authorized Records Disposition

Destruction of records shall be authorized and documented in accordance with approved procedure. Records should be disposed of after the required retention period has expired and the proper approval authorization has been obtained.

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 17-1, Section 6

"DISPOSITION

Records accumulated at various locations, prior to transfer, shall be made accessible to the Owner directly or through the procuring organization. The custodian shall inventory the submittals, acknowledge receipt, and process these records in accordance with this Standard.

Various regulatory agencies have requirements concerning records that are within the scope of this Standard. The most stringent requirements shall be used in determining the final disposition.

The Supplier's nonpermanent records shall not be disposed of until the applicable conditions listed in (a) through (e) below are satisfied:

- (a) items are released for shipment, a Code Data Report is signed, or a Code Symbol Stamp is affixed;
- (b) regulatory requirements are satisfied;
- (c) operational status permits;
- (d) warranty consideration is satisfied;
- (e) Purchaser's requirements are satisfied."

SITE REQUIREMENT SOURCE: DOE1324.2A Chapter I, Section 3

"IDENTIFY OR OBTAIN DISPOSITION AUTHORITY.

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The completed inventory is reviewed to determine the proper disposition authority for each filing series. The files described will fall into one of the following categories:

- a. Nonrecord material. This is disposed of when no longer needed.
- b. Record material covered by the GRS or Department of Energy Records Schedule (DOERS). Filing series descriptions are compared to the item descriptions in the schedules. Where they match closely enough to determine coverage, the schedule and item number, are indicated in block 7 of DOE F 1324.10.
- c. Record material not covered by existing schedules.
 - (1) Two situations are possible:
 - (a) The filing series description simply cannot be matched against any of the descriptions in the schedules, or
 - (b) They can be matched but the creator or holder of the records does not agree with the authorized disposition of those schedules.
 - (2) In either case, DOE F 1324.5, "Request for Records Disposition Authorization," must be completed and submitted through the appropriate records officers to AD-242."

SITE REQUIREMENT SOURCE: DOE1324.2A Chapter I, Section 5

"DISPOSITION ACTIONS. Disposition actions include removing noncurrent files from high-cost office space to local records holding areas and/or direct to the servicing Federal Records Center; destroying records authorized under appropriate schedules; or transferring them to the National Archives for permanent retention. The transfer of records is a local decision the timing of which is established during the inventory process. If office files are infrequently used after a certain amount of time (1, 2 or 3 years, for example), they are to be transferred at that time. This information is used in making up the disposition portion of the annual records management plan. (See Chapter IV, which discusses transfer of records to the Federal Records Centers.)"

SITE REQUIREMENT SOURCE: DOE1324.2A Chapter I, Section 6

"OTHER CONSIDERATIONS.

- a. Automatic Data Processing (ADP)/Electronic Records. ADP/electronic, machine-readable information is included in the statutory definition of records. Such records are described separately from hard copy records. This is done by entering a separate subitem on the DOE F 1324.10 to show the filing series is also in an electronic media (e.g., tape or disc). As long as they generally duplicate hard copy records, they have the same disposition. However, they are inventoried separately and their disposition is to be shown.
- b. Micrographics. This includes those means of reducing the size of hard copy records, such as microfiche and microfilm. There are instances when reducing records by these means is a sound course of action. Each such project of significant size requires a cost-benefit study to assure the project is clearly to the advantage of the Government when purchase of a micrographic system is contemplated. These copies have to be

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adequate substitutes for the hard copies they are replacing, and be readable and usable for the approved retention period of those hard copy records. Note that approval of NARA is required if the project involves microfilming of permanent records. Local approval is permitted for temporary records. Once quality control checks are completed on the films, the hard copy records should be disposed of.

- c. **Classified Records Disposal.** Classified documents (records) are scheduled just like unclassified records. While accountability for Secret and Top Secret records is required, the protection of all classified records (including Confidential records) involves high costs in manpower, space, and filing equipment. The disposition of accountable documents involves special effort because of security requirements. Vigorous efforts are to be made to assure compliance with disposition authorities. Nonrecord and extra copies of classified documents are promptly disposed of when no longer needed. DOE 5635.1A, CONTROL OF CLASSIFIED DOCUMENTS AND INFORMATION, of 2-12-88, contains the security requirements and procedures for these documents. Classification of the records is to be indicated on the DOE F 1324.10 to aid in complying with the procedures in DOE 5635.1A.
- d. **Unclassified, Sensitive Information.** This category of records includes Unclassified Controlled Nuclear Information (UCNI) Naval Nuclear Propulsion Information (under the cognizance of NE-60), Export Controlled Information, Official Use Only Information, and a variety of other sensitive information on which controls are placed by organizations. No attempt will be made to comply with the numerous requirements for the handling, including special markings, of these records in records holding areas or in Federal Records Centers. However, where these types of records are recalled by their custodial office or organization it is incumbent on that office to comply with the requirements in Departmental regulations or directives, such as DOE 5635.4, PROTECTION OF UNCLASSIFIED INFORMATION, of 2-3-88. No action on these records will be taken by records personnel.

SITE REQUIREMENT SOURCE: DOE1324.2A Chapter II, Section 2.d

***Using RIDS.**

- (1) The approved RIDS is the basic document in the management plan. They are to be reviewed, analyzed, and compiled at records officer level, i.e., each Departmental and M&O contractor records officer will have a plan for their records management activities, based on the RIDS.
- (2) Some considerations in using RIDS are as follows:
 - (a) Records are to be disposed of no later than 1 year from their authorized disposal dates (records material disposal dates are stated as the minimum periods of time which records must be retained).
 - (b) Nonrecord material should be disposed of prior to but no later than the scheduled disposal date (nonrecord material disposal dates are construed as maximum, rather than minimum, periods).
 - (c) Disposal and transfer of inactive records are accomplished on a regular basis; coordination with the servicing FRC is required prior to transfers of such records;

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(d) An expedited timetable is necessary if records accumulate rapidly; and

(e) Given careful planning, actions under the management plan are scheduled as much as possible so as not to interfere with current operations."

SITE REQUIREMENT SOURCE: DOE1324.2A Chapter II, Section 2.e(1)

"Method.

(a) Unclassified records are disposed of by maceration, shredding, landfill, burial or by sale as waste paper. Privileged records shall be shredded, macerated, or otherwise rendered illegible. Contracts for the sale of records as waste paper shall contain a provision prohibiting their resale or use as records or documents.

(b) All classified and controlled records shall be disposed of in accordance with security regulations."

SITE REQUIREMENT SOURCE: DOE1324.2A Chapter II, Section 2.e(2)

"Responsibility. The responsibility for authorizing the physical disposal of records belongs to the original office of custody which is notified by the local records holding area or the Federal Records Center, where the records are stored, when they are eligible for disposal. At this time the original office of custody authorizes their disposal or, through the appropriate DOE Records Officer, Justifies deferral. This may require a change to the schedule. Note that if the original office of custody does not respond within 90 days of its notification, authorization for disposal will be assumed."

SITE REQUIREMENT SOURCE: DOE1324.2A Section 9.a

"Establish a system for inventorying, maintaining, and obtaining disposition authority for all Departmental records, including those created and maintained under contractual arrangements by managing and operating contractors and other contractors as specified in their contracts."

SITE REQUIREMENT SOURCE: DOE1324.2A Section 9.d

"Actively pursue the disposition of records on a regular basis including transfer to lower cost storage, or to the National Archives for permanent records, and timely destruction of records in accordance with authorized dispositions, and to consider the application of technologies such as microfilming in the reduction of records holdings."

SITE REQUIREMENT SOURCE: DOE1324.6 Section 13.c

"Before destroying any classified or sensitive unclassified records, consult either the computer security operations manager or the computer protection program manager for the approved method of erasure or destruction. Note, however, that deleting electronic records will not destroy them. Only by degaussing with an approved device, or by using a program that writes an alternating pattern of zeros and ones over the data to be erased can positive protection be obtained that will prevent unauthorized access to the information approved for destruction. Therefore, to ensure the destruction of security classified or sensitive unclassified electronic records, this procedure is repeated several times to erase disks or tapes rather than have the system delete them."

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SITE REQUIREMENT SOURCE: DOE1324.6 Section 13.d

"The compactness of electronic media may present additional problems. The records may be stored in non-traditional locations. Also, since they do not present the space problems evidenced with paper records, exert diligence in destroying the records at the time of their authorized destruction. The failure to destroy records in a timely manner will undermine the effectiveness of the Department's records management program. Personnel should also be aware that records which have been authorized for destruction but have not yet been destroyed may be subject to requests for access to the records under the Freedom of Information Act."

SITE REQUIREMENT SOURCE: DOE1324.6 Section 8

"RESPONSIBILITIES. Heads of Departmental Elements shall require that records officers and all other personnel relying on electronic recordkeeping provide for cost-effective, adequate, and proper documentation of Departmental functions, activities, and operations; access and usage controls to prevent unauthorized access to, loss of, removal of, or theft of Departmental records created or acquired in electronic form; and that all records in electronic form have authorized disposition in accordance with DOE 1324.2. Proper documentation in this context means at the minimum the preservation of records for the required period of all significant decisions pertaining to the mission accomplishment responsibilities of the organization; in contrast to such decisions only on electronic records that are destroyed without authorization. If the same records are contained on more than one medium (such as paper and disk), the disposition of the records on each medium shall be authorized."

FACILITY REQUIREMENT SOURCE: DOE5635.1A Chapter X, Section 1

"Documents shall be disposed of in accordance with disposition schedules set forth in DOE 1324.2, "Records Disposition.""

SITE REQUIREMENT SOURCE: DOE5635.1A Chapter X, Section 3

"Confidential documents shall be destroyed as prescribed in paragraph 2.b, c, and d, above. Records of destructions are not required."

1.3.3

Retention

The DC/RM Process should ensure that records and documents are inventoried, appraised and categorized and that retention terms are applied commensurate with the category.

1.3.3.1

Records Management Planning

This element addresses controls for definition of a records management plans, programs, and schedules to ensure integrated criteria and processes are developed for the activities necessary for the availability of important information for future reference.

1.3.3.1.1

Records Management Plan

A records management plan shall be developed, documented, and maintained. This plan shall include, but not limited to:

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A summary of management control processes describing the records management program at the site.

Reference to lists which identify a site Records Management Officer (RMOs) and assistant RMOs.

Reference to a plan for continually providing records management program awareness training to personnel who manage, design, develop, operate, maintain, or use records management.

Recovery plan to ensure protection and preservation of records in event of a disaster based on risk of loss and value of records.

Reference to lists which identify and provide contact information for emergency response personnel.

SITE REQUIREMENT SOURCE: DOE1324.2A Chapter I, Section 4

"MANAGEMENT PLANS. Information on DOE F 1324.10 is necessary for planning the systematic, regular disposition of records; this cannot be done without the initial inventory process. DOE and contractor organizations must assure all their records are inventoried and the inventories are kept current. Planning for disposition must not be delayed waiting for completion of the inventory of all records, however. The annual records management plan has to balance inventory and disposition efforts to maximize benefits. For example, it would be more beneficial to inventory, obtain disposition authority, and dispose of 10,000 cubic feet of discontinued files than to spend all the available time inventorying 50,000 cubic feet of records. A model management plan is under development and will be included as part of DOE 1324.5, RECORDS MANAGEMENT PROGRAM."

SITE REQUIREMENT SOURCE: DOE1324.5A Section 8.a

"The site (DOE or contractor) manager will assure that a management official knowledgeable in records management policy, methods, and practices is designated as the Records Management Officer (RMO). The RMO may designate assistant RMOs to accomplish specific responsibilities."

SITE REQUIREMENT SOURCE: DOE1324.5A Section 8.b(3)

"Formulate, continually update, and review at least annually a records management plan which will allow the appropriate approving (i.e., site management) or reviewing authorities (e.g., a DOE Field Office) to judge the comprehensiveness and effectiveness of the records management program. (See paragraph 8d, below, for a description of the records management plan.)"

SITE REQUIREMENT SOURCE: DOE1324.5A Section 8.b(9)

"Develop and implement a process for institutionalizing a disaster recovery plan to ensure protection and preservation of records in the event of a disaster. The plan should be based upon an appropriate risk assessment process commensurate with the risk of loss and value of the records."

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SITE REQUIREMENT SOURCE: DOE1324.5A Section 8.c(5)

"Records management plans are approved by appropriate management officials."

SITE REQUIREMENT SOURCE: DOE1324.5A Section 8.d(1)(6)

"A records management plan should reflect known program deficiencies; and also work efforts, action, or projects for correcting these deficiencies in accordance with priorities and available staff. Elements that are relative to the coverage of the plan and to the environment of the site should be included, as follows:

- (1) Summary of management control process describing the records management program of the site. If special provisions apply to selected records management initiatives or records holdings, this information should be included.
- (2) Reference to list(s) which uniquely identify assistant RMOs and the recordkeepers and their official file stations.
- (3) Reference to schedules indicating any type of self assessments. Schedules should, at a minimum, indicate the fiscal year planned for such tasks.
- (4) Reference to documents containing the results of the latest compliance review, and follow-up actions on previous recommendations from the review.
- (5) Reference to a plan for continually providing records management program awareness and training to personnel who manage, design, develop, operate, maintain, or use records management. Plans for on-site personnel should include, as a minimum, training schedule, type of training, personnel attending, and date of attendance. (6) Reference to lists which identify emergency response personnel and locations where they may be contacted."

1.3.3.1.2

Controls for Scientific and Technical Information

No requirements identified for this subelement.

1.3.3.1.3

Records Retention Program

The Document Control and Records Management Program shall include a facility specific records retention program as one of its components to provide controls for the retention and disposition of records.

SITE REQUIREMENT SOURCE: DOE1324.2A Attachment I, Section 27

"RECORDS SCHEDULES. These are the means by which the disposition standards for records are published. The General Records Schedules, issued by NARA, includes records relating to civilian personnel, fiscal functions, accounting, procurement, communications, printing, and common or housekeeping functions, and certain nontextual records. The Department of Energy Records Schedules, issued by the Department, pertain to unique records not covered by the GRS, for which the Department has obtained NARA approval for their disposition. It is estimated that the GRS covers about one third of the records of the Department. The Department is responsible for preparing and revising separate schedules for all the records the GRS does not cover."

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SITE REQUIREMENT SOURCE: DOE1324.2A Chapter II, Section 1

***SUMMARY.**

a. Work Steps and Processes. The preparation and application of comprehensive Records Inventory and Disposition Schedules (RIDS) involve the following work steps and processes:

- (1) Selection of appropriate subordinate units within the overall organization to be covered by separate RIDS (one RIDS per file station);
- (2) Inventory of all record and nonrecord material;
- (3) Analysis of the inventory to identify (a) filing series covered by approved records schedules, (b) nonrecord material, and (c) filing series not covered by approved records schedules;
- (4) Appraisal of filing series not covered by approved records schedules (see Chapter III);
- (5) Development of cutoff instructions and retirement periods;
- (6) Coordination to obtain local approvals for the RIDS;
- (7) Initial application of the schedule by disposing of records for which the retention periods have expired, disposing or unneeded nonrecord material, and retiring eligible records; and
- (8) Periodic reviews of RIDS, to keep the RIDS current, as part of the annual records management plan.

b. Procedures. The procedures summarized in paragraph 1a, above, involve the use of these forms:

- (1) DOE F 1324.10 (or its equivalent), is used in connection with subparagraphs (2), (3) and (5) through (8) above.
- (2) DOE F 1324.5 used in connection with subparagraph (4) above."

SITE REQUIREMENT SOURCE: DOE1324.2A Chapter II, Section 2.a(2)

***Organizational Unit Designation.**

(a) Separate RIDS are prepared for each file station. For example, in an office services branch consisting of a mail section, a word processing section, a records management section, and a graphics section, each section has its own set of files constituting four separate file stations which require four separate RIDS, one for each file station.

(b) Responsibility for files maintenance and disposition actions must be assigned to an appropriate staff member."

SITE REQUIREMENT SOURCE: DOE1324.2A Section 8

***POLICY.**

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- a. Use of the General Records Schedules, published by the National Archives and Record Administration (NARA) is mandatory. Those schedules, along with internally generated, NARA approved schedules, will be used for disposition of Departmental records.
- b. Managers are accountable for records management programs in their organizations.
- c. Departmental records shall be:
 - (1) Created, maintained, and used in an effective, efficient and authorized manner; and
 - (2) Routinely disposed of in accordance with procedures in this Order."

SITE REQUIREMENT SOURCE: DOE1324.2A Section 9.c

"Develop a planned approach to retire or transfer records no longer required for current activities to lower cost storage with a preference for use of Federal Records Centers over local records holding areas."

SITE REQUIREMENT SOURCE: DOE5700.6C Attachment 1, Section A.4.b(1)

"Records

A process should be established and implemented to ensure that sufficient records (for example, records of design, environmental conditions, applied research and development, procurement, construction, data acquisition, assessments, inspection, testing, maintenance, and modification) are specified, prepared, reviewed, approved, and maintained to accurately reflect completed work. The maintenance of records should include provisions for retention, protection, preservation, traceability, accountability, and retrievability."

1.3.3.1.4

Records Retention and Storage Media

The Document Control and Records Management Program shall delineate the guideline for records retention and storage media. Retention periods shall be of sufficient duration to ensure ability to retrieve information of importance to managing, operating, and supporting facility operation as well as satisfy legal, contractual, and other applicable requirements.

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 17-1, Section 2.7

"Classification

Records shall be classified as "Lifetime" or "Nonpermanent" by the Owner, or his agent when authorized, in accordance with the criteria given in paras. 2.7.1 and 2.7.2 below.

2.7.1 Lifetime Records. Lifetime records are those that meet one or more of the following criteria:

- (a) those which would be of significant value in demonstrating capability for safe operation;
- (b) those which would be of significant value in maintaining, reworking, repairing, replacing, or modifying an item;

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(c) those which would be of significant value in determining the cause of an accident or malfunction of an item;

(d) those which provide required baseline data for in-service inspections.

Lifetime records are required to be maintained by or for the plant owner for the life of the particular item while it is installed in the plant or stored for future use.

2.7.2 Nonpermanent Records. Nonpermanent records are those required to show evidence that an activity was performed in accordance with the applicable requirements but need not be retained for the life of the item because they do not meet the criteria for lifetime records."

SITE REQUIREMENT SOURCE: DOE1324.2A Attachment I, Section 27

"RECORDS SCHEDULES. These are the means by which the disposition standards for records are published. The General Records Schedules, issued by NARA, includes records relating to civilian personnel, fiscal functions, accounting, procurement, communications, printing, and common or housekeeping functions, and certain nontextual records. The Department of Energy Records Schedules, issued by the Department, pertain to unique records not covered by the GRS, for which the Department has obtained NARA approval for their disposition. It is estimated that the GRS covers about one third of the records of the Department. The Department is responsible for preparing and revising separate schedules for all the records the GRS does not cover."

SITE REQUIREMENT SOURCE: DOE1324.2A Chapter I, Section 2.a

"The first step in the disposition process is to inventory the files (both record and nonrecord) in the organization. This inventory provides the foundation for the next three steps and includes the following:

- (1) A description of the filing series;
- (2) Location;
- (3) Identification of the organization holding the files;
- (4) Their arrangement or filing scheme (alphabetical, by year, month, by number);
- (5) The existence of filing plans, indexes, or other finding aids;
- (6) Restrictions on access and use; and
- (7) The media in which the record is maintained. (Hard copy, microform, and machine-readable records are inventoried separately to allow for showing their specific disposition.)"

SITE REQUIREMENT SOURCE: DOE1324.2A Chapter I, Section 4

"MANAGEMENT PLANS. Information on DOE F 1324.10 is necessary for planning the systematic, regular disposition of records; this cannot be done without the initial inventory process. DOE and contractor organizations must assure all their records are inventoried and the inventories are kept current. Planning for disposition must not be delayed waiting for

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completion of the inventory of all records, however. The annual records management plan has to balance inventory and disposition efforts to maximize benefits. For example, it would be more beneficial to inventory, obtain disposition authority, and dispose of 10,000 cubic feet of discontinued files than to spend all the available time inventorying 50,000 cubic feet of records. A model management plan is under development and will be included as part of DOE 1324.5, RECORDS MANAGEMENT PROGRAM."

SITE REQUIREMENT SOURCE: DOE1324.2A Chapter II, Section 2.c

"Final Preparation, Coordination, and Distribution of RIDS.

(1) In preparing RIDS for approvals, it may be desirable to rearrange the sequence of the filing series from the way they appear on the preliminary draft, especially if a large number of filing series are involved. Discontinued filing series, for example, should be listed on a separate continuation sheet for removal from the RIDS when all of the discontinued records have been disposed of. Likewise deferred or open items (ones for which new disposal authorizations are needed) may be listed on a separate sheet since that part of the RIDS is not subject to immediate application.

(2) The Office of Administrative Services (AD-60) prescribes the procedures for approval of RIDS at Headquarters.

(3) Each field element and each contractor prescribes procedures for approval of RIDS within their own organization.

(4) Approvals required should be limited to organizations having a legitimate interest in the records. Approval by the Information Management Division (AD-242), Office of IRM Policy, Plans and Oversight (AD-24), is not required. RIDS should be prepared in at least two copies for distribution and use as follows:

(a) The originals should be given to the files custodian(s) responsible for applying the RIDS.

(b) One copy should be maintained by the local records officer, or other official responsible for the records disposition program of the organization. The RIDS is a key document in the records management plan."

SITE REQUIREMENT SOURCE: DOE1324.2A Chapter III

"1. APPRAISAL PROCEDURES. Appraisal is the evaluation of filing series to determine whether they have permanent or temporary values and, if temporary, how long they should be retained. Through the appraisal process disposition authorizations are developed for unscheduled filing series. In appraising filing series, consideration is given to existing schedules, and to the administrative, financial, legal scientific, research, and historical value to the Government, or to the public.

2. EXISTING STANDARDS. The GRS and DOE Schedules often provide practical guidance in developing disposition authorizations for similar or related records. They should be used in the appraisal process to maintain consistency.

3. ADMINISTRATIVE VALUE. Records have this value if they help an organization to carry out its responsibilities. The time during which the value exists may be long or short. The frequency and purpose of reference normally indicate administrative value and for many filing

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units provide sufficient appraisal data for establishing their disposition. Some filing units possess continuing administrative values and should be designated for long-term or even permanent retention, even though reference to them is infrequent. In this group are those records which document the development of DOE-policies, programs, and procedures, and those reflecting the organization of DOE and its components. The master set of directives at DOE Headquarters, for example, is designated for permanent retention.

4. FINANCIAL VALUE. Financial records include budget records which show how expenditures were planned. Included also may be accounting voucher or expenditure filing series of several kinds which document the purposes for which DOE funds were spent. Most financial records are transaction files which have temporary value (6 years or less). Financial records relating to the development of financial policy may have long-term or even permanent value.

- a. An important consideration in assessing the financial value of records is their need for audit purposes. A 3-year retention standard for such records will usually suffice.
- b. Proposed disposition for records created by contractors are submitted to the General Accounting Office (GAO) concurrence. GAO approval also is obtained for the following DOE filing series if their recommended disposition is shorter than those prescribed in the General Records Schedules:

- (1) Payroll and pay administration;
- (2) Procurement and supply;
- (3) Property disposal;
- (4) Budget preparation, presentation, and apportionment;
- (5) Accountable officers' accounts;
- (6) Expenditure accounting;
- (7) Stores, plant, and cost accounting;
- (8) Travel and transportation;
- (9) Motor vehicle maintenance and operation; and
- (10) All program records whose proposed disposition is 3 years or less. GAO will not approve or disapprove proposed disposition for program records which are longer than 3 years, but it will occasionally suggest shorter disposition consonant with good records management practices.

- c. Note that all GRS dispositions are mandatory unless NARA approves an SF 115 for individual deviations.

5. LEGAL VALUE.

- a. Records have legal value if they contain evidence of legally enforceable rights or obligations of the Government. Among those obligations are the legal rights of

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persons to make claims against the Government. Records having legal value include but are not limited to the following:

- (1) Legal decisions and opinions;
- (2) Documents involving legal agreements, such as deeds, leases, titles, and contracts; and
- (3) Evidence of actions in particular cases such as claim papers and legal dockets.

b. In assessing the legal value of records, the probability of the records in question being needed as evidence is to be considered. Statutes of limitation are not necessarily controlling factors in the establishment of retention periods. For example, paid payroll checks are disposable after 3 years even though in most jurisdictions the applicable statute of limitations is 6 years. In this instance, experience shows that controversies claims over the payment of wages and salaries arise in a matter of hours or days, not years. The cost of storing the records for 6 years would clearly exceed any benefits to the Government.

6. **HISTORICAL VALUE.** Records have historical value if they preserve a reasonable portrait of significant past events. Historical records include those reflecting significant decisions or events in energy development, regulation, and management. Of special value are records related to events that aroused extensive public interest or controversy. Records may be of historical value if they describe the organization, procedures, and functions of major DOE programs. Records of historical value are often found in files containing Presidential or White House correspondence; with Members of Congress, congressional committees, Cabinet Secretaries, heads of agencies, and prominent citizens; internal correspondence with Heads of Departmental Elements, and other key DOE officials; background material in significant policy or operational studies; office diaries and logs; notes or records of meetings or telephone conversations by Heads of Departmental Elements; memoirs and transcripts of interviews. NARA makes the final determination about the historical value of all Federal records.

7. **VOLUME.** While volume has nothing to do with the administrative, financial, legal, or other criteria used in the appraisal process, volume should be taken into account when establishing disposition for filing series which accumulate at a rapid rate and occupy considerable filing and storage space. Cost reduction or cost avoidance in maintaining and storing records is an important objective of the records disposition program. In establishing retention standards for high volume records, the cost of retaining them should be weighed against potential benefits derived therefrom. If such costs significantly outweigh potential benefits, an element of calculated risk should be considered in establishing their disposition. It is not necessary for records to be completely valueless in order for them to be disposed of. NARA is authorized to approve standards for records that apparently will not, after the elapse of the period specified, have sufficient administrative, legal, research, or other value to warrant their further preservation by the Government."

SITE REQUIREMENT SOURCE: DOE1324.2A Section 8

***POLICY.**

- a. Use of the General Records Schedules, published by the National Archives and Record Administration (NARA) is mandatory. Those schedules, along with internally generated, NARA approved schedules, will be used for disposition of Departmental records.

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b. Managers are accountable for records management programs in their organizations.

c. Departmental records shall be:

(1) Created, maintained, and used in an effective, efficient and authorized manner; and

(2) Routinely disposed of in accordance with procedures in this Order."

SITE REQUIREMENT SOURCE: DOE1324.5A Section 8.b(6)

"Ensure that records are not stored in DOE records storage facilities for more than 20 years without the National Archives and Records Administration's (NARA) approval."

SITE REQUIREMENT SOURCE: DOE1324.5A Section 8.b(7)

"Ensure that site-specific records retention and disposition schedules are developed, approved, and implemented."

1.3.3.2

Records Generation and Capture

Controls shall be developed for the generation and capture of legible, accurate, complete, authenticated, and identifiable records. Record generated will be developed on approved procedure forms designated to be utilized for documenting information and data.

1.3.3.2.1

Controls for Records Generation and Collection

The Document Control and Records Management Program shall include directions for the generation and collection of records. Records are submitted to a local filing station or a central facility for retention. Important programmatic controls include:

Criteria and process to ensure the generation of legible, accurate, and complete records which require retention; Incorporation of controls in design specifications, procurement documents, procedures, and other documents specifying the records to be generated and captured; Definition of processes for the collection and documented transmittal of record copies to a local filing station or a centralized facility for retention; Definition of criteria and processes ensuring the protection of records against loss or damage between the time a record is generated and it is placed in a storage facility.

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Chapter II, Section 17

"QUALITY ASSURANCE RECORDS

Records that furnish documentary evidence of quality shall be specified, prepared, and maintained. Records shall be legible, identifiable, and retrievable. Records shall be protected against damage, deterioration, or loss. Requirements and responsibilities for record transmittal, distribution, retention, maintenance, and disposition shall be established and documented."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 17-1, Section 2.1

"RECORDS ADMINISTRATION

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Records System

A records system(s) shall be established by the organization responsible at the earliest practicable time consistent with the schedule for accomplishing work activities and in compliance with the general requirements of this Supplement. The records system(s) shall be defined, implemented, and enforced in accordance with written procedures, instructions, or other documentation."

1.3.3.2.2

Controls for Records Identification

Sufficient information shall be provided to permit identification between the record and the activities or item(s) to which it applies. Information identifying the record can be provided by the record and/or the system for indexing and filing.

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 17-1, Section 2.6

"Identification

Records and/or indexing system(s) shall provide sufficient information to permit identification between the record and the item(s) or activity(ies) to which it applies."

1.3.3.2.3

Controls for Records Authentication

Documents shall be authenticated to become a valid record. Authentication may be in the form of identifying initials or stamp on the record or a signature and date on the record by authorized personnel.

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 17-1, Section 2.3

"Record Validation

Documents shall be considered valid records only if stamped, initialed, or signed and dated by the authorized personnel or otherwise authenticated. This authentication may take the form of a statement by the responsible individual or organization. Handwritten signatures are not required if the document is clearly identified as a statement by the reporting individual or organization. These records may be originals or reproduced copies."

1.3.3.3

Records Receipt and Indexing

This element provides controls for the receipt and indexing of records prior to storage to ensure legible, complete, authenticated, and identifiable records are received and are indexed to permit timely retrieval for future reference.

1.3.3.3.1

Controls for Records Receipt

The receipt process shall include steps to inspect the records for attributes such as: completeness, legibility, reproducibility, authentication, and identification. Records receipt process should also include controls to:

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Define criteria and processes for determining whether the document is identified on a records listing as a required record or is a nonrecord material; Establishment of controls to permit assessment of current and accurate status of the record during the receipt process; Establishment of controls for protecting records from damage or loss during the receipt process.

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 17-1, Section 3

"RECEIPT

3.1 Responsibility

The individual or organization responsible for receiving records shall provide protection from damage or loss during the time that the records are in their possession.

3.2 Receipt Control

Each organization responsible for the receipt of records shall designate a person or organization responsible for receiving the records. The designee shall be responsible for organizing and implementing a system of receipt control of records for permanent and temporary storage.

As a minimum, a receipt control system shall include the following:

- (a) a method for designating the required records;
- (b) a method for identifying records received;
- (c) procedures for receipt and inspection of incoming records;
- (d) a method for submittal of completed records to the storage facility without unnecessary delay.

3.3 Status

Each receipt control system shall be structured to permit a current and accurate assessment of the status of records during the receiving process."

1.3.3.3.2

Controls and Systems for Records Indexing

Records filled at a local filing station or submitted to a centralized records facility shall be indexed, including fields which provide for timely and efficient retrieval of the record from within the records storage system.

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 17-1, Section 2.4

"Index

The records shall be indexed. The indexing system(s) shall include, as a minimum, record

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retention times and the location of the record within the record system."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 17-1, Section 2.6

"Identification

Records and/or indexing system(s) shall provide sufficient information to permit identification between the record and the item(s) or activity(ies) to which it applies."

SITE REQUIREMENT SOURCE: DOE1324.6 Section 10.a

"CODING RECORDS.

Subject Filed Electronic Records shall be coded in accordance with DOE 0000.1A, or its contractor equivalent. Every flexible disk shall be labeled. Every document shall be coded, named, dated, and described accurately and in sufficient detail to permit its retrieval. Coding means assigning each record the applicable subject classification code (four digit identification number in DOE 0000.1A). As much of the descriptive information as is feasible shall be entered on the index of the diskette as part of the file title. Necessary information in excess of the indexing capability of the machine shall be provided, either as external information available to users or as additional information in a separate electronic record."

SITE REQUIREMENT SOURCE: DOE1324.6 Section 10.b

"Case-Filed Electronic Records shall be indexed. The complexity of the indexing system shall be based on the volume of records, retention periods, and the users familiarity with the records. Do not assume that since the current users are very familiar with the records that no index, or only a limited one, is needed. Consider the likely personnel turnover in the originating office from the time the records are created until they are no longer needed for current operations. Also consider that indexes will be required by persons to whom the records may be transferred.

(1) Electronic indexes should be helpful in locating the records based upon the characteristics of the particular record; therefore include such things as date, subject, sender, receiver, and number (case, contract, purchase order, and so forth). The operation of the index should be an easily accessible part of the system documentation.

(2) In addition to the electronic index to the records, indexes to diskettes may be required. If the diskettes are properly labeled, they may be largely self-indexing if there are only a few. If there are more, the physical file may need to be subdivided logically to aid retrievability. Additionally, the diskette indexes should be printed out to ensure easy access."

1.3.3.4

Records Correction and Restoration

Controls shall be established for the correction of records if changes or additions are needed after the generation of the record. These controls will also allow for the restoration of lost or damaged records.

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1.3.3.4.1

Controls for Correction of Records

Controls shall be provided for correcting or supplementing record information to ensure appropriate review and approval of the new or corrected information. Controls shall ensure appropriate reviews and approvals of the corrected information are completed by the originating organization and the proper approval information is included such as the identification of the person authorized to issue the correction and the date of issue.

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 17-1, Section 2.9

"Corrected Information in Records

Records may be corrected in accordance with procedures which provide for appropriate review or approval by the originating organization. The correction shall include the date and the identification of the person authorized to issue such correction."

1.3.3.4.2

Controls for the Restoration of Lost or Damaged Records

Controls shall be established for the prompt restoration of lost or damaged records to ensure documentation regarding items and activities at the facility is available for future reference.

1.4

SELF-ASSESSMENT

The scope of this section includes those functional area elements/sub-elements and programmatic controls necessary to maintain a self-assessment program that verifies compliance with DOE Orders and/or implements corrective action to attain compliance; verifies compliance with site policies & procedures and provides tracking and trending information for analysis relative to determining corrective action that includes recurrence control; and performance assessment that tracks and evaluates functional performance based on performance objectives and performance indicators developed for the purpose of improving performance. The basis for the DOE Order Compliance elements/sub-elements is DP-AP-202, Order Compliance Self-Assessment Instruction. The major influence on the elements/sub-elements for Performance Improvement Self-Assessment is S-1 Memorandum July 31, 1990, Guidance On Environment, Safety, and Health (ESH) Self-Assessment. This section identifies regulatory requirements and industry experience relevant to self-assessment to be implemented at the facility.

Some of the elements/sub-elements of this section do not have regulatory requirements associated with them due to an absence of such requirements. Several guidance documents that have been generated in the DOE system to convey the current thinking within DOE relative to Self-Assessment, have been excerpted in the form of "requirements" to help establish a full complement of activities needed in an effective self-assessment program. i.e. DOE Self Assessment Guidance Document (DOESAGD) Description of industry accepted good practice or author specific experience is also provided as "requirements" for elements/sub-elements where this situation exists. Some elements/sub-elements contain requirements imposed only by certain program oriented DOE Orders. These requirements are included in the section, not only to convey them on their own merits, but to support the DOE direction and guidance that self-assessment for purposes of the attainment of excellence is a concept that is intended to apply to all functional areas involved in the management of a site or facility. Certain performance objectives and criteria (POCs) from DOE/EH 0135, Performance Objectives and

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Criteria for Technical Safety Appraisals at DOE Facilities and Sites, are included as "requirements" to reflect the overall perspective from which DOE evaluates operational performance.

1.4.1

DOE Order Compliance

The DOE Order Compliance Self-Assessment process described in DP-AP-202, (DP Order Compliance Self-Assessment Instruction) shall be used by Operations management to assess and document the status of DOE Order implementation. This assessment serves to help line and functional organizations to learn more about the sources of requirements and how they are implemented. Therefore, the assessment should be performed by the responsible manager and not by a quality assurance group, central self-assessment group, or subcontractor.

Implementation may not be possible immediately upon identifying a deficiency or noncompliance. This process provides guidance for gaining approval for corrective action plans or exemptions from Order statements based on issues management, safety upgrade, or backfit processes. The major actions to be completed are identified and defined in DP Order Compliance Self-Assessment Instruction DP-AP-202.

The graded approach to application/implementation of DOE Orders shall be applied after it has been determined that the Order statement is applicable to the site or organization in 19.1.2. The graded approach, as applied to DOE Order Compliance, is described in terms of concept and implementation/application in Appendix A of DP-AP-202.

The sub-elements that follow reflect the instructions in DP-AP-202 for DOE Order Compliance.

1.4.1.1

Self-Assessment Plans

The Operations organization shall have a compliance coordinator to develop a plan to guide the self-assessment of DOE Order implementation status. DP-AP-202 specifies the following elements of a self-assessment plan:

- The assignment and training of people to operate the Requirements & Self-Assessment Database (RSAD).
- The process for determining Order applicability.
- A master schedule for the assessments.
- Development of an administrative procedure to guide the conduct of these assessments that includes the characteristics specified in section 5 of DP-AP-202.

SITE REQUIREMENT SOURCE: DP-AP-202 Section 5

The Operations organization shall have a compliance coordinator to develop a plan to guide the self-assessment of DOE Order implementation status. DP-AP-202 specifies the following elements of a self-assessment plan.

- The assignment and training of people to operate the Requirements & Self-Assessment Database (RSAD).

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- The process for determining Order applicability.
- A master schedule for the assessments.
- Development of an administrative procedure to guide the conduct of these assessments that includes the characteristics specified in section 5 of DP-AP-202.

1.4.1.2

Define Applicability & Implementation

The definition of applicability and implementation involves several elements. To facilitate the self-assessment and use of the RSAD, the following steps should be included in the process.

- Define a site.
- Determine the Orders which apply to the site and document on the Site Order Applicability Data Collection Form as described in the latest version of the User's Manual for RSAD.
- Determine subdivisions as assessable units of a site.
- Determine the Orders that apply to the subdivision and document on the Self-Assessment Data Collection Form as described in the latest version of the User's Manual for RSAD.
- Determine the Order statements that apply to the subdivision and document on the Self-Assessment Data Collection Form as described in the latest version of the User's Manual for RSAD.

The major elements of the self-assessment plan are as follows and are defined in DP-AP-202.

- Applicability
- Backfit Determination
- Implementation
- New or Revised Order Assessment

SITE REQUIREMENT SOURCE: DP-AP-202 Section 6

The definition of applicability and implementation involves several elements. To facilitate the self-assessment and use of the RSAD, the following steps should be included in the process.

- Define a site
- Determine the Orders which apply to the site and document on the Site Order Applicability Data Collection Form as described in the latest version of the User's Manual for RSAD.
- Determine the Orders that apply to the subdivision and document on the Self-Assessment Data Collection Form as described in the latest version of the User's Manual for RSAD.
- Determine the Order statements that apply to the subdivision and document on the Self-Assessment Data Collection Form as described in the latest version of the User's Manual for RSAD.

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The major elements of the self-assessment plan are as follows and are defined in DP-AP-202.

- Applicability
- Backfit Determination
- Implementation
- New or Revised Order Assessment

1.4.1.3

Conducting The Assessment

Conduct of the self-assessment process requires certain actions to be executed in comparing applicable DOE Order statements to documented policies, programs, procedures, and practices and to verify that they are being followed during office of facility activities. These actions are noted below and are defined in detail in DP-AP-202.

- Local Organization Assessment
- Assessment Package Preparation
- Data Collection
- Status Assessment

SITE REQUIREMENT SOURCE: DP-AP-202 Section 7

Conduct of the self-assessment process requires certain actions to be executed in comparing applicable DOE Order statements to documented policies, programs, procedures, and practices and to verify that they are being followed during office of facility activities. These actions are noted below and are defined in detail in DP-AP-202.

- Local Organization Assessment
- Assessment Package Preparation
- Data Collection
- Status Assessment

1.4.1.4

Corrective Action Analysis

Corrective Action Analysis is a process for resolving Order noncompliances of deficiencies based on the evaluation of overall risk presented by the noncompliance or deficiency and the benefit of implementing corrective actions. The issues Management and Safety Upgrade processes are the key activities in the corrective action process are to resolve the noncompliances and deficiencies; to submit the Requests for DOE Approval; and to complete and close out corrective actions. The Corrective Action Analysis Process is defined Section 8.0 of DP-AP-202 and described in more detail in Appendices D,E,& F relative to the issues management, and safety upgrade processes.

SITE REQUIREMENT SOURCE: DP-AP-202 Section 8

Corrective Action Analysis is a process for resolving Order noncompliances of deficiencies based on the evaluation of overall risk presented by the noncompliance or deficiency and the benefit of implementing corrective actions. Key activities in the corrective action process are to resolve the noncompliances and deficiencies; to submit the Requests for DOE Approval; and to

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complete and close out corrective actions are the Issues Management and Safety Upgrade Analysis processes.

1.4.1.5

Request for DOE Approval

The process for requesting DOE approval of actions to correct noncompliances and deficiencies involves actions concerning classified information in addition to procedural steps and protocol relative to DOE and Contractor authority and responsibilities. The Request for Approval process is described in Section 9.0 of DP-AP-202 and proceduralized in Appendix F of the same document.

SITE REQUIREMENT SOURCE: DP-AP-202 Section 9

The process for requesting DOE approval of actions to correct noncompliances and deficiencies involves actions concerning classified information in addition to procedural steps and protocol relative to DOE and Contractor authority and responsibilities. The Request for Approval process is described in Section 9.0 of DP-AP-202 and proceduralized in Appendix F of the same document.

1.4.1.6

Corrective Action Implementation

Upon receipt of the approving authority action in the Request for Approval process, implementation of the corrective actions can proceed. Section 10.0 of DP-AP-202 specifies the steps in the implementation process including updating and reporting of implementation status.

SITE REQUIREMENT SOURCE: DP-AP-202 Section 10

Upon receipt of the approving authority action in the Request for Approval process, implementation of the corrective actions can proceed including updating and reporting of implementation status.

1.4.1.7

Quality Verification

Each functional area/organization shall use its approved quality assurance program to control and verify the DOE Order Compliance process as specified in DP-AP-202.

SITE REQUIREMENT SOURCE: DP-AP-202 Section 11

Each functional area/organization shall use its approved quality assurance program to control and verify the DOE Order Compliance process.

1.4.2

Performance Improvement Self Assessment

Performance Improvement Self-Assessment focuses on a set of performance standards which are intended to define the desired organization. These standards are referred to as Performance Objectives and Criteria (POCs). The POCs establish a standard of excellence rather than minimum requirements for acceptability. The POCs are developed by individuals from within and at all levels of the organization. Once issued, the POCs communicate the manager's expectation for a safe, efficient, and effective organization.

SITE REQUIREMENT SOURCE: DOE/EH0135 FR.6

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"PERFORMANCE OBJECTIVE: Operating experiences should be evaluated, and appropriate actions should be undertaken to improve safety and reliability."

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.5

"PERFORMANCE OBJECTIVE: Management and supervisory personnel should monitor and assess facility activities to improve performance in all aspects of the operation."

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.5.6

"Management and supervisory assessment and improvement efforts are performance-oriented and are conducted in a manner that reinforces the line functions of managers and supervisors."

SITE REQUIREMENT SOURCE: DOE5700.6C Attachment 1, Section C.1.a

"Assessment

Criterion 9 -- Management Assessment

Planned and periodic management assessments should be established and implemented as a way to improve quality. Management assessments should focus on how well the integrated collude assurance program is working and should identify management problems that hinder the organization from achieving its objectives in accordance with quality, safety, and environmental requirement".

SITE REQUIREMENT SOURCE: DOE5700.6C Attachment 1, Section C.1.b

"Senior management should retain overall responsibility for management assessments. Direct participation by senior management during management assessment is essential. This process should involve all levels of management, as appropriate."

SITE REQUIREMENT SOURCE: DOE5700.6C Attachment 1, Section C.1.c

"Management assessment results should be documented. Senior management should take prompt action and document resulting decisions in response to recommendations resulting from the management assessment process. Follow-up should include an evaluation of the effectiveness of management's actions."

SITE REQUIREMENT SOURCE: DOESAGD Section 2.1.3

"Extent and Frequency of Evaluation. The extent and frequency of both self and independent evaluation activities should be commensurate with the hazard attendant with the respective operating activities, and consistent with DOE policy of protection of the public, facility personnel, property, and the environment. The rationale for the extent and frequency should be clearly explained in the Self-Assessment Implementation Plan. Both self-evaluation and independent evaluation activities should include performance-based evaluations of appropriate functional areas, technical disciplines, and management systems and practices."

SITE REQUIREMENT SOURCE: DOESAGD Section 3.1.8

"Procedures to Plan and Document Self-Assessment. Written procedures should be developed

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and disseminated to all concerned to describe the process used, roles and responsibilities assigned, and the documentation needed to organize, schedule, conduct, analyze, integrate, and follow up the self-assessment activities performed by the PSO, FO/AO, and contractor. Procedures may be reviewed and approved by successively higher levels of management, and such required approvals may be specified in the Self-Assessment Program Implementation Plan."

SITE REQUIREMENT SOURCE: DOESAGD Section 3.2.1

"Self-Evaluation Activities. Self-evaluation activities are required of all DOE and DOE contractor organizational units within the line organization for the purpose of assessing their own performance. They are conducted in accordance with the criteria outlined in the formal Self-Assessment Program Implementation Plan, by qualified individuals using written implementing procedures. Evaluation should be performance based and cover functional areas, technical disciplines, and management systems and practices. Evaluation activities should feed information into a performance data stream for use by line management, self-assessment organizations, and independent assessment organizations.

The three general categories of self-evaluation activities are monitoring and surveillance activities, program review activities, and appraisal activities. Figure 3-1 illustrates the concept and relationships of self-assessment evaluation activities. It also identifies types of evaluation activities that would fall into one of the three general categories of self-evaluation activities. The following paragraphs describe the categories of monitoring and surveillance, program reviews, and appraisals.

Monitoring and surveillance activities are evaluations in which functions, operations, facilities, or equipment are monitored to identify deviations from norms as well as to measure conformance with performance and compliance requirements. Monitoring activities include performance indicator programs, various failure analysis and trending programs, surveillances, and lessons-learned programs where overall complex and industry performance is monitored for applicability to specific facilities. They also include observation programs such as safety or environment observer programs, management walk-throughs, site representatives, system/cognizant engineer programs, and building manager programs. To fully support a self-assessment program, they should be identified in a Self-Assessment Program Implementation Plan and executed on a schedule. Observations should be recorded in a structured manner that allows them to be fed into the self-assessment data stream to support corrective action, information exchange, and lessons learned.

Program reviews are formal evaluations of management systems, technical and institutional programs against preset program objectives and performance elements to include all levels of the organization. Program reviews may include a broad spectrum of evaluation activities including award fee determinations, annual technical program reviews, business management and financial reviews, quality management program reviews, operation readiness reviews and portions of incident investigations. Strengths and weaknesses should be identified during review.

Appraisals include team assessments, audits, surveys, and inventories that are conducted to measure performance and/or compliance. Appraisals identify performance strengths, weaknesses, and findings of fact. Appraisals are formal and may be initiated as either self or independent appraisals. Appraisals are planned, structured, and documented. They are conducted in accordance with written and validated guidance/criteria to verify that applicable

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requirements and audits that are set forth in DOE 5482.1B are incorporated into self-assessment programs as part of the evaluation activities."

SITE REQUIREMENT SOURCE: DP-AP-202 Section 11

Each functional area/organization shall use its approved quality assurance program to control and verify the DOE Order Compliance process.

1.4.2.1

Identification and Evaluation of Procedural Controls and Documentation

The procedural controls and documentation that apply to each POC criteria shall be identified. This identification process shall be accomplished on an individual criterion basis by procedure/instruction reviews and from knowledge and experience of the assessors.

After the identification process, the assessors shall evaluate the identified procedural controls and documentation to determine whether they are sufficient to meet the needs of the user and address the complexity of the activity. The assessors then will document the results of the identification and evaluation process by recording the document number and the degree of implementation met, either full, partial, or if there is no existing documentation, state none.

The differences between the specified procedures and documentation and the existing conditions for each applicable criterion shall be evaluated. The procedure requirements will be determined by using the graded approach, which means, the level of detail in the procedure and the level of control on its use is commensurate with the risk involved in the activity. The assessors shall document whether the procedures and documentation are acceptable or needs improvement and shall annotate and explain what improvements are needed for use in planning corrective action.

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.5.8

"An internal audit system exists which includes assessments of the technical adequacy of the activities undertaken to comply with procedural requirements."

1.4.2.2

Identification & Evaluation of Practices & Processes

The practices and processes that apply to each POC criteria shall be identified. This identification process shall be accomplished on an individual criterion basis by procedure/instruction reviews and from knowledge and experience of the assessors.

After the identification process, the assessors shall evaluate the existing practices and processes to determine whether they are sufficient to meet the needs of the user and address the complexity of the activity plus whether the procedures and documentation requirements are being met. This evaluation must focus on how personnel actually perform the work, as opposed to only how the procedures say the work is to be performed. This review is not intended to be detailed or all encompassing. However, the assessors must determine if the procedural approach and objectives are being accomplished. The results of this evaluation shall be documented and provide a specific explanation of differences if appropriate. Any needed improvements will be explained and documented for use in performance corrective action planning.

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Based on the evaluation of existing practices and processes, the assessors shall indicate if training is recommended to enable the existing practice or process to meet the intent of the applicable criteria. If training is recommended, a specific explanation of this training is required to be documented for use in performance corrective action planning.

The differences between the specified procedures and documentation and the existing conditions for each applicable criterion shall be evaluated. The procedure requirements will be determined by using the graded approach, which means, the level of detail in the procedure and the level of control on its use is commensurate with the risk involved in the activity. The assessors shall document whether the procedures and documentation are acceptable or needs improvement and shall annotate and explain what improvements are needed for use in planning corrective action.

SITE REQUIREMENT SOURCE: DOE/EH0135 FR.6.3

"In-house events are screened for significance and prioritized for evaluation."

**SITE REQUIREMENT SOURCE: DOE5480.19 Chapter I, Section C.3,
Paragraph 5**

"Inspections, audits, reviews, investigations, and self-assessment are a part of the checks and balances needed in an operating program. Line managers and supervisors should perform routine observations of personnel performing operating activities. Deficiencies identified should be documented, trended, and corrected. Also, other groups, such as Quality Assurance, should periodically review and assess operation performance. These reviews can assist line managers and supervisors in identifying and correcting problems."

1.4.2.3

Identification of Equipment and/or Modification Requirements

No requirements identified for this subelement.

1.4.2.4

Identification and Evaluation of Weaknesses

The criteria level recommendations for a particular performance objective will be the focus for analyzing the overall organizational conditions. The existing procedures and practices controlling activities are evaluated against procedures and practices requirements applicable to the POCs on a facility by facility basis. An analysis of the criteria level differences and recommendations shall be performed for each performance objective and shall follow the process described below.

The assessors shall analyze the recommendations for the criteria under a performance objective to identify and group those that address the same weakness in organizational conditions. The grouping should exhibit a logical arrangement of criteria recommendations to improve a common weakness. The recommendations shall be listed in a related grouping and assigned a unique number that relates the weakness to the POC. This will provide assurance that the weakness can be dispositioned effectively by the issues management program and tracked to completion. The objective is to eliminate overlap between action plans to reduce the number of weaknesses into a few succinct improvement issues.

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SITE REQUIREMENT SOURCE: DOESAGD Section 3.3

"Performance Analysis and Issues Management Elements. The purpose of performance analysis and reporting is to ensure that line organization personnel and managers are informed of their strengths and weaknesses, and made aware of the basic underlying causes for weaknesses, and that they use this information when making corrective action decisions and plans for overall performance improvements. The various performance analyses, tracking and reporting systems, trending and lessons learned programs are discussed in subsections 3.3.1 through 3.3.4."

1.4.2.5 **Development and Approval of Conceptual Performance Improvement Plans**

No requirements identified for this subelement.

1.4.3 **Performance Objectives and Criteria**

No requirements identified for this subelement.

1.4.4 **Performance Indicators**

The Performance Indicator (PI) Program defined in DOE 5480.26, Trending And Analysis of Operations Information Using Performance Indicators establishes a uniform system of PIs for trending and analyzing operational data from DOE facilities. PIs help assess and support progress in improving performance and in strengthening line management control of operations. Approved POCs are the basis upon which PIs are established. The POCs are updated annually as a part of the performance plan development, to ensure that the PIs reflect changes to expectations of performance remain focused upon critical performance parameters.

SITE REQUIREMENT SOURCE: DOE5480.26 Section 7.a(3)

"Performance Indicators are designed to be reportable as numerical values on a consistent basis so that they are readily usable in trending analysis. For each facility included in the DOE PI program, the contractor shall gather, analyze and report the Performance Indicators data, to include narrative data, according to the requirements of this Order and the guidance provided in DOE-STD-1048-92."

SITE REQUIREMENT SOURCE: DOE5700.6C Attachment 1, Section A.3.c

"Processes should be established and implemented to promote continuous improvement. This includes the identification and improvement of expected performance standards and associated performance measures."

1.4.4.1 **Identify Indicators**

The PIs will be selected so that performance in critical aspects of each functional area is clearly reflected and less important areas minimized. While some facility/organization unique indicators will be required, indicator selection based upon functional program areas will capture performance both at the programmatic and the facility/organization specific levels.

After development of POCs, the program owner and each applicable facility/organization manager will define performance indicators for each objective based upon the specified

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criteria. The indicators will provide the basis for:

- Capture and analysis of actual program performance at the element/sub-element level.
- Comparison of actual program performance against planned performance.
- Performance trending.
- Assessment of individual manager performance
- Integration and analysis of individual program performance as an indicator of overall management team performance.
- Improvement initiatives/corrective actions.
- Input into Award Fee Determination

SITE REQUIREMENT SOURCE: DOE5480.26 Section 7.c

"c. Reportable Performance Indicators.

The Performance Indicators delineated in DOE-STD-1048-92 are the minimum required to be reported for each facility. For some facilities, certain information may not be applicable and, therefore, need not be reported. However, the report should indicate. It is also expected that DOE line management may request additional Performance Indicators to be reported which they may determine to be relevant to their facilities. Detailed definitions and information concerning these PIs can be found in DOE-

1.4.4.2

Indicator Trending & Analysis

Performance Indicators, once identified, become the measurement of performance. By tracking performance, trends can be identified and analyzed for strengths and weaknesses. The strengths can be expanded upon and weaknesses become improvement opportunities from which corrective action can become performance improvement.

SITE REQUIREMENT SOURCE: DOE/EH0135 FR.6.6

"In-house events are trended to identify recurring problems and determine appropriate corrective actions.

SITE REQUIREMENT SOURCE: DOE5480.19 Chapter VI, Section C.8

"Patterns of deficiencies such as operator errors or inadequate procedures should be trended. A periodic summary report of events, causes, and trends should be submitted to department heads, the facility manager, and appropriate managers. Department heads should ensure training programs include appropriate material from the summary report."

SITE REQUIREMENT SOURCE: DOE5480.26 Section 6.f(1)

"Facility Managers As defined in paragraph of this Order shall:

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(1) Assess facility Performance Indicators and other operations information, such as reportable occurrences, for trends in improving or deteriorating conditions;"

SITE REQUIREMENT SOURCE: DOE5480.26 Section 7.B(1)

"Contractors for each facility, group of facilities, or site shall review and assess their Performance Indicators and other operations information such as reportable occurrences. Facility Managers shall assess their facility operating information for trends and indications of deteriorating/improving conditions and identify lessons-learned and good practices that should be used in their facility to prevent occurrences or to improve safety and/or operations."

1.4.4.3

Indicator Reporting

The contractor provides a PI report addressing the specified list of Performance Indicators (Appendix 1 of DOE-STD-1048-92) to the cognizant PSO through the cognizant Field Organization on a quarterly basis.

SITE REQUIREMENT SOURCE: DOE5480.26 Section 7.a(1)

"For all DOE facilities included in the DOE PI program, contractors shall provide their PI report addressing the specified list of Performance Indicators, provided in subparagraph c below, to the cognizant Field Organization, on a quarterly basis. For those facilities identified in Appendix 1 of DOE-STD-1048-92, which do not report to a Field Office, their quarterly report should be sent directly to the cognizant PSO."

SITE REQUIREMENT SOURCE: DOE5480.26 Section 7.a(2)

"Departmental elements not included in the formal DOE PI Program shall internally establish and track operations using PIs appropriate to their organizations but are excluded from formal reporting requirements defined in DOE-STD-1048-92."

SITE REQUIREMENT SOURCE: DOE5480.26 Section 7.a(4)

"The quarterly contractor, Field Office, and PSO Performance Indicator reports shall follow the format and content provided in DOE-STD-1048-92."

1.4.5

Issues Management

No requirements identified for this subelement.

1.4.6

Action Plans and Commitment Tracking

Upon management review and approval of Requests for Approval in the Order Compliance system or after Issues Management disposition of Conceptual Action Plans from Performance Self-Assessment or Corrective Actions identified in the Compliance Assessment process, Action Plans must be developed and recorded to provide the basis from which to manage performance improvement. These "commitments" must be recorded in a system capable of tracking these commitments in terms of implementation progress and reporting progress to management for purposes of evaluating performance.

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SITE REQUIREMENT SOURCE: DOE/EH0135 FR.6.1

"A effective followup system assures that appropriate and timely actions are taken to achieve improvements."

1.5

POLICY AND PROCEDURE SYSTEMS

SCOPE

The scope of this Requirements Identification Document (RID) is to establish guidelines, applicable to the Tank Farm Facility, for a Policy and Procedures System as defined by related DOE Orders, regulations, industry codes and standards, Hanford site specific documents and good industry practices. Defense Nuclear Facilities Board Recommendations 90-2 and 91-1, which require the strengthening of DOE facility activities through the identification and application of relevant standards which supplement or exceed requirements mandated by DOE guidelines, will serve as the parent documents to direct the development of this RID.

This document is intended to be used as a baseline to compare the existing Tank Farm Facility Policy and Procedures Program for a determination of the current programs completeness and effectiveness. The comparison of the RID and the current Tank Farm Facility programs will allow the determination that an overall Tank Farm Facility Policy does exist, that administrative and standard operating procedures are in place, a well established infrastructure has been developed, and interfaces with other relevant programs are clearly defined.

1.5.1

Preparation

Controls should be established for the preparation of policies and procedures based upon need, type, category, and use. Guidance should be provided, in the form of a Writers Guide, for format and content according to these bases and should include standard nomenclature and terminology. Processes should be established to control the preparation of policies and procedures to ensure accuracy, completeness, consistency and usability.

Criteria should be established to ensure that the preparation, review, and control of policies and procedures are accomplished by personnel with education, experience, and training and are commensurate with the safety significance of the subject process or activity.

Procedures are developed at varying levels of complexity and scope dependent on the intended usage and the level and scope of responsibility of the designated users. Development of procedures in this manner, therefore, frequently requires them to be interrelated within a program and between programs. The P&P System ensures that procedures which have a hierarchal or lateral dependence on one another and/or interrelated procedures are cross referenced accordingly to facilitate changes to applicable requirements. The System should also ensure that procedure development and approval resides with the organization responsible for the subject activity.

1.5.1.1

Management and Organization

Formal definition and communication of organization structure, responsibilities, accountabilities, and authorities exists through the application of organization charts and descriptions, job descriptions, etc. Management expectations, standards, and goals are clearly documented for the development, use, and maintenance of policies and procedures for

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site/facility operations.

1.5.1.1.1

Program Policy

A Policies and Procedures Program shall be initiated and issued to clearly state in writing management philosophies, standards, goals and expectations. The Policies and Procedures Program will include definitions of Standards of Excellence for performance and professional conduct, goals and objectives for safe, reliable and continued operation of the Tank Farm Facility. This program will be characterized by specific controls that will ensure a process for preparing, reviewing, approving and revising policies and procedures consistent with the Parent Policy Statements.

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.1

"Program Description. The total program for providing administrative controls and quality assurance during the operational phase may be described in many diverse documents. For example, operating procedures may be compiled in one manual, maintenance procedures in a second manual and quality assurance procedures in a third. It is not intended that all source documents be compiled in one master document. However, a summary document should be compiled by each owner organization to identify the sources, to index such source documents to the requirements of this standard, and to provide a consolidated base for description of the program. The owner organization shall identify in the program description those structures, systems and components to be covered by the program and the major organizational units and their responsibilities. The program shall provide control over activities affecting the quality of the structures, systems and components to an extent consistent with the scope and purpose of this standard. The program shall take into account the need for special controls, processes, tests, equipment, tools, and skills to attain the required quality and the need for verification of quality by inspections, evaluation or test.

Guidance on the content of the procedures is given in the sections which follow."

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.3.1

"Objectives indicate a strong commitment to a safe and high-quality operation and safe work practices."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Chapter I, Section A

"The organization and administration of operations should ensure that a high level of performance in DOE facility operations is achieved through effective implementation and control of operations activities. Operations activities should recognize that environment, safety, and productivity are compatible goals. DOE facility policies should describe the philosophy of standards of excellence under which the facility is operated and clear lines of responsibility for normal and emergency conditions are established. Effective implementation and control of operating activities are primarily achieved by establishing written standards in operations, periodically monitoring and assessing performance, and holding personnel accountable for their performance."

1.5.1.1.2

Duties, Responsibilities, and Authorities

Duties, responsibilities, and authorities of personnel performing Policies and Procedures

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Program activities shall be clearly defined, documented and monitored. Specific programmatic controls applicable to this program include the establishment of clear lines of responsibility and authority through the development of Organization Charts, Functional Organization Descriptions and Specific Job Descriptions. In the program policy and implementing procedures duties, responsibilities, accountabilities and authorities should be defined by position description.

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 3.2

"Assignment of Authority and Responsibility. It is essential that all members of the owner organization involved in operation of nuclear power plants, including those at the highest management levels, recognize the necessity that the plants be operated under a well formulated and detailed administrative controls and quality assurance program. Lines of authority, responsibility and communication for the plant operating and support organizations shall be established and defined. These relationships shall be documented and updated, as appropriate, in the form of organizational charts, functional descriptions of departmental responsibilities and relationships and job descriptions for key personnel positions or in equivalent forms of documentation."

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 9(1)

"Identification of individuals or organizations responsible for preparing, reviewing, approving, and issuing documents and revisions thereto."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Chapter II, Section 1

"ORGANIZATION

The organizational structure, functional responsibilities, levels of authority, and lines of communication for activities affecting quality shall be documented. Persons or organizations responsible for assuring that an appropriate quality assurance program has been established and verifying that activities affecting quality have been correctly performed shall have sufficient authority, access to work areas, and organizational freedom to:

- (1) identify quality problems;
- (2) initiate, recommend, or provide solutions to quality problems through designated channels;
- (3) verify implementation of solutions; and
- (4) assure that further processing, delivery, installation, or use is controlled until proper disposition of a nonconformance, deficiency, or unsatisfactory condition has occurred.

Such persons or organizations shall have direct access to responsible management at a level where appropriate action can be effected. Such persons or organizations shall report to a management level such that required authority and organizational freedom are provided, including sufficient independence from cost and schedule considerations."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 1S-1, Section 3

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"Where more than one organization is involved in the execution of activities covered by this Standard, the responsibility and authority of each organization shall be clearly established and documented."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 6S-1, Section 2

"DOCUMENT PREPARATION, REVIEW, APPROVAL, AND ISSUANCE The control system shall be documented and shall provide for (a) through (c) below:

- (a) identification of documents to be controlled and their specified distribution;
- (b) identification of assignment of responsibility for preparing, reviewing, approving, and issuing document;
- (c) review of documents for adequacy, completeness, and correctness prior to approval and issuance."

FACILITY REQUIREMENT SOURCE: DOE/EH0135 TS.1.4

"Responsibilities and authority for each management, supervisory, and professional position are well defined through written job or position descriptions."

SITE REQUIREMENT SOURCE: DOE5700.6C Section 9.b(1)(a)

"Quality Assurance Criteria

Management

Criterion 1 - Program Organizations shall develop, implement, and maintain a written Quality Assurance Program. The QAP shall describe the organizational structure, functional responsibilities, levels of authority, and interfaces for those managing, performing, and assessing adequacy of work. The QAP shall describe the management system, including planning, scheduling, and cost control considerations."

1.5.1.1.3

Organizational and Programmatic Interfaces

Formal definition of facility organizational interfaces is necessary to insure timely, consistent, and coordinated process for preparing, reviewing, approving, and revising policies and procedures. These interfaces should include definition of interfaces between facility in-house organizations and interfaces with external site organizations required for specific reviews and approvals.

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 1

"Review, Approval and Control of Documents. The administrative controls and quality assurance program shall control and coordinate the approval, issuance, and revision of documents which prescribe all activities affecting quality. Such documents include those which describe organizational interfaces, or which prescribe activities affecting structures, systems, or components. These documents also include administrative procedures and special orders, operating procedures, emergency operating and off-normal procedures, emergency plan

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implementing procedures, test procedures, equipment control procedures, maintenance or modification procedures, radiation control procedures, chemistry procedures, refueling procedures, and material control procedures. Documents, including revisions or changes, shall be reviewed for adequacy by appropriately qualified personnel. This review shall ensure that documents fully implement all requirements of the facility license. Particular emphasis should be placed on ensuring that previous regulatory commitments continue to be met. Documents shall be approved for release by authorized personnel and shall be distributed in accordance with current distribution lists and used by the personnel performing the prescribed activity. The use of out-dated or inappropriate documents shall be avoided. In addition, to ensure that the procedures in current use provide the best possible instructions for performance of the work involved, systematic feed-back and review of information based on actual use of the procedures shall be performed."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 1S-1, Section 3

"Where more than one organization is involved in the execution of activities covered by this Standard, the responsibility and authority of each organization shall be clearly established and documented."

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.1.11

"Employees and subcontractors understand the level of cooperation with interfacing organizations necessary for the safe performance of activities at the site or facility."

SITE REQUIREMENT SOURCE: DOE5700.6C Attachment 1, Section A.1.h

"Work assigned to parties outside the organization should be identified. For assigned work, management controls should be established, responsibilities assigned, and lines of communication identified."

1.5.1.2

Staffing and Qualification

Criteria are established to ensure that the preparation, review, and control of policies and procedures is accomplished by personnel with education, experience, and training commensurate with the safety significance of the specific process or activity. Considerations such as access to pertinent background information, familiarity with process or activity, knowledge of the applicable programmatic controls, and experience within the organization are also included. This element interfaces with the Training and Qualification Functional Area which provides further detail.

1.5.1.2.1

Writers and Reviewers Qualifications

Writers and Reviewers Qualifications are essential in the performance of their positions. Preparation and review of procedures by personnel with education, experience, and training commensurate with the safety significance of the policy or procedure under development is necessary. The personnel qualification records should be periodically reviewed, evaluated, and revised to stay current with their ongoing training and gained experience. Writers and reviewers should be intimately knowledgeable and familiar with the subject of the procedure or policy they are developing or reviewing. Supervisors should understand their employees areas

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of expertise and ability. This can be reenforced by supervisor review of the work prepared by each employee.

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 1

"Review, Approval and Control of Documents. The administrative controls and quality assurance program shall control and coordinate the approval, issuance, and revision of documents which prescribe all activities affecting quality. Such documents include those which describe organizational interfaces, or which prescribe activities affecting structures, systems, or components. These documents also include administrative procedures and special orders, operating procedures, emergency operating and off-normal procedures, emergency plan implementing procedures, test procedures, equipment control procedures, maintenance or modification procedures, radiation control procedures, chemistry procedures, refueling procedures, and material control procedures. Documents, including revisions or changes, shall be reviewed for adequacy by appropriately qualified personnel. This review shall ensure that documents fully implement all requirements of the facility license. Particular emphasis should be placed on ensuring that previous regulatory commitments continue to be met. Documents shall be approved for release by authorized personnel and shall be distributed in accordance with current distribution lists and used by the personnel performing the prescribed activity. The use of out-dated or inappropriate documents shall be avoided. In addition, to ensure that the procedures in current use provide the best possible instructions for performance of the work involved, systematic feed-back and review of information based on actual use of the procedures shall be performed."

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 5

"Plant procedures shall be approved by the owner organization before initial use. Rules shall be established which provide for interdisciplinary review of procedures by knowledgeable personnel other than the originator and the approval of procedures and procedure changes by authorized individuals."

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.1.3

"Task assignments are consistent with regularly defined duties and personnel performing the tasks are qualified."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.1

"To ensure consistency among operations procedures, the methods for developing new procedures, including procedure formats, should be clearly defined. Administrative procedures and/or writers' guides should direct the development and review process for procedures.

Procedures should be developed for all anticipated operations, evolutions, tests, and abnormal or emergency situations. Annunciator/alarm response procedures that guide the operator in verifying abnormal conditions or changes in plant status and provide the appropriate corrective action should be developed for all alarm panels. All procedures should provide administrative and technical direction to conduct the intent of the procedure effectively. The extent of detail in a procedure should depend on the complexity of the task, the experience and training of the user(s), the frequency of performance, and the significance of the consequences of error. Procedure preparation, verification, and validation should receive high-level attention.

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Qualifications for procedure writers should be considered, including operating organization and experience. Review, verification, and validation should be formalized for written and software procedures."

FACILITY REQUIREMENT SOURCE: DOE5700.6C Attachment 1 Chapter II, Section B.1.a(5)

"Work related instructions, procedures, and other forms of direction should be developed, verified, validated, and approved by technically competent personnel."

1.5.1.3

Policy and Procedure Systems

Systems are defined and implemented to ensure the promulgation of authority, control, and requirements flowdown in a formal and a deliberate manner such that compliance with requirements and commitments is achieved.

1.5.1.3.1

Policy System and Coverage Criteria

The Policies and Procedures program shall clearly establish required policies and their role and position within the administrative control hierarchy to ensure clear communication of management philosophies, expectations, goals and standards to facility personnel and to ensure incorporation of stated policy in lower tier documents. Specific programmatic controls should include promotion of a high level of performance and professionalism for conduct of facility operations and support activities. Goals and objectives specified to encourage safe, reliable and efficient facility operations. Facility operations and support activities will be conducted under the guidelines of administrative controls, with documentation to support compliance with requirements and commitments.

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 3.1

"General. The owner organization shall establish an administrative controls and quality assurance program which complies with this standard. The program shall be in effect at all times during the operational phase. The program shall require that decisions are made at the proper level of responsibility and with the necessary technical advice and review. The owner organization may delegate to other organizations the work of establishing and executing the administrative controls and quality assurance program or any part thereof, in accordance with this standard, but shall retain responsibility therefor."

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2

"Program Requirements. The owner organization shall establish program requirements pertaining to the conduct and control of plant activities such that affected personnel are provided with a clear understanding of operating philosophy and management policies, as well as methods and techniques for performing required work."

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 9(2)

"Identifying the proper documents to be used in performing the activity."

SITE REQUIREMENT SOURCE: DOE5480.19 Chapter I, Section C.1

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"Procedures or other definitive documentation should specify policies that are to be applied for operations. These policies should also specify goals and the means to achieve those goals. These documents should also provide for the types of controls necessary to implement policies as discussed in this and other chapters of the guidelines. Operations procedures should support facility and DOE guidance for operations. Responsibilities for implementing these policies, including the responsibility of shift personnel, if applicable, should be clearly defined. Operations personnel should clearly understand their authority, responsibility, accountability, and interfaces with other groups. Physical security should be in accordance with DOE 5630.11."

1.5.1.3.2

Procedure System and Hierarchy

The procedures system shall provide control of management processes and clearly prescribe methods appropriate to the circumstances for performing detailed activities. Specific programmatic controls applicable to this sub-element include: Establishment of a hierarchy of procedures to ensure decisions and approvals are made at the proper level; Implementation of facility programs in a system of documented procedures to specify processes, assign responsibilities, and define interfaces for performing facility activities; Establishment of administrative controls to ensure documents and their changes are prepared, reviewed, and approved on a timely basis prior to implementation and maintained thereafter; and Implementation of a consistent method to facilitate identification of procedures.

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 1

"Review, Approval and Control of Documents. The administrative controls and quality assurance program shall control and coordinate the approval, issuance, and revision of documents which prescribe all activities affecting quality. Such documents include those which describe organizational interfaces, or which prescribe activities affecting structures, systems, or components. These documents also include administrative procedures and special orders, operating procedures, emergency operating and off-normal procedures, emergency plan implementing procedures, test procedures, equipment control procedures, maintenance or modification procedures, radiation control procedures, chemistry procedures, refueling procedures, and material control procedures. Documents, including revisions or changes, shall be reviewed for adequacy by appropriately qualified personnel. This review shall ensure that documents fully implement all requirements of the facility license. Particular emphasis should be placed on ensuring that previous regulatory commitments continue to be met. Documents shall be approved for release by authorized personnel and shall be distributed in accordance with current distribution lists and used by the personnel performing the prescribed activity. The use of out-dated or inappropriate documents shall be avoided. In addition, to ensure that the procedures in current use provide the best possible instructions for performance of the work involved, systematic feed-back and review of information based on actual use of the procedures shall be performed."

FACILITY REQUIREMENT SOURCE: DOE4330.4A Chapter I, Section 3.4.5.b

"Preparation, review, approval, and revision of procedures and work-related documents are properly controlled"

FACILITY REQUIREMENT SOURCE: DOE4330.4A Chapter I, Section 3.4.5.o

"The maintenance procedures program documents how procedures are to prepared, verified,

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validated, reviewed, approved, controlled, updated, revised, and used and specifies where these procedures are to be located."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.7

"Facility operation should be conducted in accordance with applicable procedures that reflect the facility design basis. The requirements for use of procedures should be clearly defined and understood by all operators. If procedures are deficient, a procedure change should be initiated. In exception to this policy, operators may take whatever action is necessary during emergency conditions to place the facility in a safe condition, and to protect equipment, personnel, and public safety without first initiating a procedure change.

Operators should have procedures with them and follow them in a step-by-step manner when the procedures contain sign-offs for the various activities. In addition, procedures should be referenced during infrequent or unusual evolutions when the operator is not intimately familiar with the procedure requirements or when errors could cause significant adverse impact to the facility. Operators need not reference emergency procedures during the performance of immediate actions since these actions are committed to memory; however, the emergency procedure immediate action instructions should be reviewed after the actions are performed, thus, verifying that all required actions have been taken."

SITE REQUIREMENT SOURCE: DOE5700.6C Attachment 1, Section A.4.a(1)

"Criterion 4 -- Documents and Records

Documents

A process should be established and implemented to control preparation, review, approval, issuance, use and revision of documents that establish policies, prescribe work, specify requirements, or establish design."

SITE REQUIREMENT SOURCE: DOE5700.6C Section 9.b(1)(d)

"Criterion 4 - Documents and Records Documents shall be prepared, reviewed, approved, issued, used, and revised to prescribe processes, specify requirements, or establish design. Records shall be specified, prepared, reviewed, approved, and maintained."

1.5.1.4

Policy and Procedure Preparation

Controls are established for the preparation of policies and procedures based upon need, type, category, and use. This element addresses identification of policy and procedure types and categories. Format and content programmatic controls are established to ensure policies and procedures clearly communicate management directives and methods of performing facility activities.

1.5.1.4.1

Policy and Procedure Types

This Sub-element defines the types and categories of policies and procedures to ensure clear communication of management directives and definition of methods to perform important and

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detailed activities. Required policies and procedures shall be specified by policies and procedures program administrative controls. Examples of policy types and categories include Emergency Preparedness, Health and Safety, and Operations policies, specific subjects from reference documents and other activities which warrant specific management direction are also subjects which could direct policy generation. Examples of procedure types and categories encompass documents prescribing administrative and technical activities necessary to ensure proper management, performance, and support of facility operations. Included in these document types are procedures pertaining to; Design, purchasing, handling, shipping, receiving, storing, cleaning, maintenance, modification, installation, inspection, testing, and others directly or indirectly related to safety and reliability of facility systems, structures or components. Other procedure types will relate to direction for preparation, reviewing, approving, issuing, controlling, revising, and use of policies and procedures.

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.3

"Administrative Controls. Instructions of general and continuing applicability to the conduct of business shall be provided. Such instructions, sometimes also referred to as administrative procedures, standing orders or standard operating procedures, should deal with job turnover and relief designation of confines of the control room, definitions of duties of operators and others, transmittal of operating data to management, filing of charts, limitations of access to certain areas and equipment, shipping and receiving instructions, or other such matters. Provisions shall be made for periodic review and updating of these instructions.

For those licensees with multi-unit sites, administrative controls should be present to ensure that any activities occurred or performed at one unit do not adversely effect the operation of the other unit(s)."

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.5

"Temporary Procedures. Temporary procedures may be issued during the operational phase only when permanent procedures do not exist for the following activities: to direct operations during testing, refueling, maintenance and modifications; to provide guidance in unusual situations not within the scope of the normal procedures; and to ensure orderly and uniform operations for short periods when the plant, a system, or a component of a system is performing in a manner not covered by existing detailed procedures, or has been modified or extended in such a manner that portions of existing procedures do not apply. Temporary procedures shall include designation of the period of time during which they may be used, usually 14 days or less, and shall be subject to the review process prescribed in 4.2, 5.2.15 and the Technical Specification as applicable. Temporary procedures shall be approved by the management representative assigned approval authority."

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.3

"Preparation of Procedures. Activities shall be accomplished throughout plant life in accordance with documented procedures appropriate to the circumstances. Procedures shall be prepared and approved prior to implementation.

These procedures shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished, and shall provide an approved preplanned method of conducting operations."

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SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Chapter II, Section 5

"INSTRUCTIONS, PROCEDURES, AND DRAWINGS

Activities affecting quality shall be prescribed by and performed in accordance with documented instructions, procedures, or drawings of a type appropriate to the circumstances. These documents shall include or reference appropriate quantitative or qualitative acceptance criteria for determining that prescribed activities have been satisfactorily accomplished."

SITE REQUIREMENT SOURCE: DOE/EH0135 TS.2.7

"A formal policy or procedure governing the use of procedures is implemented. It includes the following:

- Action to be taken when procedures are found to be inadequate for the intended tasks or when unexpected results occur;
- Directions for when procedures are to be used as general guidance, are to be followed step-by-step, or require sign off for specific or all steps;
- Identification of procedures required to be in-hand when performing the activities to which they pertain; and
- Action to be taken if procedures conflict or do not contain adequate guidance or would violate a Technical Specification/Operational Safety Requirement."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.1

"To ensure consistency among operations procedures, the methods for developing new procedures, including procedure formats, should be clearly defined. Administrative procedures and/or writers' guides should direct the development and review process for procedures.

Procedures should be developed for all anticipated operations, evolutions, tests, and abnormal or emergency situations. Annunciator/alarm response procedures that guide the operator in verifying abnormal conditions or changes in plant status and provide the appropriate corrective action should be developed for all alarm panels. All procedures should provide administrative and technical direction to conduct the intent of the procedure effectively. The extent of detail in a procedure should depend on the complexity of the task, the experience and training of the user(s), the frequency of performance, and the significance of the consequences of error. Procedure preparation, verification, and validation should receive high-level attention. Qualifications for procedure writers should be considered, including operating organization and experience. Review, verification, and validation should be formalized for written and software procedures."

SITE REQUIREMENT SOURCE: DOE5700.6C Attachment 1, Section B.1.a(4)

"Work should be planned, authorized, and accomplished under controlled conditions using technical standards, instructions, procedures, or other appropriate means of a detail commensurate with the complexity and risk of the work."

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1.5.1.4.2

Preparation Processes

Processes shall be established to control preparation of policies providing management and procedures prescribing facility activities to ensure accuracy, completeness, consistency, and usability. Clear methods for policy and procedure preparation defined in administrative procedures and writers guides shall be applied to ensure consistency.

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Chapter II, Section 6

***DOCUMENT CONTROL**

The preparation, issue, and change of documents that specify quality requirements or prescribe activities affecting quality shall be controlled to assure that correct documents are being employed. Such documents, including changes thereto, shall be reviewed for adequacy and approved for release by authorized personnel."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.1

"To ensure consistency among operations procedures, the methods for developing new procedures, including procedure formats, should be clearly defined. Administrative procedures and/or writers' guides should direct the development and review process for procedures.

Procedures should be developed for all anticipated operations, evolutions, tests, and abnormal or emergency situations. Annunciator/alarm response procedures that guide the operator in verifying abnormal conditions or changes in plant status and provide the appropriate corrective action should be developed for all alarm panels. All procedures should provide administrative and technical direction to conduct the intent of the procedure effectively. The extent of detail in a procedure should depend on the complexity of the task, the experience and training of the user(s), the frequency of performance, and the significance of the consequences of error. Procedure preparation, verification, and validation should receive high-level attention. Qualifications for procedure writers should be considered, including operating organization and experience. Review, verification, and validation should be formalized for written and software procedures."

1.5.1.4.3

Format and Content

The policies and procedures program shall establish controls to ensure policies and procedures comply with applicable content and format controls and reflect information in existence at the time of development, such as industry experience, organizational structure, and responsibilities. Programmatic controls for policy and procedure content and format should be defined in administrative procedures and writers guides to ensure effective and consistent development of documents. Examples of information which needs incorporation in policies and procedures includes: Incorporation of appropriate information from applicable source documents such as design drawings, safety analysis reports, and vendor technical manuals; Incorporation of human factors considerations in procedures appropriate to promote understanding by intended users; and conformance of procedural steps to ensure proper sequencing of operations and maintenance steps.

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SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.1

"Control of Plant Operations. Responsibilities and authorities of plant operating personnel and those persons assigned to provide immediate support for the plant operations personnel shall be delineated for both normal and emergency conditions. The following requirements shall be established:

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.3

"Preparation of Procedures. Activities shall be accomplished throughout plant life in accordance with documented procedures appropriate to the circumstances. Procedures shall be prepared and approved prior to implementation.

These procedures shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished, and shall provide an approved preplanned method of conducting operations."

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.3.3

"Level of Detail. Each procedure shall be sufficiently detailed for an individual to perform the required function without direct supervision, but need not provide a complete description of the system or plant process. The level of detail contained in the procedure should be commensurate with the qualifications of the individual normally performing the function."

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.3.4, Paragraph 2

"A style guide should be developed to promote standardization of procedure format and to ensure human factors engineering principles are applied. Each page should include identification of the procedure, its revision, the page number and total number of pages."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Chapter II, Section 5

"INSTRUCTIONS, PROCEDURES, AND DRAWINGS

Activities affecting quality shall be prescribed by and performed in accordance with documented instructions, procedures, or drawings of a type appropriate to the circumstances. These documents shall include or reference appropriate quantitative or qualitative acceptance criteria for determining that prescribed activities have been satisfactorily accomplished."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 17-1, Section 2.2

"Generation of Records

The applicable design specifications, procurement documents, test procedures, operational procedures, or other documents shall specify the records to be generated, supplied, or maintained by or for the Owner. Documents that are designated to become records shall be legible, accurate, and completed appropriate to the work accomplished."

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SITE REQUIREMENT SOURCE: DOE/EH0135 OA.1.6

"Procedures clearly define the responsibility for safety-related decisions and provide for the escalation of matters in an appropriate timeframe."

SITE REQUIREMENT SOURCE: DOE/EH0135 TS.2.5

"Procedures are clear, concise, and contain adequate information for users to understand and perform their activities effectively;

- portions or steps of other documents that are used or referred to when performing a procedure are clearly identified in the procedure, and

- Procedures include other human factor considerations (such as sequenced procedure steps and use and placement of notes and caution statements) to promote error-free performance."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.1

"To ensure consistency among operations procedures, the methods for developing new procedures, including procedure formats, should be clearly defined. Administrative procedures and/or writers' guides should direct the development and review process for procedures.

Procedures should be developed for all anticipated operations, evolutions, tests, and abnormal or emergency situations. Annunciator/alarm response procedures that guide the operator in verifying abnormal conditions or changes in plant status and provide the appropriate corrective action should be developed for all alarm panels. All procedures should provide administrative and technical direction to conduct the intent of the procedure effectively. The extent of detail in a procedure should depend on the complexity of the task, the experience and training of the user(s), the frequency of performance, and the significance of the consequences of error. Procedure preparation, verification, and validation should receive high-level attention. Qualifications for procedure writers should be considered, including operating organization and experience. Review, verification, and validation should be formalized for written and software procedures."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.2.a

"The scope and applicability of individual procedures should be readily apparent. Procedures with single-unit applicability should be distinctively identified to avoid confusion with sister-unit procedures. In addition, to enhance rapid retrieval, emergency procedures should be distinguishable from other procedures. Color coding could be used for these purposes."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.2.b

"Procedures should incorporate appropriate information from applicable source documents, such as the facility design documents, safety analysis documents, and vendor technical manuals."

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FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.2.c

"Prerequisites and initial conditions should be detailed. Careful consideration should be given to the location of this information within the procedure in order to help ensure that the intent of the procedure is understood. In addition, any hoses, tools, or other temporary testing equipment should be verified operable, calibrated, or inspected and in good condition where possible, before implementing any test procedure, to ensure that they function as expected during the test. These verifications should be identified in the prerequisite section, with completion sign-offs required. "Hold" points (requiring independent verification and/or approval) should be clearly delineated."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.2.d

"Definitions used in the procedure should be explained."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.2.e

"Procedures should be easily understood, and actions should be clearly stated."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.2.f

"Procedures should contain only one action per step."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.2.g

"Procedures should contain sufficient but not excessive detail. The skill level, experience, and training of the users should be considered."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.2.h

"Warnings, notes, and cautions should be easily identifiable and should not contain action statements. The probability of missing an action step increases when it is included in a warning, note, or caution."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.2.i

"Warnings and cautions should precede the step to which they apply. Warnings, notes, and cautions should appear on the same page as the step to which they apply. This ensures that operators are alerted to necessary information before performing a procedural step."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.2.j

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"Procedures should be technically and administratively accurate (i.e., the instructions and information should be correct; referenced documents should be correctly identified; and necessary instructions should be present to guide the user when transferring between procedures)."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.2.k

"Individual sign-offs should be provided for selected critical steps. One sign-off should not be applied to more than one action."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.2.l

"Limits and/or tolerances for operating parameters should be specified and should be consistent with the readable accuracy of instrumentation. Operators should not be required to perform mental arithmetic to determine if a specified parameter is acceptable."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.2.m

"Acceptance criteria for surveillance or test procedures should be easily discerned, including tolerances and units. If calculations are needed to compare data to acceptance criteria, the calculations should be clearly explained."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.2.n

"Sequence of procedural steps should conform to the normal or expected operational sequence. Training on this sequence, reinforced with procedures that show the same sequence, will serve to improve operator performance by development of patterns of action that are more easily remembered."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.2.o

"Procedures should be developed with consideration for the human-factor aspects of their intended use. For example, references to components should exactly match drawing and label-plate identifiers, units should be the same as those marked on applicable instrumentation, and charts and graphs should be easily read and interpreted. Important factors (such as operating limits, warnings, cautions, etc.) should be highlighted."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.2.p

"Emergency operating procedures should provide guidance in responding to single and multiple casualties."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.2.q

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"Portions or steps of other procedures that are used or referred to when performing a procedure should be specifically identified within the procedure so that operators will not be confused when transferring between procedures."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.2.r

"Component or system shutdown and restoration requirements following shutdown or a surveillance or test activity should be specific and controlled by the procedure."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Chapter I, Section A

"The organization and administration of operations should ensure that a high level of performance in DOE facility operations is achieved through effective implementation and control of operations activities. Operations activities should recognize that environment, safety, and productivity are compatible goals. DOE facility policies should describe the philosophy of standards of excellence under which the facility is operated and clear lines of responsibility for normal and emergency conditions are established. Effective implementation and control of operating activities are primarily achieved by establishing written standards in operations, periodically monitoring and assessing performance, and holding personnel accountable for their performance."

1.5.1.4.4

Standardized Nomenclature and Terminology

Standard action verbs and names for plant locations, systems, equipment, job positions, and work groups shall be established and included as part of the Policies and Procedures Program. Programmatic controls used in policy and procedure development to standardize nomenclature and terminology include: Adoption of nomenclature representative of the document type and category; Development of consistent methods for presenting nomenclature and incorporation in program documents; Consistency between nomenclature used in procedures for plant systems and equipment and that from engineering drawings, technical manuals, common usage, and installed identification labels; and Development and issue of a dictionary of standard terminology and nomenclature for referencing during procedure preparation and use to ensure consistency.

SITE REQUIREMENT SOURCE: DOE5700.6C Attachment 1, Section A.1.g

"A common vocabulary that is consistent and representative of the work being performed should be adopted. Key terminology should be defined. Personnel indoctrination should include appropriate definitions to ensure consistent understanding and communications."

1.5.2

Review, Verification, Validation, and Approval

Controls should be established for the review of policies and procedures for adequacy and accuracy by qualified personnel other than the writer of the document. Independent verification should be performed and the need for a validation process specified. A validation process, if required, should be commensurate with the safety significance of the procedure. Attributes to be reviewed should include applicability, correctness, completeness, conformance with established requirements, and consideration of human factors. The review process should include a security classification review as early as possible. Procedures which technically or administratively impact safety significant or hazardous processes/activities should be identified

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for performance of an independent safety review. Controls should also ensure that procedures which impact or interface with multiple processes/organizations have received review by authorized representatives of these. An approval process should be established which relates the authority level of approval to the hierarchal standing and the safety significance of the policy/procedure. Controls should be developed to establish a mechanism for identification, documentation and resolution of comments and feedback from review, verification, and validation efforts.

1.5.2.1

Policy and Procedure Verification

Controls are established for the review of policies and procedures for adequacy and accuracy by qualified personnel other than the writer of the document.

1.5.2.1.1

Review Process

In order for policies and procedures to be properly reviewed by qualified personnel other than the writer of the document the following programmatic controls will be in place to allow: Access by reviewers to pertinent background information upon which to base concurrence; Adequacy in reviewer understanding of requirements and intent of the original document when revisions are reviewed; Definition of review criteria for new and revised policies and procedures, allowing verification of applicability, correctness, completeness, conformance with established requirements, and incorporation of appropriate human factors considerations; Review of procedure revisions to the same depth as the initial version; and Performance of an initial technical review of procedures within originating organization to ensure technical adequacy.

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 4.2

"Technical Review. The initial technical review of documents affecting plant operation such as operating, maintenance and test procedures should be performed within the originating department or organization. The purpose of this review is to ensure technical accuracy and to verify the originator's determination if the document constitutes a change to the Technical Specifications or an unreviewed safety question in accordance with 10 CFR 50.59 [2]. The reviewers should be other than the individuals who proposed the material to be reviewed. A review of the work by the preparers' supervisor may be considered a technical review provided all the requirements of this section are satisfied. The technical review is the first step in the formal review process. The reviewer shall determine if additional cross-disciplinary review is required to ensure all applicable technical disciplines are included. Conflicts that may develop between the reviewers and the originator shall be resolved prior to approval. Successful completion of the review shall be documented by the reviewer's signature on the original document."

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 1

"Review, Approval and Control of Documents. The administrative controls and quality assurance program shall control and coordinate the approval, issuance, and revision of documents which prescribe all activities affecting quality. Such documents include those which describe organizational interfaces, or which prescribe activities affecting structures, systems, or components. These documents also include administrative procedures and special orders, operating procedures, emergency operating and off-normal procedures, emergency plan implementing procedures, test procedures, equipment control procedures, maintenance or

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modification procedures, radiation control procedures, chemistry procedures, refueling procedures, and material control procedures. Documents, including revisions or changes, shall be reviewed for adequacy by appropriately qualified personnel. This review shall ensure that documents fully implement all requirements of the facility license. Particular emphasis should be placed on ensuring that previous regulatory commitments continue to be met. Documents shall be approved for release by authorized personnel and shall be distributed in accordance with current distribution lists and used by the personnel performing the prescribed activity. The use of out-dated or inappropriate documents shall be avoided. In addition, to ensure that the procedures in current use provide the best possible instructions for performance of the work involved, systematic feed-back and review of information based on actual use of the procedures shall be performed."

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 5

"Plant procedures shall be approved by the owner organization before initial use. Rules shall be established which provide for interdisciplinary review of procedures by knowledgeable personnel other than the originator and the approval of procedures and procedure changes by authorized individuals."

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 7

"The reviewing organizations shall have access to pertinent background information upon which to base its approval and shall have adequate understanding of requirements and intent of the original document."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Chapter II, Section 6

"DOCUMENT CONTROL

The preparation, issue, and change of documents that specify quality requirements or prescribe activities affecting quality shall be controlled to assure that correct documents are being employed. Such documents, including changes thereto, shall be reviewed for adequacy and approved for release by authorized personnel."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 6S-1, Section 2(c)

"Review of documents for adequacy, completeness, and correctness prior to approval and issuance."

FACILITY REQUIREMENT SOURCE: DOE4330.4A Chapter I, Section 3.4.5.g

"New and revised procedures are reviewed or verified for technical accuracy prior to use and checked or validated to ensure usability and correctness prior to or during initial use. Validation is done in a shop or training environment on a mockup or simulator or by a craftsman and supervisor during the first use of the procedure."

FACILITY REQUIREMENT SOURCE: DOE4330.4A Chapter II, Section 6.3.6[06]

"Vendor manuals or the portions of a vendor manual and other reference materials used in support of maintenance should be technically accurate, up to date, and controlled. Reference

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material used in lieu of facility-prepared maintenance procedures (e.g., an instruction section of a vendor manual and vendor or contractor drawings) should receive the same review and approval as facility maintenance procedures. When vendor recommendations conflict with maintenance experience, a documented engineering evaluation may be required."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.1

"To ensure consistency among operations procedures, the methods for developing new procedures, including procedure formats, should be clearly defined. Administrative procedures and/or writers' guides should direct the development and review process for procedures.

Procedures should be developed for all anticipated operations, evolutions, tests, and abnormal or emergency situations. Annunciator/alarm response procedures that guide the operator in verifying abnormal conditions or changes in plant status and provide the appropriate corrective action should be developed for all alarm panels. All procedures should provide administrative and technical direction to conduct the intent of the procedure effectively. The extent of detail in a procedure should depend on the complexity of the task, the experience and training of the user(s), the frequency of performance, and the significance of the consequences of error. Procedure preparation, verification, and validation should receive high-level attention. Qualifications for procedure writers should be considered, including operating organization and experience. Review, verification, and validation should be formalized for written and software procedures."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.4

"Operating procedures should be approved by the operations supervisor. In addition, procedures that affect safety-related equipment and emergency procedures should be reviewed by the facility safety review committee or by another appropriate review mechanism. Procedure revisions should receive the same depth of review and level of approval as the initial versions. New and revised procedures should be approved prior to use."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.5

"New and revised operations procedures should be reviewed prior to issuance and at periodic intervals to ensure that the information and instructions are technically accurate and that appropriate human-factor considerations have been included. The frequency of subsequent reviews should be specified; it may vary with the type and complexity of the activity involved and with time as a given plant reaches operational maturity. Applicable procedures should be reviewed after an unusual incident (such as an accident, an unexpected transient, significant operator error, or equipment malfunction). During reviews, procedures should be compared to source documents to verify their accuracy. In addition, new procedures should be validated by walk-throughs in the facility or by operation on a facility-specific simulator to ensure workability."

1.5.2.1.2

Verification of Technical Procedures

The review process for new technical procedures and selected revisions shall include verification prior to or during initial use. Procedures shall be verified to ensure they meet the

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requirements of DOE Orders, Codes and Standards, Policies, and Design Basis Documents. Programmatic controls shall be in place to ensure the verification process occurs prior to procedure use.

FACILITY REQUIREMENT SOURCE: DOE4330.4A Chapter I, Section 3.4.5.g

"New and revised procedures are reviewed or verified for technical accuracy prior to use and checked or validated to ensure usability and correctness prior to or during initial use. Validation is done in a shop or training environment on a mockup or simulator or by a craftsman and supervisor during the first use of the procedure."

FACILITY REQUIREMENT SOURCE: DOE4330.4A Chapter II, Section 6.3.2

"Procedure verification is a review to ensure the proper format and technical accuracy of a new or revised procedure. This review should ensure that the format incorporates human-factors principles and other appropriate administrative policies. The technical accuracy review should also include a review of the procedure against the design requirement for that system or component. This may be accomplished by comparing the vendor manual and design specifications to the procedures."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.1

"To ensure consistency among operations procedures, the methods for developing new procedures, including procedure formats, should be clearly defined. Administrative procedures and/or writers' guides should direct the development and review process for procedures.

Procedures should be developed for all anticipated operations, evolutions, tests, and abnormal or emergency situations. Annunciator/alarm response procedures that guide the operator in verifying abnormal conditions or changes in plant status and provide the appropriate corrective action should be developed for all alarm panels. All procedures should provide administrative and technical direction to conduct the intent of the procedure effectively. The extent of detail in a procedure should depend on the complexity of the task, the experience and training of the user(s), the frequency of performance, and the significance of the consequences of error. Procedure preparation, verification, and validation should receive high-level attention. Qualifications for procedure writers should be considered, including operating organization and experience. Review, verification, and validation should be formalized for written and software procedures."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.3.g

"The review process should involve verification and validation of the procedure using walkthroughs or similar methods."

1.5.2.1.3

Independent Safety Review Criteria and Process

The policies and procedures program shall include an independent safety review process for original issue and major revisions of procedures for safety hazards. Administrative procedure shall contain a definition of methods and criteria for conducting independent safety reviews of

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sufficient depth to ensure that the reviewers are satisfied that procedures do not constitute a concern for safety.

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 4.3

"Plant Safety Review Committee (PSRC) A committee shall be established to review those activities that affect the plant safety. This committee is typically called a Plant Safety Review Committee. The PSRC shall ensure that plant activities are conducted safely and do not constitute unreviewed safety questions as defined in 10 CFR 50.59 [2] or changes to the Technical Specifications."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.4

"Operating procedures should be approved by the operations supervisor. In addition, procedures that affect safety-related equipment and emergency procedures should be reviewed by the facility safety review committee or by another appropriate review mechanism. Procedure revisions should receive the same depth of review and level of approval as the initial versions. New and revised procedures should be approved prior to use."

FACILITY REQUIREMENT SOURCE: DOE5480.5 Section 9.h

"Provides for objective and independent review of:

- (1) Proposed modifications to nuclear facilities and equipment having safety significance, and safety analyses thereof.
- (2) Proposed experiments and operations having safety significance.
- (3) Administrative, operating (normal and abnormal), maintenance, repair, testing, quality assurance, and emergency procedures and significant changes thereto.
- (4) Organization and staffing.
- (5) Standards, Nuclear Criticality Safety Limits, Operational Safety Requirements, and changes thereto.
- (6) Nuclear facility safety training programs, including the initial and subsequent qualification and verification requirements and procedures for criticality safety.
- (7) Unusual occurrences, including those referred to as incidents, operating anomalies, and violations of Nuclear Criticality Safety Limits or Operational Safety Requirements.
- (8) The physical condition of the nuclear facilities.
- (9) The accuracy and completeness of record keeping and documentation.
- (10) Facility operations against its safety analyses.
- (11) Facility operational compliance with the requirements of this Order."

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1.5.2.1.4

Periodic Review Criteria and Process

Controls shall be established to ensure procedures are reviewed at specific intervals to ensure current practices, programmatic controls, operating experience, and human factors considerations are accurately reflected. Examples of programmatic controls governing periodic reviews include: Performance of reviews by individuals knowledgeable in the area(s) affected by the procedure; Establishment of periodic review intervals by document type and category based on such considerations as: significance to health, safety, and the environment; type and complexity of activity; operational experience; and Specific requirements for review intervals; and Definition of review criteria, to ensure: Incorporation of current requirements and commitments, review consistency, and adequacy of review scope and depth.

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 4

"The frequency of subsequent procedure reviews shall be specified and may vary depending on the type and complexity of the activity involved, and may vary with time as a given plant reaches operational maturity. Review of the procedures can be accomplished in several ways, including: Documented step-by-step use of the procedure (such as occurs when the procedure has a step-by-step checkoff associated with it), or detailed scrutiny of the procedure as part of a documented training program, drill, simulator exercise, or other such activity"

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.3

"Administrative Controls. Instructions of general and continuing applicability to the conduct of business shall be provided. Such instructions, sometimes also referred to as administrative procedures, standing orders or standard operating procedures, should deal with job turnover and relief designation of confines of the control room, definitions of duties of operators and others, transmittal of operating data to management, filing of charts, limitations of access to certain areas and equipment, shipping and receiving instructions, or other such matters. Provisions shall be made for periodic review and updating of these instructions.

For those licensees with multi-unit sites, administrative controls should be present to ensure that any activities occurred or performed at one unit do not adversely effect the operation of the other unit(s)."

FACILITY REQUIREMENT SOURCE: DOE4330.4A Chapter I, Section 3.4.5.1

"Formal program exists to review procedures periodically for technical accuracy, human factors considerations, and inclusion of in-house and industry operating experience."

FACILITY REQUIREMENT SOURCE: DOE4330.4A Section 6.3.6

"Responsibilities for procedure program administration should be clearly defined. Procedures should be controlled in accordance with facility administrative requirements. All procedures should be periodically reviewed (e.g., every 2 years or prior to use for infrequently used procedures) for changes affecting content (such as reference material revisions, permanent incorporation of changes, incorporation of industry and in-house experience) and for philosophy and format enhancements and human-factors considerations. Checklists for the review should be utilized to ensure the scope and depth of the review is consistent and adequate. Procedure revisions should receive the same review and approval as new procedures as described in Sections 6.3.2 through 6.3.4 above, with the extent of these reviews varying

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dependent upon the extent of the revision. A method should exist to ensure that technical specification and other commitments are not inadvertently changed or deleted in the process of revising procedures."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.5

"New and revised operations procedures should be reviewed prior to issuance and at periodic intervals to ensure that the information and instructions are technically accurate and that appropriate human-factor considerations have been included. The frequency of subsequent reviews should be specified; it may vary with the type and complexity of the activity involved and with time as a given plant reaches operational maturity. Applicable procedures should be reviewed after an unusual incident (such as an accident, an unexpected transient, significant operator error, or equipment malfunction). During reviews, procedures should be compared to source documents to verify their accuracy. In addition, new procedures should be validated by walk-throughs in the facility or by operation on a facility-specific simulator to ensure workability."

1.5.2.2

Procedure Validation

Controls are established to ensure confirmation that procedures are accurate, complete, and usable. This includes validation techniques such as walkthroughs, simulations, tabletop discussions, etc. The review process for new technical procedures and selected revisions shall include validation prior to use or during initial use. Definition of the validation processes should be outlined in the administrative procedures.

1.5.2.2.1

Feedback Mechanisms and Criteria

Confirmation of procedure validation process will be accomplished by use of walkthroughs, simulations or similar methods. These methods of validation will ensure that the procedures are accurate, complete and usable for their specific application. Controls established in the administrative procedures will ensure validation of procedures has occurred prior to or during initial procedure use.

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 1

"Review, Approval and Control of Documents. The administrative controls and quality assurance program shall control and coordinate the approval, issuance, and revision of documents which prescribe all activities affecting quality. Such documents include those which describe organizational interfaces, or which prescribe activities affecting structures, systems, or components. These documents also include administrative procedures and special orders, operating procedures, emergency operating and off-normal procedures, emergency plan implementing procedures, test procedures, equipment control procedures, maintenance or modification procedures, radiation control procedures, chemistry procedures, refueling procedures, and material control procedures. Documents, including revisions or changes, shall be reviewed for adequacy by appropriately qualified personnel. This review shall ensure that documents fully implement all requirements of the facility license. Particular emphasis should be placed on ensuring that previous regulatory commitments continue to be met. Documents shall be approved for release by authorized personnel and shall be distributed in accordance with current distribution lists and used by the personnel performing the prescribed activity. The use of out-dated or inappropriate documents shall be avoided. In addition, to ensure that

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the procedures in current use provide the best possible instructions for performance of the work involved, systematic feed-back and review of information based on actual use of the procedures shall be performed."

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.7.2, Paragraph 2

"In addition to the above design basis documentation, affected plant procedures shall be changed prior to declaring the system operable to reflect revised plant conditions; and cognizant personnel who are responsible for operating and maintaining the modified equipment shall be adequately trained."

SITE REQUIREMENT SOURCE: DOE4330.4A Chapter I, Section 3.4.5.m

"A feedback mechanism is provided for the maintenance personnel to change and/or improve the usability of the procedure(s)."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.3.g

"The review process should involve verification and validation of the procedure using walkthroughs or similar methods."

1.5.2.2.2

Validation of Technical Procedures

The review process for new technical procedures and selected revisions shall include validation prior to use or during initial use.

FACILITY REQUIREMENT SOURCE: DOE4330.4A Chapter I, Section 3.4.5.g

"New and revised procedures are reviewed or verified for technical accuracy prior to use and checked or validated to ensure usability and correctness prior to or during initial use. Validation is done in a shop or training environment on a mockup or simulator or by a craftsman and supervisor during the first use of the procedure."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.1

"To ensure consistency among operations procedures, the methods for developing new procedures, including procedure formats, should be clearly defined. Administrative procedures and/or writers' guides should direct the development and review process for procedures.

Procedures should be developed for all anticipated operations, evolutions, tests, and abnormal or emergency situations. Annunciator/alarm response procedures that guide the operator in verifying abnormal conditions or changes in plant status and provide the appropriate corrective action should be developed for all alarm panels. All procedures should provide administrative and technical direction to conduct the intent of the procedure effectively. The extent of detail in a procedure should depend on the complexity of the task, the experience and training of the user(s), the frequency of performance, and the significance of the consequences of error. Procedure preparation, verification, and validation should receive high-level attention.

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Qualifications for procedure writers should be considered, including operating organization and experience. Review, verification, and validation should be formalized for written and software procedures."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.5

"New and revised operations procedures should be reviewed prior to issuance and at periodic intervals to ensure that the information and instructions are technically accurate and that appropriate human-factor considerations have been included. The frequency of subsequent reviews should be specified; it may vary with the type and complexity of the activity involved and with time as a given plant reaches operational maturity. Applicable procedures should be reviewed after an unusual incident (such as an accident, an unexpected transient, significant operator error, or equipment malfunction). During reviews, procedures should be compared to source documents to verify their accuracy. In addition, new procedures should be validated by walk-throughs in the facility or by operation on a facility-specific simulator to ensure workability."

1.5.2.3

Policy and Procedure Approval

Controls exist which ensure that policies and procedures are approved by the appropriate authority prior to release and use. The approval process ensures that adequately prepared and reviewed documents are released for use and that responsible management is aware of and concurs in how activities are conducted.

1.5.2.3.1

Approval Process

The approval process for policies and procedures, and their changes, shall incorporate programmatic controls ensuring the approval of procedures by authorized individuals prior to release. Specific programmatic controls regarding the approval process for policies and procedures include: Definition of the approval process for policies and procedures in administrative procedures, and Approval of policies and procedures for release after completion of review and resolution of comments.

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 1

"Review, Approval and Control of Documents. The administrative controls and quality assurance program shall control and coordinate the approval, issuance, and revision of documents which prescribe all activities affecting quality. Such documents include those which describe organizational interfaces, or which prescribe activities affecting structures, systems, or components. These documents also include administrative procedures and special orders, operating procedures, emergency operating and off-normal procedures, emergency plan implementing procedures, test procedures, equipment control procedures, maintenance or modification procedures, radiation control procedures, chemistry procedures, refueling procedures, and material control procedures. Documents, including revisions or changes, shall be reviewed for adequacy by appropriately qualified personnel. This review shall ensure that documents fully implement all requirements of the facility license. Particular emphasis should be placed on ensuring that previous regulatory commitments continue to be met. Documents shall be approved for release by authorized personnel and shall be distributed in accordance with current distribution lists and used by the personnel performing the prescribed activity. The use of out-dated or inappropriate documents shall be avoided. In addition, to ensure that

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the procedures in current use provide the best possible instructions for performance of the work involved, systematic feed-back and review of information based on actual use of the procedures shall be performed."

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 2

"Each procedure shall be reviewed and approved prior to initial use. Plant procedures shall be reviewed by an individual(s) knowledgeable in the aspects of the technical content and of human factors affected by the procedure within six months following startup after the first refueling outage of the unit to determine if changes are necessary or desirable. Applicable procedures shall also be reviewed following an unusual incident, such as an accident, an unexpected transient, significant operator error, or equipment malfunction, or following any modification to a system."

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 5

"Plant procedures shall be approved by the owner organization before initial use. Rules shall be established which provide for interdisciplinary review of procedures by knowledgeable personnel other than the originator and the approval of procedures and procedure changes by authorized individuals."

FACILITY REQUIREMENT SOURCE: DOE4330.4A Chapter II, Section 6.3.4

"Approval should be consistent with facility technical specifications or their equivalent and administrative procedures. As a minimum, the maintenance manager or his designee should approve maintenance procedures."

FACILITY REQUIREMENT SOURCE: DOE4330.4A Chapter II, Section 6.3.6[06]

"Vendor manuals or the portions of a vendor manual and other reference materials used in support of maintenance should be technically accurate, up to date, and controlled. Reference material used in lieu of facility-prepared maintenance procedures (e.g., an instruction section of a vendor manual and vendor or contractor drawings) should receive the same review and approval as facility maintenance procedures. When vendor recommendations conflict with maintenance experience, a documented engineering evaluation may be required."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.4

"Operating procedures should be approved by the operations supervisor. In addition, procedures that affect safety-related equipment and emergency procedures should be reviewed by the facility safety review committee or by another appropriate review mechanism. Procedure revisions should receive the same depth of review and level of approval as the initial versions. New and revised procedures should be approved prior to use."

1.5.2.3.2

Required Approvals

Policies and procedures shall be approved for release by authorized personnel designated in administrative controls. Specific programmatic controls applicable to approval include: Approval of policies and procedures by the management position responsible for the activity or function prescribed in the policy or procedure; Approval of revisions by the same or equivalent

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management position that approved the original version; and Additional approvals, if specified by reference documents. For example, DOE approval requirements for procedures involving an unreviewed safety question.

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 1

"Review, Approval and Control of Documents. The administrative controls and quality assurance program shall control and coordinate the approval, issuance, and revision of documents which prescribe all activities affecting quality. Such documents include those which describe organizational interfaces, or which prescribe activities affecting structures, systems, or components. These documents also include administrative procedures and special orders, operating procedures, emergency operating and off-normal procedures, emergency plan implementing procedures, test procedures, equipment control procedures, maintenance or modification procedures, radiation control procedures, chemistry procedures, refueling procedures, and material control procedures. Documents, including revisions or changes, shall be reviewed for adequacy by appropriately qualified personnel. This review shall ensure that documents fully implement all requirements of the facility license. Particular emphasis should be placed on ensuring that previous regulatory commitments continue to be met. Documents shall be approved for release by authorized personnel and shall be distributed in accordance with current distribution lists and used by the personnel performing the prescribed activity. The use of out-dated or inappropriate documents shall be avoided. In addition, to ensure that the procedures in current use provide the best possible instructions for performance of the work involved, systematic feed-back and review of information based on actual use of the procedures shall be performed."

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 6

"Changes to documents shall be reviewed and approved by the same organizations that perform the original review and approval unless the owner organization designates another qualified organization."

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.5

"Temporary Procedures. Temporary procedures may be issued during the operational phase only when permanent procedures do not exist for the following activities: to direct operations during testing, refueling, maintenance and modifications; to provide guidance in unusual situations not within the scope of the normal procedures; and to ensure orderly and uniform operations for short periods when the plant, a system, or a component of a system is performing in a manner not covered by existing detailed procedures, or has been modified or extended in such a manner that portions of existing procedures do not apply. Temporary procedures shall include designation of the period of time during which they may be used, usually 14 days or less, and shall be subject to the review process prescribed in 4.2, 5.2.15 and the Technical Specification as applicable. Temporary procedures shall be approved by the management representative assigned approval authority."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Chapter II, Section 6

"DOCUMENT CONTROL

The preparation, issue, and change of documents that specify quality requirements or prescribe activities affecting quality shall be controlled to assure that correct documents are being

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employed. Such documents, including changes thereto, shall be reviewed for adequacy and approved for release by authorized personnel."

FACILITY REQUIREMENT SOURCE: DOE4330.4A Chapter II, Section 6.3.4

"Approval should be consistent with facility technical specifications or their equivalent and administrative procedures. As a minimum, the maintenance manager or his designee should approve maintenance procedures."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.4

"Operating procedures should be approved by the operations supervisor. In addition, procedures that affect safety-related equipment and emergency procedures should be reviewed by the facility safety review committee or by another appropriate review mechanism. Procedure revisions should receive the same depth of review and level of approval as the initial versions. New and revised procedures should be approved prior to use."

1.5.3

Controls

The (P&P) System should ensure that policies and procedures are controlled in a manner to ensure that changes to such are accomplished only through the system, that issues are current, that outdated issues are recalled or canceled and that distribution is necessary and sufficient for the intended usage. Controls should be established which delineate the process and authority for making routine changes and changes which require immediate action. The change control process should include USQ review and determination and a methodology to maintain consistency between references and source documents. Distribution lists should be established and maintained to ensure copy holders receive updated policies and procedures.

1.5.3.1

Policy and Procedure Distribution and Control

Controls exist which ensure that prior to distribution of policies and procedures, distribution lists are developed so that effective document control is maintained. Periodic update of such lists ensures continued control.

1.5.3.1.1

Distribution Lists

Distribution lists shall be established and maintained for policies and procedures to ensure copy holders receive updated documents. Distribution lists shall include those individuals and organizations with assigned responsibilities or a need for the information in the new or revised document. In order to ensure current revisions of policies and procedures are available distribution lists will be kept current to provide control stations with current documents.

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 1

"Review, Approval and Control of Documents. The administrative controls and quality assurance program shall control and coordinate the approval, issuance, and revision of documents which prescribe all activities affecting quality. Such documents include those which describe organizational interfaces, or which prescribe activities affecting structures, systems, or components. These documents also include administrative procedures and special orders, operating procedures, emergency operating and off-normal procedures, emergency plan

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implementing procedures, test procedures, equipment control procedures, maintenance or modification procedures, radiation control procedures, chemistry procedures, refueling procedures, and material control procedures. Documents, including revisions or changes, shall be reviewed for adequacy by appropriately qualified personnel. This review shall ensure that documents fully implement all requirements of the facility license. Particular emphasis should be placed on ensuring that previous regulatory commitments continue to be met. Documents shall be approved for release by authorized personnel and shall be distributed in accordance with current distribution lists and used by the personnel performing the prescribed activity. The use of out-dated or inappropriate documents shall be avoided. In addition, to ensure that the procedures in current use provide the best possible instructions for performance of the work involved, systematic feed-back and review of information based on actual use of the procedures shall be performed."

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 9(5)

"Establishing current and up-dated distribution lists. "

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.5

"Temporary Procedures. Temporary procedures may be issued during the operational phase only when permanent procedures do not exist for the following activities: to direct operations during testing, refueling, maintenance and modifications; to provide guidance in unusual situations not within the scope of the normal procedures; and to ensure orderly and uniform operations for short periods when the plant, a system, or a component of a system is performing in a manner not covered by existing detailed procedures, or has been modified or extended in such a manner that portions of existing procedures do not apply. Temporary procedures shall include designation of the period of time during which they may be used, usually 14 days or less, and shall be subject to the review process prescribed in 4.2, 5.2.15 and the Technical Specification as applicable. Temporary procedures shall be approved by the management representative assigned approval authority."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 6S-1, Section 2(a)

"identification of documents to be controlled and their specified distribution."

1.5.3.1.2

Controls for Identification of Procedure Use Requirements

Ensure programmatic controls for procedure use are identified in procedures. Administrative procedures shall include guidance for the manner in which procedures are to be implemented. Some procedures contain signoffs for key steps to document completion, must accompany the user during performance, and be followed step by step, except where situation warrants this impractical. Other procedures need not be available for reference or signoff during use due to the nature of the activities being performed. Programmatic controls applicable to procedure use include: Development of criteria in administrative procedures for specifying procedure use requirements based on such consideration as; Complex, unusual, or infrequent activities are being performed; User unfamiliarity is a factor and errors could have a significant adverse impact on safety; Classification and identification of procedures by use categories or other method to specify whether: Step by step compliance is required; Signoffs are used to document step completion; and the Procedure needs to be in hand during performance.

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SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.2

"Procedure Adherence. Procedures shall be followed, and the requirements for their use shall be prescribed in writing. The method(s) by which both permanent and temporary changes to approved procedures may be made, shall be proceduralized and shall include the designation of a person or persons authorized to approve such changes. Changes shall be made in accordance with the requirements of the Technical Specifications.

In the event of an emergency not covered by an approved procedure, or an emergency not following the path upon which the approved procedure is based, operations personnel shall be instructed to take action so as to protect public health and safety, and minimize personnel injury and damage to the facility, in accordance with 10 CFR 50.54(x) [2].

Guidance should be provided to identify the manner in which procedures are to be implemented. Examples of such guidance include identification of those tasks that require:

- (1) The written procedure to be present and followed step-by-step while the task is being performed.
- (2) The operator to have committed the procedural steps to memory. This memorization includes the identification and assessment of key plant parameters and the verification of certain time critical actions that are prerequisites to the execution of appropriate emergency procedures.
- (3) Verification of completion of significant steps, by initials or signature on checkoff lists.

The types of procedures that shall be present and referred to directly are those developed for extensive or complex jobs where reliance on memory cannot be trusted, e.g., reactor startup, tasks which are infrequently performed, and tasks in which operations must be performed in a specified sequence and emergency operating procedures. Routine procedural actions that are frequently repeated might not require the procedure to be present. Copies of all procedures shall be available to appropriate members of the plant staff. Those procedures which might be necessary for use by the reactor operators shall be available and readily accessible in the control room. If an electronic display is relied upon as the written procedure, a hard copy should be available as backup.

If documentation of an action is required, the necessary documentation shall be recorded as the task is performed. Examples of procedures requiring verification are furnished in 5.3.7.1 and 5.3.7.2."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.7

"Facility operation should be conducted in accordance with applicable procedures that reflect the facility design basis. The requirements for use of procedures should be clearly defined and understood by all operators. If procedures are deficient, a procedure change should be initiated. In exception to this policy, operators may take whatever action is necessary during emergency conditions to place the facility in a safe condition, and to protect equipment, personnel, and public safety without first initiating a procedure change.

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Operators should have procedures with them and follow them in a step-by-step manner when the procedures contain sign-offs for the various activities. In addition, procedures should be referenced during infrequent or unusual evolutions when the operator is not intimately familiar with the procedure requirements or when errors could cause significant adverse impact to the facility. Operators need not reference emergency procedures during the performance of immediate actions since these actions are committed to memory; however, the emergency procedure immediate action instructions should be reviewed after the actions are performed, thus, verifying that all required actions have been taken."

1.5.4

Maintenance

The P&P System should ensure that policies and procedures are periodically reviewed and maintained in a current and accurate condition that reflects the rate and extent of changes to driving regulations and interrelated procedures.

The maintenance process should include establishing records and history files which serve as documentary evidence of program activities and demonstrate compliance to program requirements. This effort interfaces with Compliance Management and Document Control and Records Management Processes.

1.5.4.1

Policy and Procedure Revision, Change, and Cancellation

Controls exist which ensure that revisions, changes, and cancellations to policies and procedures are achieved in a timely and controlled manner. Changes are approved by the appropriate management or technical authority. Time limits are established for formal revisions; considerations are given to equivalent reviews; USQ review and determination is performed and consistency is maintained between references and source documents. Retrieval of canceled or outdated policies and procedures is accomplished at the appropriate time.

1.5.4.1.1

Policy Revision Process

If policy deficiencies are identified, a revision shall be initiated, processed, reviewed, approved, and issued. The policy revision process shall be defined in administrative procedures and shall include measures for: Review of revised policies equivalent to the original versions; and Approval of revised policies by authorized personnel prior to release for use.

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 5.2.15, Paragraph 6

"Changes to documents shall be reviewed and approved by the same organizations that perform the original review and approval unless the owner organization designates another qualified organization."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Chapter II, Section 6

"DOCUMENT CONTROL

The preparation, issue, and change of documents that specify quality requirements or prescribe activities affecting quality shall be controlled to assure that correct documents are being employed. Such documents, including changes thereto, shall be reviewed for adequacy and approved for release by authorized personnel."

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SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 6S-1, Section 2

"DOCUMENT PREPARATION, REVIEW, APPROVAL, AND ISSUANCE The control system shall be documented and shall provide for (a) through (c) below:

- (a) identification of documents to be controlled and their specified distribution;
- (b) identification of assignment of responsibility for preparing, reviewing, approving, and issuing document;
- (c) review of documents for adequacy, completeness, and correctness prior to approval and issuance."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 6S-1, Section 3

"DOCUMENT CHANGES

3.1 Major Changes

Changes to documents, other than those defined as minor changes in para. 3.2 below, are considered as major changes and shall be reviewed and approved by the same organizations that performed the original review and approval unless other organizations are specifically designated. The reviewing organization shall have access to pertinent background data or information upon which to base their approval.

3.2 Minor Changes

Minor changes to documents, such as inconsequential editorial corrections, shall not require that the revised documents receive the same review and approval as the original documents. To avoid a possible omission of a required review, the type of minor changes that do not require review, the type of minor changes that do not require such a review and approval and the persons who can authorize such a decision shall be clearly delineated."

1.5.4.1.2

Policy Cancellation Process

No requirements identified for this subelement.

1.5.4.1.3

Procedure Change Process

If a procedure deficiency is identified which requires immediate action, a change shall be initiated and processed promptly without retyping or reissuing the procedure. The change process shall be controlled to ensure needed changes are made but inappropriate changes are prevented. Examples of programmatic controls regarding procedure change process include: Definition of criteria in administrative procedures to determine if needed change can be processed immediately or if the full review and approval process must be used; Definition of controls for the review and approval of changes in administrative procedures, including such measures as: Identification of reviewers and approval authorities necessary for prompt implementation of the change; Provisions for review and approval equivalent to the original version as soon as feasible but no later than a specified interval after implementation of the

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change; Verification or Validation when appropriate; Review of changes to procedures described in the existing safety analyses to identify changes requiring safety evaluations of unreviewed safety questions; Measures to ensure users are aware of the change such as attachment of the change to controlled procedure copies and identifying the change in the affected procedure text; and Documentation of change initiation, review, and approval.

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Chapter II, Section 6

"DOCUMENT CONTROL

The preparation, issue, and change of documents that specify quality requirements or prescribe activities affecting quality shall be controlled to assure that correct documents are being employed. Such documents, including changes thereto, shall be reviewed for adequacy and approved for release by authorized personnel."

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Supplement 6S-1, Section 3

"DOCUMENT CHANGES

3.1 Major Changes

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3.2 Minor Changes

Minor changes to documents, such as inconsequential editorial corrections, shall not require that the revised documents receive the same review and approval as the original documents. To avoid a possible omission of a required review, the type of minor changes that do not require review, the type of minor changes that do not require such a review and approval and the persons who can authorize such a decision shall be clearly delineated."

FACILITY REQUIREMENT SOURCE: DOE4330.4A Chapter II, Section 6.3.6[02]

"Controls are needed to allow for procedure changes (temporary alternations of procedures so that work can be safely continued) and revisions (permanent alterations of procedures that incorporate outstanding temporary changes and other needed updates). Changes and revisions are necessary to correct errors and to ensure that procedures reflect current maintenance practices and requirements. Procedure changes do not normally involve retyping or reissuing an entire procedure. As a minimum, these changes should be reviewed and approved by technically competent supervisors, even though these changes may or may not become permanent later. For example, a typical procedure change may require a review by an engineer for technical content; by a maintenance supervisor for good maintenance practice and human-factors principles; and by an operations supervisor for regulatory compliance, facility operations, and approval. Changes that are needed to remain in effect beyond their original intent should receive the same review and approval as a revision as soon as feasible (normally,

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within 2 weeks). Procedure change information should be inserted neatly in the body of the procedure to avoid missing the changes when the procedure is used."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.3

"Procedure changes and revisions are necessary to ensure that procedures reflect current operating practices and requirements. The review and approval process for each procedure change or revision should be documented. For the purpose of these guidelines, a "procedure change" refers to an on-the-spot change (whether for permanent or for one-time-only use). Procedure changes do not involve retyping or reissuing a procedure. "Procedure revisions" constitute a new, retyped edition of the procedure. Procedure changes and revisions should conform to the following practices:"

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.3.a

"Procedure changes intended for use more than one time should be documented in a location readily available for operator reference. To avoid the possibility of error, these changes should also be referenced in procedure copies used by operators."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.3.b

"Appropriate procedure changes and revisions should be initiated when procedure inadequacies or errors are noted."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.4[02]

"Changes in Operations procedure that do not affect the intent of operations procedure should be approved by two individuals; one should be a qualified operator, and the other should be a member of facility management. For this purpose, management could be interpreted to mean the operations supervisor or a more senior individual within the operating organization. Within 2 weeks, these procedure changes should be concurred with by the individuals who would normally approve a revision or the initial version of the procedure. Changes that alter the intent of a procedure should receive the same approval as a new or revised procedure."

FACILITY REQUIREMENT SOURCE: DOE5480.21 Chapter II, Section 3

"Changes in the procedures as defined in Safety Analyses. a. There are three types of procedure changes to be considered. First, if a procedure is not contained or described in the safety analyses, it would not require a USQ evaluation to be performed before a change can be implemented. Second, changes to procedures simply listed, and not outlined, summarized, or described in the safety analyses, do not require evaluation in accordance with this Order. Finally, changes to procedures that are outlined, summarized, or described must be evaluated in accordance with this Order if the outline, summary, or description in the safety analyses are impacted. b. Procedures are not limited to those items specifically identified as procedure types (e.g., operating, chemistry, system, test, surveillance, and emergency plan) but could include anything described in the safety analyses that defines or describes activities or controls over the conduct of work. If changes to these activities or controls are made, such changes qualify as

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changes to procedures as described in the safety analyses, and the changes must be evaluated. c. In instances when procedural modifications are implementing operational changes, such as setpoint changes, while the procedure itself may not meet the requirement for evaluation, in accordance with this Order, the operational change should be evaluated to assure it does not impact authorization basis limits supporting safety analyses."

SITE REQUIREMENT SOURCE: DOE5480.21 Chapter III, Section 2

"Once the contractor organization has determined the various sources of change, it must then determine the process by which these sources of change should be integrated into the USQ review process."

FACILITY REQUIREMENT SOURCE: DOE5480.21 Section 10.b(2)

"A safety evaluation shall be performed for; Temporary or permanent changes in procedures as described in the existing safety analysis."

1.5.4.1.4

Procedure Revision Process

If procedure deficiencies are identified which do not require an immediate correction in order to be performed, or if significant changes to a procedure are needed, then the full review and approval process shall be used to revise and reissue the entire procedure in a timely manner. Specific programmatic controls regarding the change process include: Definition of criteria in administrative procedures for initiation of revisions, such as: A change has been in effect for a specified period or the number of changes has exceeded a specified value; A source document has been revised; A facility modification has been made; Operating practices have changed to implement corrective action or reflect operating experience; or the procedure is affected by a revision to another document. Definition of controls for the procedure revision process in administrative procedures, including such measures as: Provisions for review and approval equivalent to the original version; Verification or validation when appropriate; Review of revisions to procedures described in the existing safety analyses to identify changes requiring safety evaluations of unreviewed safety questions; or documentation of revision initiation, review, and approval.

FACILITY REQUIREMENT SOURCE: DOE4330.4A Chapter II, Section 6.3.6, Paragraph 1

"Responsibilities for procedure program administration should be clearly defined. Procedures should be controlled in accordance with facility administrative requirements. All procedures should be periodically reviewed (e.g., every 2 years or prior to use for infrequently used procedures) for changes affecting content (such as reference material revisions, permanent incorporation of changes, incorporation of industry and in-house experience) and for philosophy and format enhancements and human-factors considerations. Checklists for the review should be utilized to ensure the scope and depth of the review is consistent and adequate. Procedure revisions should receive the same review and approval as new procedures as described in Sections 6.3.2 through 6.3.4 above, with the extent of these reviews varying dependent upon the extent of the revision. A method should exist to ensure that technical specification and other commitments are not inadvertently changed or deleted in the process of revising procedures."

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FACILITY REQUIREMENT SOURCE: DOE4330.4A Chapter II, Section 6.3.6, Paragraph 3

"A procedure revision should be initiated when a change has been outstanding for an extended (normally, longer than 6 months), when a procedure has been affected by several changes, or when a single change becomes so extensive that the procedure is difficult to follow. When the procedure is revised, all effective procedure changes should normally be incorporated into the revision".

FACILITY REQUIREMENT SOURCE: DOE4330.4A Chapter II, Section 6.3.6, Paragraph 4

"A system should also be in place to ensure that facility, system, and component changes or modifications adequately identify procedures impacted by the change and provide for their revision as required."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.3

"Procedure changes and revisions are necessary to ensure that procedures reflect current operating practices and requirements. The review and approval process for each procedure change or revision should be documented. For the purpose of these guidelines, a "procedure change" refers to an on-the-spot change (whether for permanent or for one-time-only use). Procedure changes do not involve retyping or reissuing a procedure. "Procedure revisions" constitute a new, retyped edition of the procedure. Procedure changes and revisions should conform to the following practices:"

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.3.b

"Appropriate procedure changes and revisions should be initiated when procedure inadequacies or errors are noted."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.3.d

"Procedures revisions should be implemented concurrently with modifications. Procedure updates required by temporary modifications should be handled as procedure "change" and implemented concurrently with the temporary modification installation."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.3.e

"Important information regarding changed or revised procedures should be communicated to appropriate operations personnel via the required reading system (Chapter XIV), a pre-shift briefing, or a similar method."

FACILITY REQUIREMENT SOURCE: DOE5480.21 Chapter II, Section 3

"Changes in the procedures as defined in Safety Analyses. a. There are three types of

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procedure changes to be considered. First, if a procedure is not contained or described in the safety analyses, it would not require a USQ evaluation to be performed before a change can be implemented. Second, changes to procedures simply listed, and not outlined, summarized, or described in the safety analyses, do not require evaluation in accordance with this Order. Finally, changes to procedures that are outlined, summarized, or described must be evaluated in accordance with this Order if the outline, summary, or description in the safety analyses are impacted. b. Procedures are not limited to those items specifically identified as procedure types (e.g., operating, chemistry, system, test, surveillance, and emergency plan) but could include anything described in the safety analyses that defines or describes activities or controls over the conduct of work. If changes to these activities or controls are made, such changes qualify as changes to procedures as described in the safety analyses, and the changes must be evaluated. c. In instances when procedural modifications are implementing operational changes, such as setpoint changes, while the procedure itself may not meet the requirement for evaluation, in accordance with this Order, the operational change should be evaluated to assure it does not impact authorization basis limits supporting safety analyses."

SITE REQUIREMENT SOURCE: DOE5480.21 Chapter III, Section 2

"Once the contractor organization has determined the various sources of change, it must then determine the process by which these sources of change should be integrated into the USQ review process."

SITE REQUIREMENT SOURCE: DOE5480.21 Chapter III, Section 4

"Screening Criteria and Procedures.

- a. Doe finds that it is acceptable to use screening criteria to limit the number of proposed actions for which written safety evaluations must be performed, provided the reasons for exclusion are documented and well supported. In fact, DOE encourages the use of screening criteria because, when properly defined and implemented, the screening criteria should assist in reducing the efforts expended for issues of minor significance and should focus efforts more fully on the aspects of safety for which this requirement is intended.
- b. Screening criteria are intended to be applied to those items that, by broad definition, enter into the USQ process but for which a detailed safety evaluation is not necessary. For example, an operational procedure described in the SAR may require a change to correct a typographical error or include an additional reference to an equipment list. This change, although by definition within the bounds of this Order, is not of any safety significance. If the contractor applied a screening procedure that asks: "Is the change inconsequential?" (i.e., a spelling or typographical correction, grammatical change, clarification, or additional note or reference), the reviewer could document the change and thus avoid the need to answer the detailed questions of the safety evaluation process.
- c. A different manner in which screening criteria may be applied is through categorical exclusions (e.g., different procedure types). For the purpose of illustration, maintenance procedures may be considered. If it is true that no modifications or changes are performed under maintenance procedures, then a basic premise of performing maintenance is that the plant will be returned to the exact same "condition" it was in prior to maintenance. That is, the functional condition will continue to meet or exceed those performance capabilities set forth in the authorization

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basis. A change to a maintenance procedure would therefore not be governed under this Order. Other requirements, such as the DOE 4330.4A, may draw some bounds upon the subject and content of these procedures, but this Order need not be considered. However, it should be understood that, by applying screening criteria in this manner, DOE would expect to find a detailed evaluation of why, for example, a one-time categorical exclusion of maintenance procedures from the USQ process is acceptable.

- d. For physical modifications to the facility, DOE does not believe that screening criteria would be appropriate. The application of screening criteria for administrative changes may prove useful, but contractors, must ensure that the use of these criteria do not inappropriately screen out changes that require safety evaluations."

SITE REQUIREMENT SOURCE: DOE5700.6C Attachment 1, Section A.4.a(3)

"Revisions to controlled documents should be reviewed and approved by the organization that originally reviewed and approved the documents. An alternative organization may be designated based on technical competence and capability. Timeliness guidelines should be implemented for distribution of new or revised controlled documents."

1.5.4.1.5

Process and Criteria for Withdrawal and Cancellation of Procedures

No requirements identified for this subelement.

1.5.4.1.6

Review and Preservation of Key Procedure Steps

Administrative procedures shall provide methods accessible to writers, reviewers, and users for documenting and reviewing the basis for key procedure steps. Procedure steps should include provisions to avoid overlooking requirements that need to be included during procedure development and eliminating the possibility of invalidating requirements previously incorporated during changes and revisions.

FACILITY REQUIREMENT SOURCE: DOE4330.4A Section 6.3.6

"Responsibilities for procedure program administration should be clearly defined. Procedures should be controlled in accordance with facility administrative requirements. All procedures should be periodically reviewed (e.g., every 2 years or prior to use for infrequently used procedures) for changes affecting content (such as reference material revisions, permanent incorporation of changes, incorporation of industry and in-house experience) and for philosophy and format enhancements and human-factors considerations. Checklists for the review should be utilized to ensure the scope and depth of the review is consistent and adequate. Procedure revisions should receive the same review and approval as new procedures as described in Sections 6.3.2 through 6.3.4 above, with the extent of these reviews varying dependent upon the extent of the revision. A method should exist to ensure that technical specification and other commitments are not inadvertently changed or deleted in the process of revising procedures."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.3.f

"Documentation of the reason for key procedure steps should be maintained and reviewed

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when implementing changes or revisions that alter these steps. This practice is important to ensure that the reason for a step is not overlooked."

1.5.5

Records and History Files

Records and history files are established which serve as documentary evidence of program activities and demonstrate compliance to program requirements. Historical files provide a traceable path from initial procedure development to current procedure status, including comment resolution, technical source/ input documents, technical review results, validation results, etc. Interface with configuration management.

1.5.5.1

Control for Records Generated During Policy and Procedure Development

Records providing documentary evidence of program activities and demonstrating compliance with applicable programmatic controls shall be captured and retained. Examples of records include: Review comments and their resolution; Completed safety evaluations of new procedures and their revisions; Independent safety review concerns, recommendations, and resolutions; Completed verification and validation checklists; and Approved documents containing approval signatures. Controls shall be implemented in facility procedures for the identification, generation, handling, and protection of policy and procedure records prior to turnover to the records management function for retention.

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.3

"Procedure changes and revisions are necessary to ensure that procedures reflect current operating practices and requirements. The review and approval process for each procedure change or revision should be documented. For the purpose of these guidelines, a "procedure change" refers to an on-the-spot change (whether for permanent or for one-time-only use). Procedure changes do not involve retyping or reissuing a procedure. "Procedure revisions" constitute a new, retyped edition of the procedure. Procedure changes and revisions should conform to the following practices:"

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XVI, Section C.3.f

"Documentation of the reason for key procedure steps should be maintained and reviewed when implementing changes or revisions that alter these steps. This practice is important to ensure that the reason for a step is not overlooked."

1.5.6

Computer Use

Controls exist which ensure files containing formatted policies and procedures residing on computer storage media are protected from unplanned, unauthorized, or inadvertent configuration changes. Actions such as authorized access, password use and protection, and periodic backup of files are prescribed. The following subelements are included:

- Software Security
- Configuration Integrity

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1.5.6.1

Software Security

Establishment of a system to provide security for computer files to ensure changes and entries are made only by qualified and authorized personnel. This will be achieved by identification of personnel who are qualified and authorized and by use of password protection or other access control to ensure only qualified and authorized personnel modify document files. Documents shall be assigned security classification to determine levels of access authorization.

SITE REQUIREMENT SOURCE: DOE1330.1D Section 8.g

"Each site will have procedures in place which discourage the abuse or misuse of the software operated at the site or any of the data associated with that software. Custom-developed software will have safeguards against abuse or misuse identified and incorporated into the software as early in the development process as possible."

SITE REQUIREMENT SOURCE: INPO-86-024-R1 Section 5.1

"The plant manager is responsible for the following:

- establishing and maintaining a software control program that identifies and controls existing and future software important to safe and reliable plant operation.
- establishing and maintaining software security that addresses the vulnerability of software to failures from both human error and equipment failures"

1.5.6.2

Configuration Integrity

A system shall be established and documented to control files containing formatted policies and procedures residing on computer storage media to ensure unplanned or inadvertent configuration changes do not occur through failures, errors, or unauthorized access. Incorporation of control measures into administrative procedures to control computer file configuration integrity, such as periodic back-up of computer files to external tape or disk media to permit recovery in case of equipment failure or human error.

SITE REQUIREMENT SOURCE: DOE1330.1D Section 8.h

"Each site will conduct systematic reviews to determine the need to update its own software management methodologies, policies, procedures, and conventions, including those related to the safeguarding of the software and its associated data from misuse. These reviews will assure that the appropriate computer security controls are in place and that they are effective and reflect currently accepted industry practices."

SITE REQUIREMENT SOURCE: INPO-86-024-R1 Section 5.2 Bullets 1,2,5,9

"The computer engineer is responsible for the following:

- Tracking of all software design and modifications requests. Developing, implementing, and documenting the details of the software control program.
- Developing and implementing software security measures.

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- Assembling software design or modification packages and verifying that all aspects such as design reviews, testing, and security measures are fully documented."

1.6

OCCURRENCE REPORTING

Occurrence reporting is a process for identification and reporting of occurrences and "near miss" situations that could be precursors to more serious situations. This process should ensure that personnel are aware of their responsibility to recognize and report occurrences consistent with promulgated requirements. Such notification of reportable occurrences are made to DOE and appropriate Federal, state, tribal and local agencies on a timely basis. Qualified personnel correctly categorize the occurrence and provide appropriate notifications. This allows notifications to be made with consistency in format and content to permit adequate assessment and appropriate response. A system also exists to ensure adequate action and follow-up is performed.

The Tank Farm Facility must demonstrate a fully functional occurrence reporting system.

1.6.1

Identification

The Occurrence Reporting process is a mechanism for personnel to identify and report occurrences and "near miss" situations on a real-time basis. Controls are established for the review and screening of activities and documentation for after-the-fact identification of such occurrences.

SITE REQUIREMENT SOURCE: DOE5000.3B Section 8.a.(1)

"Occurrence Categorization and Notification Process.

The facility staff and operators shall identify and promptly notify the Facility Manager of abnormal events and conditions and record and archive all information pertaining to such occurrences."

SITE REQUIREMENT SOURCE: DOE5500.1B Section 10.w(26)(a)1

"Ensure the proper identification, categorization, and notification of emergencies or other reportable occurrences to line management and the HQ EOC, in accordance with applicable DOE policies and requirements;"

1.6.2

Categorization

Controls are established which specify occurrence or "near miss" situation categorization methodology and process, including categorization criteria and elevation of occurrence category to a higher level in case of uncertainty. Categorization criteria are consistent and integrated with site and/or facility emergency plans and include provisions for annual review and updating. Such criteria are readily available to facility personnel, including first-line management.

SITE REQUIREMENT SOURCE: DOE/EH0135 EP.6.1

"A system of Emergency Action Level criteria is established to aid in properly classifying events."

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SITE REQUIREMENT SOURCE: DOE/EH0135 EP.6.2

"Classification of emergency events is consistent with current DOE requirements as stated in DOE 5500.2A."

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.2.3

"An effective program for reporting unusual occurrences exists. The threshold for classification of unusual occurrences is appropriate and interpreted consistently."

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.5.2

"Unusual events are reported to and reviewed by management for safety implications. Events are classified as unusual events in compliance with DOE 5484.1 and DOE 5000.3A."

SITE REQUIREMENT SOURCE: DOE5000.3B General Attachment I

The purpose of this attachment is to categorize a list of occurrences so that DOE field and operating contractors understand the degree of significance which is associated with the emergency, unusual, and off-normal categories defined in DOE 5000.3B. It provides a minimum set of standards necessary to allow specific sites/facilities to develop and document specific Reportable Occurrences applicable to their operations.

SITE REQUIREMENT SOURCE: DOE5000.3B Section 7.a.(1)(2)(3)

"Categorization.

Categorization of Reportable Occurrences shall be made as soon as practical and, in all cases, within 2 hours of identification. If categorization is not clear, then the occurrence shall be initially categorized at the higher level being considered and DOE notified in accordance with this Order. The occurrence categorization shall either be elevated, maintained, or lowered as information is made available. The categories of Reportable Occurrences are:

(1) Emergencies. Emergencies are the most serious occurrences and require an increased alert status for onsite personnel and, in specified cases, for offsite authorities. The detailed definitions, criteria, and classifications of emergencies and appropriate emergency responses to be taken are provided in DOE 5500.2B. The types of occurrences that are to be categorized as emergencies are:

(a) Any unintentional nuclear criticality that results or could result in actual or potential facility damage or release of radioactive material to the environment;

(b) Any actual or potential release of material to the environment which results or could result in significant offsite consequences;

(c) Any natural or man-made event posing an actual or potential threat to the integrity of the facility that results or could result in significant offsite consequences;

(d) Any event in process or having occurred which involves an actual or potential substantial degradation of the level of safety of the facility that results or could result in significant offsite consequences;

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(e) Any safeguards or security event which is an actual or potential threat to DOE operations, facilities, or personnel, and results or could result in significant effects on the public health and safety and/or on national security; or

(f) Any event which requires activation of the site emergency plan.

(2) Unusual Occurrences. An unusual occurrence is a non-emergency occurrence that has significant impact or potential for impact on safety, environment, health, security, or operations. The types of occurrences that are to be categorized as unusual occurrences are those that:

(a) Result in the release of radioactive or hazardous materials above limits established in, or violation of, safety, environmental, or health requirements defined in Federal permits, Federal regulations, or DOE standards; (b) Are significant internal or external threats to safety, environment, health protection, or the ability of a facility to operate;

(c) Involve significant degradation of safety class equipment or environmental, safety, security, or health conditions;

(d) Result in fatalities, exposures to hazardous or radioactive materials or offsite or onsite contamination that do not meet emergency criteria defined in DOE 5500.2B, but are in excess of regulatory limits, failure of environmental monitoring equipment necessary to demonstrate compliance, failure of safety equipment or systems reducing the capability below a minimum required safety function, or significant delay or cost in operations;

(e) Result in the actuation of emergency systems or engineered safety features, except under approved testing;

(f) Violate Technical Safety Requirements, (technical specifications, operational safety requirements), or involve an unreviewed safety question;

(g) Violate DOE safety requirements, environmental requirements, or result in the loss of control or release of radioactive material above allowable limits;

(h) Result in the release of a hazardous substance or material that exceeds a reportable quantity and is not federally permitted as defined in Attachment I; or

(i) Result in failure or significant degradation of administrative controls which are required to ensure safety, security, or environmental protection.

(3) Off-Normal Occurrences. Off-normal occurrences are abnormal or unplanned events or conditions that adversely affect, potentially affect, or are indicative of degradation in, the safety, security, environmental or health protection performance or operation of a facility. The types of occurrences that are to be categorized as off-normal occurrences are those that:

(a) Result in the release of radioactive or hazardous materials below limits established by Federal permits, Federal regulations, or DOE standards but that must be reported in writing to State or local agencies in other than routine monthly/quarterly reports;

(b) Are internal or external threats to safety, security, environmental, or health protection or the ability of a facility to operate;

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- (c) Involve degradation of environmental, safety, security, or health conditions;
- (d) Result in serious personnel injury or significant lost workdays; personnel contamination, assimilation, exposure, or significant onsite or offsite contamination of hazardous or radioactive materials in excess of administrative limits but within regulatory limits; or degradation of environmental monitoring equipment necessary to demonstrate compliance;
- (e) Result in violation of safety, environmental, or health administrative limits;
- (f) Involve operational procedural violations, including maintenance and administrative procedures which have the potential to impact the safety, security, environmental or health performance, or operation of a facility; or
- (g) Involve discovery of a condition that could prevent the functioning of administrative controls necessary to ensure safety or environmental protection."

SITE REQUIREMENT SOURCE: DOE5000.3B Section 8.a.(3)

"The Facility Manager shall categorize the occurrence as required in Paragraph 7a of this Order utilizing the facility specific procedures developed in accordance with Paragraph 8d(2) of this Order. For occurrences resulting from and directly related to a previously identified cause which is currently documented in a nonfinalized Occurrence Report, the Facility Manager, with concurrence from the Facility Representative and Program Manager, may submit a 10-Day Update Report in lieu of a new Occurrence Report."

SITE REQUIREMENT SOURCE: DOE5500.1B Section 10.w(17)

"Develop appropriate plans and procedures for timely and accurate determination of the emergency class, notification, and reporting of emergency events;"

SITE REQUIREMENT SOURCE: DOE5500.1B Section 10.w(26)(a)1

"Ensure the proper identification, categorization, and notification of emergencies or other reportable occurrences to line management and the HQ EOC, in accordance with applicable DOE policies and requirements;"

FACILITY REQUIREMENT SOURCE: DOE5500.2B Section 11.a(1)(2)

"CATEGORIES AND CLASSES OF EMERGENCY EVENTS.

Emergencies which involve or affect DOE are grouped into three broad categories defined as Operational, Energy, and COG. These emergency events may result from operations of facilities, accidents, hostile attack, or catastrophic earthquakes or other natural phenomena. These three categories of emergencies are further divided into classes by degree of severity depending on the actual or potential consequence of the emergency situation. Emergency classes for each category of DOE emergency are defined as follows:

a. Operational Emergencies.

(1) Operational Emergencies are significant accidents, incidents, events, or natural phenomena which have, or can potentially, seriously degrade the safety or security of DOE facilities.

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Operational Emergencies apply to DOE reactors and other DOE facilities (nuclear and non-nuclear) involved with hazardous materials; DOE-controlled nuclear weapons, components, or test devices; DOE safeguards and security events; and transportation accidents involving hazardous material under DOE control.

(2) The three classes of Operational Emergencies are defined as follows, listed in order of increasing severity: Alert, Site Area Emergency, and General Emergency. Differentiation of these classes by severity is for the purpose of specifying appropriate emergency actions, including required response activities and notifications, commensurate with the degree of hazard presented by the event. Less severe events are reported through the "Unusual Occurrence" and "Off-Normal Occurrence" process described in DOE 5000.3A."

FACILITY REQUIREMENT SOURCE: DOE5500.3A Section 11.c(3)

"Operational Emergency Event Classes. Operational Emergencies involving or affecting DOE facilities must be characterized as one of the Operational Emergency classes (e.g., Alert, Site Area Emergency, or General Emergency) in accordance with DOE 5500.2B. EALs, the specific criteria used to recognize and categorize events, must be developed for the spectrum of potential Operational Emergencies identified by the hazards assessment. EALs form the basis for notification and participation of offsite organizations and for determining what and when protective measures will be implemented. EAL initiating conditions (i.e., individual instrument readings, equipment status, valve positions, parameter values, on-site and/or off-site monitor readings, etc.) must be specifically identified in procedures and must be observable and recognizable in a timely manner by responsible personnel. The EALs and related information must be consistent and integrated with the emergency plans and procedures of off-site Federal, state, tribal, and local organizations, and should be reviewed annually, as appropriate, by all parties involved in response activities."

1.6.3

Notification

Controls exist which ensure that notifications of reportable occurrences are made to DOE and appropriate Federal, state, tribal and local agencies on a timely basis. Criteria exist such that notifications are made with consistency in format and content to permit adequate assessment and appropriate response.

SITE REQUIREMENT SOURCE: DOE/EH0135 EP.6.4

"Notification systems and procedures minimize distraction of operating personnel and include, as appropriate, the use of preformatted messages. Notification is conducted in a timely manner."

SITE REQUIREMENT SOURCE: DOE/EH0135 EP.6.5

"Notifications include the emergency response organization, local and Headquarters DOE elements, and State and local emergency response agencies, as appropriate."

SITE REQUIREMENT SOURCE: DOE5000.3B Section 7.b.

"Notification. The emphasis for both oral and documented notifications is on providing clear and succinct descriptions of the occurrence, and brief, concise descriptions of both the operating conditions of the facility at the time of the occurrence and the immediate actions

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taken, including results, if known. Requirements for oral and documented notification of Reportable Occurrences are as follows:

(1) **Emergencies.** Oral notification to DOE and offsite authorities of emergencies shall be made within 15 minutes or less of categorization. However, recognizing that the majority of, if not all, emergency occurrences will result in generating external interest, oral notification to DOE should be accomplished as soon as possible. Emergency criteria are defined by DOE Order 5500.2B.

Facility implementation procedures for DOE Order 5500.2B should identify the specific criteria for emergencies. These should be included or referenced in the facility specific procedures developed as required by Paragraph 8d of this Order. If the requirements of DOE Order 5500.2B have been implemented, then all oral notification requirements shall be satisfied in accordance with DOE Order 5500.2B. A Notification Report shall be prepared and submitted as soon as practical but, in all cases, before the close of the next business day from the time of categorization (not to exceed 80 hours).

(2) **Unusual Occurrences.** Oral notification to DOE of unusual occurrences shall be as soon as sufficient information is obtained to indicate the general nature and extent of the occurrence but, in all cases, within 2 hours of categorization. However, oral notification to DOE should be accomplished as soon as possible for those occurrences judiciously determined to likely generate external interest. A Notification Report shall be prepared and submitted before the close of the next business day from the time of categorization (not to exceed 80 hours).

(3) **Off-Normal Occurrences.** For off-normal occurrences, oral notification to DOE is not mandatory; however, a Notification Report shall be prepared and submitted before the close of the next business day from the time of categorization (not to exceed 80 hours).

(4) **Categorization Changes.** Any changes in categorization shall be documented in a 10-Day Occurrence Report and submitted before the close of the next business day from the time of recategorization (not to exceed 80 hours). A justification for the new categorization shall be included in the report."

SITE REQUIREMENT SOURCE: DOE5000.3B Section 7.b.(1)(2)(3)(4)

"Notification.

The emphasis for both oral and documented notifications is on providing clear and succinct descriptions of the occurrence, and brief, concise descriptions of both the operating conditions of the facility at the time of the occurrence and the immediate actions taken, including results, if known. Requirements for oral and documented notification of Reportable Occurrences are as follows:

(1) **Emergencies.** Oral notification to DOE and offsite authorities of emergencies shall be made within 15 minutes or less of categorization. However, recognizing that the majority of, if not all, emergency occurrences will result in generating external interest, oral notification to DOE should be accomplished as soon as possible. Emergency criteria are defined by DOE Order 5500.2B. Facility implementation procedures for DOE Order 5500.2B should identify the specific criteria for emergencies. These should be included or referenced in the facility specific procedures developed as required by Paragraph 8d of this Order. If the requirements of DOE Order 5500.2B have been implemented, then all oral notification requirements shall be satisfied in accordance with DOE Order 5500.2B. A Notification Report shall be prepared and

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submitted as soon as practical but, in all cases, before the close of the next business day from the time of categorization (not to exceed 80 hours).

(2) Unusual Occurrences. Oral notification to DOE of unusual occurrences shall be as soon as sufficient information is obtained to indicate the general nature and extent of the occurrence but, in all cases, within 2 hours of categorization. However, oral notification to DOE should be accomplished as soon as possible for those occurrences judiciously determined to likely generate external interest. A Notification Report shall be prepared and submitted before the close of the next business day from the time of categorization (not to exceed 80 hours).

(3) Off-Normal Occurrences. For off-normal occurrences, oral notification to DOE is not mandatory; however, a Notification Report shall be prepared and submitted before the close of the next business day from the time of categorization (not to exceed 80 hours).

(4) Categorization Changes. Any changes in categorization shall be documented in a 10-Day Occurrence Report and submitted before the close of the next business day from the time of recategorization (not to exceed 80 hours). A justification for the new categorization shall be included in the report."

SITE REQUIREMENT SOURCE: DOE5000.3B Section 7.c.

"Follow-up Notification. In addition to the initial oral notifications required in Paragraph 7b, follow-up oral notification shall also be made to DOE for any of the following:

(1) Any further degradation in the level of safety of the facility or other worsening conditions, including those that require the declaration of any emergency class as defined by DOE Order 5500.2B, if such a declaration has not been previously made;

(2) Any change from one emergency class (as defined in DOE Order 5500.2B) or category (as defined by this Order) to another; or

(3) Termination of an emergency."

SITE REQUIREMENT SOURCE: DOE5000.3B Section 8.a.(5)

"For oral notification, the Facility Manager shall simultaneously contact the DOE Facility Representative and the Headquarters (HQ) Emergency Operations Center (EOC) through which the DOE Program Manager and any other necessary program staff can be located and direct communications links with the Facility Manager established. The HQ EOC function here is to facilitate communications within line organizations and to record and archive conversations. To facilitate this archival function, the oral notification shall include as many of the required report fields [see discussion in Attachment II, Section 1, regarding Fields 1-18 identified with an asterisk (*)] as known at the time of the oral notification with particular emphasis on clear and succinct descriptions of the occurrence (Field 15); brief, concise descriptions of the operating conditions of the facility at the time of the occurrence (Field 16); and immediate actions taken, including results, if known (Field 18). The Facility Manager may use the local Field/Site EOC to expedite establishing the direct communication link required above. To promote common understanding, the use of jargon should be avoided and uncommon or facility/ site-specific abbreviations and acronyms should be fully described in oral notifications and spelled out in subsequent written reports."

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FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter VII, Section C

***1. Notification Procedures**

Procedures should be developed to address appropriate notifications and should include the following elements:

- a. Specific responsibilities for notifications;
- b. Identification of events and conditions requiring notifications;
- c. Identification of primary and alternate personnel to be notified for various situations;
- d. Establishment of time requirements for notifications that are consistent with the facility emergency plan; and
- e. Definition of recordkeeping requirements that documents the reason for notifications, the time of notifications, and the person notified.

2. Notification Responsibility

The operations supervisor should ensure that all appropriate personnel receive notification when required. The actual notification of specific individuals or agencies may be accomplished by other individuals.

3. Names and Phone Numbers

Names of primary and alternate contacts and current phone numbers and page codes should be readily available to the person assigned to make the notifications.

4. Documentation

All notifications should be documented. Fill-in-the-blank forms for different types of situations might be useful as a checklist and for providing necessary documentation. In any case, a formal record of notifications should be maintained.

5. Communication Equipment

Adequate communication equipment should be maintained in the main control area to meet the objectives of this chapter."

SITE REQUIREMENT SOURCE: DOE5480.5 Section 8.g

"Basic Requirements. The environment, safety, and health program for nuclear facilities shall include the following:

Notification, investigation, and reporting of occurrences and utilization of a follow up system to assure remedial action has been implemented."

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SITE REQUIREMENT SOURCE: DOE5500.1B Section 10.w(17)

"Develop appropriate plans and procedures for timely and accurate determination of the emergency class, notification, and reporting of emergency events;"

SITE REQUIREMENT SOURCE: DOE5500.1B Section 10.w(26)(a)1

"Ensure the proper identification, categorization, and notification of emergencies or other reportable occurrences to line management and the HQ EOC, in accordance with applicable DOE policies and requirements;"

FACILITY REQUIREMENT SOURCE: DOE5500.3A Section 11.c(4)

"Notification. Notification and communication of emergency information must be consistent with the requirements of DOE 5000.3A and 5500.2B. Provisions must be in place for prompt initial notification of appropriate DOE elements and other Federal, state, tribal, and local organizations, and for continuing effective communication among the response organizations throughout an emergency. The content and format of the initial notification and follow-up messages must be prearranged and standardized in the emergency plan. The handling of classified and/or controlled information during an emergency must be in accordance with established procedures and DOE requirements.

1.6.4

Investigation

Controls exist which ensure occurrences are investigated in a timely and consistent manner by qualified personnel to determine event-related aspects such as: reportability, sequence of events, equipment and personnel performance and adequacy of procedures. The extent of investigation is dependent upon event severity or potential consequences. Methods for reconstructing and analyzing events include: interviewing, data collection, root cause analysis, human performance evaluations, and information from previous investigations of similar events. Event severity also dictates qualifications of investigation team members, independence of investigation team members, and organizational affiliation, e.g., investigations conducted by DOE personnel.

SITE REQUIREMENT SOURCE: DOE/EH0135 EP.6.9

"Records and logs are kept to enable review and reconstruction of actions taken during an emergency event."

SITE REQUIREMENT SOURCE: DOE5000.3B Section 8.b.(4)

"The Final Occurrence Report shall be prepared by the Facility Manager and submitted when the analysis of the occurrence has been completed, root cause(s) and contributing cause(s) finalized, corrective actions(s) determined and scheduled, and lessons-learned identified. This report shall be submitted to the DOE Facility Representative within 45 days of categorization of the occurrence. If the required analysis cannot be completed within 45 days, an update to the 10-Day Occurrence Report shall be submitted within the 45 days and shall include a detailed explanation of the delay and an estimated date for submittal of the Final Occurrence Report."

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SITE REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter VI, Section C.1,2,3,4,5

***1. Events Requiring Investigation**

Events that occur in the facility and adversely affect operations, personnel safety, or DOE requirements (DOE 5000.3A) should receive a thorough investigation. The criteria for when to perform an event investigation should be clearly established. Specific events requiring investigation should be listed for supervisory use, along with criteria for use in deciding what "near miss" situations should receive review. The following conditions and situations should require an investigation: an adverse effect on personnel or equipment results.

2. Investigation Responsibility

The operations supervisor or another manager should be responsible for event investigations. He/she may delegate specific investigations or portions of investigations to other personnel. For example, the initial review following a reactor trip might be conducted by the shift supervisor. Based on the results of the shift supervisor investigation, the need for further review will be established. Examples of specific tasks of an investigation that may be delegated include gathering necessary records, conducting interviews, recommending restart following a reactor trip, and determining the long-term corrective action to prevent recurrence. However, the overall responsibility for the consistency and thoroughness of event investigations should be the responsibility of the appropriate manager.

3. Investigator Qualification

The credibility of the investigative process is highly dependent upon the knowledge and experience of the individuals performing the investigation. It is important that individuals performing an investigation be technically knowledgeable and well respected by the facility staff. Additionally, investigators should not have a bias or a vested interest in the results of the investigation. Investigators should be trained in facility systems and operations and other major disciplines appropriate for the event under investigation. Additionally, investigators should be trained in techniques for conducting an investigation. This can include training in areas such as root-cause determination, diagnostics for plant events, interviewing techniques, and factors affecting human performance.

4. Information to be Gathered

Sufficient data must be collected to allow the event investigators to perform a reconstruction and analysis of the event. An individual should be assigned responsibility for collecting the required information and assembling the information for review. It is important to collect the necessary information as soon as possible after the event. This will minimize the possibility of losing information or that observers of the event will be unavailable. Information should be gathered in the following areas:

- a. Initial facility conditions.
- b. Statements of operators and personnel involved in the event (this should be permanently recorded).
- c. Pertinent computed printouts (post-trip log sequence of events) and strip charts.

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- d. Pertinent documentation (such as operator logs, radiation work permits, chemistry logs, and radiological surveys) as required to establish conditions prior to and during the event.

As listed above, statements of operators and facility personnel involved in the event should be obtained. This item is particularly useful because personnel observing or participating in an event can provide insights into the facility response during the event and into actions leading up to the event that would be not available from strip charts or other hard-copy data. Methods for collecting this information can vary; however, the event investigation containing relevant information should be permanently recorded for future reference.

When collecting hard copy (such as strip charts), it is important to annotate the data with its source, chart speed (if applicable), and a time mark to aid in coordinating the data during the reconstruction of the event. The collection of data should not interfere with the continued operation of the facility. Temporary interference should occur only if necessary to understand the event.

5. Event Investigation

Upon completion of the data collection, a structured review of the abnormal event should occur. The format of the investigation will depend upon the significance of the event. Each event investigation should include the following steps, with emphasis placed on each individual step depending upon the severity or potential consequences of the event.

a. Event Reconstruction

The abnormal event should be reconstructed using the collected information. When applicable, this is best accomplished using the sequence of events recorder printout as a basis.

If the sequence of events printout is not available (or not applicable) or if the abnormal event was not of sufficient magnitude or nature to impact the sequence of events recorder, then a chronological listing of events should be developed. It is desirable to include the personnel involved in the event in the reconstruction process.

b. Event Analysis and Evaluation

Once the facts of the event have been established, the event should be analyzed to determine the response of equipment and involved personnel. During the analysis, emphasis should be placed on determining the proper response of systems, comparison of actual and expected response, adequacy of procedures, and factors affecting human performance. When available, the event should be compared with previous event investigations of similar events or transients. During the analysis, a safety evaluation should be performed to ascertain the proper response of equipment and to identify detrimental effects on facility equipment. If the event was a process shutdown, the acceptability of restart may be determined at this time. In some instances, however, steps 5c and 5d below may also be required prior to restart. Supervisors need to be sure no further corrective action is required prior to restart.

c. Root-Cause Determination

The root cause of the event should be determined. The root cause can be defined as those causal factors that, if corrected, would preclude a recurrence of the event.

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d. Corrective Action Determination

Appropriate corrective action should be established for each event investigation, and specific personnel should be assigned responsibilities for the corrective action. Corrective action can take the form of procedure changes, training, design modifications, and changes to administrative controls. The final approval for corrective action should be made by the facility manager."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter VI, Section C.9

"Sabotage

Acts of known or suspected sabotage are a special case of event investigations. If an act of sabotage is discovered or suspected, it is important to begin an investigation immediately and to accomplish the following:

- a. Determine the condition of the affected system(s) and ensure the operability of all safety-related systems;
- b. Decide if continued operation is justified or if systems are available to support safe facility shutdown; and
- c. Minimize the impact of discovered acts of sabotage and deter future acts of sabotage."

SITE REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter XI, Section C.3(last paragraph)

"To aid in event reconstruction, as much significant information as possible should be logged during emergencies and abnormal or unexpected events. However, logkeeping should not take precedence over controlling and monitoring the facility."

SITE REQUIREMENT SOURCE: DOE5480.5 Section 8.g

"Basic Requirements. The environment, safety, and health program for nuclear facilities shall include the following:

Notification, investigation, and reporting of occurrences and utilization of a follow up system to assure remedial action has been implemented."

SITE REQUIREMENT SOURCE: DOE5500.1B Section 10.w(26)(a)5

"Provide for investigation of root cause(s) and corrective actions to prevent recurrence;"

FACILITY REQUIREMENT SOURCE: DOE5500.3A Section 11.d(3)

"Emergency records which contain information for review and reconstruction of major communications and actions taken during a emergency. These records include operator logs and documentation produced by the emergency response organization. These records shall be maintained by the individual responsible for program administration."

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1.6.5

Reporting

Reportable occurrence information, including results of investigations and analysis, is submitted on a timely basis and documented with accuracy and consistency in format and content to permit adequate assessment of event significance, corrective action, and lessons learned.

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.2.3

"An effective program for reporting unusual occurrences exists. The threshold for classification of unusual occurrences is appropriate and interpreted consistently."

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.5.2

"Unusual events are reported to and reviewed by management for safety implications. Events are classified as unusual events in compliance with DOE 5484.1 and DOE 5000.3A."

SITE REQUIREMENT SOURCE: DOE/EH0135 TS.4.4

"Information on potentially significant safety-related deficiencies is reported to management on a timely basis in accordance with DOE 5000.3 and DOE 5484.1."

SITE REQUIREMENT SOURCE: DOE5000.3B Section 7.d.

"Occurrence Report Preparation.

An Occurrence Report shall be prepared for all Reportable Occurrences, according to the instructions provided in Attachment II, INSTRUCTIONS FOR COMPLETING AN OCCURRENCE REPORT. The submission of Occurrence Report information is required as follows:

- (1) The Notification Report shall be prepared as required in Paragraphs 7b and 8a(10) of this Order;
- (2) Within 10 working days of categorization, the contractor shall submit a 10-Day Occurrence Report utilizing the information available at that time;
- (3) The 10-Day Occurrence Report shall be updated when significant new information is available and submitted as a 10-Day Update Report; and
- (4) The Final Occurrence Report shall be prepared and distributed by the contractor in accordance with this Order when the cause of the occurrences has been analyzed, root cause and contributing causes determined, corrective actions determined and scheduled, and lessons learned identified."

SITE REQUIREMENT SOURCE: DOE5000.3B Section 7.e.(1)

"At facilities where classified operations are not conducted and classified information is not generated, authorized classifier (AC) reviews of Occurrence Reports are not required. Similarly, at facilities where UCNI operations are not conducted and UCNI is not generated, review of the Occurrence Reports by a Reviewing Official is not required."

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SITE REQUIREMENT SOURCE: DOE5000.3B Section 8.a.(10)

"The Facility Manager shall prepare and submit the Notification Report (fields 1 through 18 of the Occurrence Report), and distribute it to the DOE Facility Representative and Program Manager before the close of the next business day from the time of categorization (not to exceed 80 hours). When an unclassified Notification Report is submitted using the computerized DOE ORPS data base, Paragraph 8c(1) below, the distribution requirement is automatically satisfied."

SITE REQUIREMENT SOURCE: DOE5000.3B Section 8.b.(1)(2)(3)(4)

"(1) For every Reportable Occurrence, the Facility Manager shall determine and document in the Occurrence Report as soon as practical:

- (a) The significance, nature and extent of the event or condition;
- (b) The cause(s) of the event or condition, including the root cause, as appropriate; and
- (c) The corrective actions to be taken to correct the condition and prevent recurrence.

(2) Within 10 working days of categorization, the Facility Manager shall submit an Occurrence Report in accordance with subparagraph (6) below. The 10-Day report shall include any updated information provided by the DOE Facility Representative in accordance with subparagraph (3) below. Complete information required in subparagraph (1) above should be available at that time for the majority of Reportable Occurrences. For recurring occurrences identified in 8a (3) above (after receiving the required concurrences), a 10-Day Update Report shall be submitted with the new information by the close of the next business day from the time of categorization (not to exceed 80 hours).

(3) The DOE Facility Representative, in consultation with the DOE Program Manager, should provide the Facility Manager his or her assessment of the occurrence, initial and proposed corrective actions, follow-up by the contractor, and any other actions DOE has taken since the occurrence in a timely manner for inclusion in the Occurrence Report. If the computerized DOE ORPS data base is being used, the Facility Representative's comments should be provided via the data base. The Facility Representative's comments are not mandatory.

(4) The Final Occurrence Report shall be prepared by the Facility Manager and submitted when the analysis of the occurrence has been completed, root cause(s) and contributing cause(s) finalized, corrective actions(s) determined and scheduled, and lessons-learned identified. This report shall be submitted to the DOE Facility Representative within 45 days of categorization of the occurrence. If the required analysis cannot be completed within 45 days, an update to the 10-Day Occurrence Report shall be submitted within the 45 days and shall include a detailed explanation of the delay and an estimated date for submittal of the Final Occurrence Report."

SITE REQUIREMENT SOURCE: DOE5000.3B Section 8.b.(6)

"The Occurrence Reports (10-Day and Final) shall be prepared by the Facility Manager and distributed to the Program Manager, the affected program self-assessment group, PSOs, the Heads of all Field Organizations, the DOE Facility Representative, Office of Nuclear Safety (NS-1), Office of Environment, Safety and Health (EH-1), all DOE Management and

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Operations (M&O) contractors, and the Office of Nuclear Safety Policy and Standards (NE-70). For those occurrences involving safeguards and security issues, copies of the Occurrence Reports should be provided to the Office of Security Affairs (SA-1). When unclassified Occurrence Reports (10-Day and final) are entered onto the DOE ORPS data base, Paragraph 8c(1) below, by the Facility Manager, the distribution requirement is automatically satisfied. Distribution of written classified reports shall be defined by the cognizant PSO based on a "need to know."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter VI, Section C.6

"An investigative report should be prepared in a timeframe determined by the responsible authority. The report should include a description of the event (including pertinent conditions), a discussion of the impact of the event, root cause, the lessons learned, and the proposed corrective action(s). The report should include positive aspects of the event (such as particularly effective personnel responses). The investigative report should be approved by the facility manager and reviewed by appropriate supervisors, managers, and the safety review committee."

SITE REQUIREMENT SOURCE: DOE5480.5 Section 8.g

"Basic Requirements. The environment, safety, and health program for nuclear facilities shall include the following:

Notification, investigation, and reporting of occurrences and utilization of a follow up system to assure remedial action has been implemented."

SITE REQUIREMENT SOURCE: DOE5500.1B Section 10.w(17)

"Develop appropriate plans and procedures for timely and accurate determination of the emergency class, notification, and reporting of emergency events;"

SITE REQUIREMENT SOURCE: DOE5500.2B Section 12.b(2)(d)

"Provide written reports concerning the emergency event as soon as practical but within 24 hours of event categorization; and"

1.6.6

Tracking

Tracking systems exist and are maintained to ensure that program activities and trends are managed. Key activities included in the tracking program are: occurrence report status and identified milestones, corrective action determination, and implementation status and trending evaluation.

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter VI, Section C.8

Event Trending

Patterns of deficiencies such as operator errors or inadequate procedures should be trended. A periodic summary report of events, causes, and trends should be submitted to department

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heads, the facility manager, and appropriate managers. Department heads should ensure training programs include appropriate material from the summary report."

SITE REQUIREMENT SOURCE: DOE5480.5 Section 8.g

"Basic Requirements. The environment, safety, and health program for nuclear facilities shall include the following:

Notification, investigation, and reporting of occurrences and utilization of a follow up system to assure remedial action has been implemented."

1.7

COMPLIANCE MANAGEMENT

A formal Compliance Management (CM) Process is established to ensure that requirements and commitments are identified and incorporated into implementing documents and training of personnel. The CM process establishes a control and decision process for accepting requirements, management of internal and external interfaces, taking exemptions from requirements, flowdown of requirements into the operating organizations, and identification and tracking of commitments.

This document does not attempt to identify all reference documents applicable to a compliance management program but those which directly support or supplement the existence of a particular element/subelement of a baseline program. The identified reference documents include those considered to the "drivers" or those which specifically mandate the need for a particular element/attribute as an essential feature of a baseline program.

1.7.1

Organization and Administration

This element addresses the organization and administration of an effective Compliance Management Program. The formal organization and administration of a Compliance Management Program is necessary to ensure that company activities involving official interface and communication with DOE or other regulatory entities are properly coordinated and conducted in a timely, effective, and consistent manner.

There are several important aspects of the organization and administration of Compliance Management to be implemented.

- A policy is developed and issued to communicate to employees, managements expectations regarding the proper coordination and conduct of official interfaces and communications with DOE or external regulatory entities. Consistent with the expectations of management, the policy defines the establishment of a compliance management organization within WHC which will serve as the principle coordinator of assist with coordination of such interfaces and communications.
- A policy regarding the establishment of a Compliance Management process addresses the following:
- The responsibilities of the compliance management personnel relative to the coordination of official verbal and written communications between the company and DOE or external regulatory entities.

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- The management personnel responsible for the implementation and administration of the compliance management process.
- The development of implementing procedures which translate managements' expectations and the policy regarding the compliance management function into a defined and documented process.
- Duties and responsibilities of personnel performing compliance activities are clearly defined and documented through organizational charts, functional descriptions, and job/position descriptions. Duties and responsibilities are incorporated into program and implementation level policies and procedures.
- Formal definition of both internal and external interfaces is established to facilitate proper communication and coordination and to ensure proper and efficient conduct of compliance activities.

Definition of interfaces addresses the following organizations and management positions:

- **Plant Manager/Senior Managers**
 - Commitments Management
 - Correspondence Control
 - Legal
 - Public/Corporate Communications
 - Operations
 - Engineering
 - Environmental and Waste Management
 - Standards/Compliance Management
 - Planning and Scheduling
 - Other organizations directly responsible for notifications and event reporting to DOE or external regulatory entities
- Define staffing and qualification requirements necessary to ensure that the compliance management personnel are well-qualified and experienced, and that sufficient staffing exists for the effective conduct of compliance management functions.

SITE REQUIREMENT SOURCE: ANSI/ANS-3.2-88 Section 3.2

"Assignment of Authority and Responsibility. It is essential that all members of the owner organization involved in operation of nuclear power plants, including those at the highest management levels, recognize the necessity that the plants be operated under a well formulated and detailed administrative controls and quality assurance program. Lines of authority, responsibility and communication for the plant operating and support organizations shall be established and defined. These relationships shall be documented and updated, as appropriate, in the form of organizational charts, functional descriptions of departmental responsibilities and relationships and job descriptions for key personnel positions or in equivalent forms of documentation."

SITE REQUIREMENT SOURCE: DOE5480.19 Section 4

"It is the policy of the Department that the conduct of Operations at DOE facilities be managed with a consistent and auditable set of requirements, standards, and responsibilities and that,

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consistent with the requirement of this Order:

- a. Operations at DOE facilities be managed, organized, and conducted in a manner to assure an acceptable level of safety;
- b. Operators at DOE facilities have procedures in place to control the conduct of their operations;
- c. Line organizations review existing and planned programs important to safe and reliable facility operations; and
- d. Line organizations assess the effectiveness of corporate directives, plans, or procedures at facilities under their cognizance."

FACILITY REQUIREMENT SOURCE: DOE5480.20 Chapter I, Section 11

"EXCEPTIONS TO TRAINING REQUIREMENTS. Initial training programs are developed for persons with entry-level knowledge and skills. Some candidates may already possess the necessary knowledge and skills for their job, and may be excepted from areas of the training program on the basis of prior education, experience, and training. Proficiency testing is the preferred method of excepting persons from specific areas of training. In all cases, the requisite examinations to establish qualification shall be completed."

FACILITY REQUIREMENT SOURCE: INPO-90-015 Part OA.4 Criteria C&E

- "C. Timely action is taken to anticipate and fill vacancies. Selection of personnel is based on factors such as qualifications, experience, merit, and ability.
- E. Position incumbents, including contract personnel, meet prescribed job qualification requirements. Sufficient numbers of qualified replacements are available to fill vacancies in key positions."

SITE REQUIREMENT SOURCE: WHC-SME-SA 1.7.1A

A policy is developed and issued to communicate to employees, managements expectations regarding the proper coordination and conduct of official interfaces and communications with DOE or external regulatory entities. Consistent with the expectations of management, the policy defines the establishment of a compliance management organization within WHC which will serve as the principle coordinator of assist with coordination of such interfaces and communications.

SITE REQUIREMENT SOURCE: WHC-SME-SA 1.7.1B

A policy regarding the establishment of a Compliance Management process addresses the following:

- A. The responsibilities of the compliance management personnel relative to the coordination of official verbal and written communications between the company and DOE or external regulatory entities.

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- B. The management personnel responsible for the implementation and administration of the compliance management process.
- C. The development of implementing procedures which translate managements' expectations and the policy regarding the compliance management function into a defined and documented process.

SITE REQUIREMENT SOURCE: WHC-SME-SA 1.7.1C

Duties and responsibilities of personnel performing compliance activities are clearly defined and documented through organizational charts, functional descriptions, and job/position descriptions. Duties and responsibilities are incorporated into program and implementation level policies and procedures.

1.7.2

Review And Acceptance of New Requirement

The CM process ensures that new requirements promulgated by federal, state, local, and tribal authorities are reviewed for applicability to the site/facility in a timely manner. Notification to organizations/programs should be timely and should solicit response as to applicability to specific operations/facilities.

The applicability of requirements to specific structures, systems, components, processes, and procedures are determined using existing processes between DOE offices and between the DOE office and its contractors. The product of these determinations become commitments to be managed. Two important aspects of managing commitments are review of commitments and the documentation & recording of commitments. Another important aspect of commitment management, is tracking the commitments relative to action status and closure. This aspect is addressed in more detail in section 1.7.5.

The compliance management function serves to ensure that proposed commitments are clear in terms of proposed action, scope, and organizational responsibility for fulfillment of the commitment or long term administration. This function also serves to ensure commitments made by the company to DOE or external regulatory entities are properly documented and recorded for subsequent follow-up action and as appropriate, long term administration.

FACILITY REQUIREMENT SOURCE: DOE5480.23 Attachment I, Section 3.a(2)

"SARs serve to define and control the safety basis and commitments for design, procurement, construction, and operation to assure safety at DOE nuclear facilities and selected nuclear operations. This Order defines the "safety basis" as the combination of information relating to control of hazards at a nuclear facility (including design, engineering analyses, and administrative controls) upon which DOE depends for its conclusion that activities at the facility can be conducted safely. The contractor takes the initiative to propose design, construction, operational, and maintenance commitments to assure facility safety. DOE approval action may include modification or addition to these commitments. This approach has the advantage of allowing contractors the freedom to tailor or adapt the DOE generic requirements to the specifics of the facility. The role of safety analyses and the SAR in recording the DOE-contractor consensus on how safety will be assured in ongoing nuclear operations is not just to support the initial safety review and approval for new facilities, but it must also define the basis for continuing operations. A corollary is that SARs must be kept up-to-date as facilities change or are modified. The process of preparing, submitting,

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reviewing, modifying, or approving SARs establishes the compliance basis for the nuclear safety program for each facility or operation in question. Likewise, the process for updating, upgrading, or amending SARs following DOE authorization is a vehicle by which the responsible contractor may amend and update its commitments to DOE that ensure the safety of the facility or operations."

FACILITY REQUIREMENT SOURCE: DOE5480.23 Attachment I, Section 4.d(2)

"All material associated with accident analyses or institution safety programs appearing in an SAR, including such assumptions, are to be taken as commitments to which the operating contractor proposes to adhere. The set of commitments must include facility-specific implementation of nuclear safety requirements. Examples of such commitments include TSRs, the Quality Assurance program plan, and the training program plan. Many commitments will constitute the working definitions of how the particular facility or operation proposes to comply with generic statutes, Federal rules, or DOE Directives."

FACILITY REQUIREMENT SOURCE: DOE5480.23 Attachment I, Section 4.d(3)

"The set of commitments must be sufficiently comprehensive to meet DOE's needs in its role as regulator of the safety of its facilities. The set of commitments must also be sufficiently comprehensive to meet DOE's needs as the responsible owner of its nuclear facilities in regard to safety. Many recent SARs for DOE nuclear facilities limit commitments to Technical Specifications or Operational Safety Requirements TS/OSRs (now called Technical Safety Requirements). These TS/OSRs, in turn, are often limited to those constraints on design or operation found significant to accidents with non-negligible offsite consequences. Such safety analysis practices may fall short of the requirements in this Order in one of several ways, as follows:"

FACILITY REQUIREMENT SOURCE: DOE5480.23 Attachment I, Section 4.d(3)(a)

"Consideration must be given to accidents that pose non-negligible risks to co-located workers, facility workers, and the environment."

FACILITY REQUIREMENT SOURCE: DOE5480.23 Attachment I, Section 4.d(5)

"This Order's language requiring adherence to commitments and assumptions applies only to DOE-approved SARs (paragraph 8 requirements). Adherence is not required, under the terms of this Order, prior to DOE approval. DOE may make compliance with commitments a requirement of facility operation in the interim while DOE review and approval is under way, and will commonly do so for already authorized facilities, but doing so is not mandatory according to the language of this Order."

FACILITY REQUIREMENT SOURCE: DOE5480.23 Attachment I, Section 4.d(6)

"This feature of this Order has been introduced to avoid problems associated with applying the new concept of commitments to SARs prepared prior to the effective date of this Order. There are a number of DOE nuclear facilities with out-of-date SARs. These preexisting SARs will come under the requirement to adhere to commitments only when the preexisting SAR is resubmitted under the terms of this Order that require upgrading and updating SARs. In this way, contractors will have an opportunity to verify whether a preexisting SAR would be

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problematic or out-of-date and make suitable changes, and DOE must review and approve the resubmitted SAR under the terms of this Order before it becomes subject to the requirement for adherence to commitments. Note, however, that all DOE nuclear facilities must ultimately have an SAR containing commitments subject to this requirement for compliance, unless a specific exemption from this Order is granted by DOE."

SITE REQUIREMENT SOURCE: DOE5480.23 Section 8

"Requirements - A contractor, as designated in writing by the PSO, who is responsible for the design, construction, or operation of DOE nuclear facilities shall be required to perform a safety analysis that develops and evaluates the adequacy of the safety basis for each such facility. The safety basis to be analyzed shall include management, design, construction, operation, and engineering characteristics necessary to protect the public, workers, and the environment from the safety and health hazards posed by the nuclear facility or non-facility nuclear operations. All contractors shall be held responsible for adhering to assumptions and commitments set forth in the safety analysis. Contractors shall be required to prepare, and shall submit to DOE for its approval, SARs documenting safety analyses for each DOE nuclear facility under their cognizance. Contractors responsible for conducting one or more non-facility nuclear operations are required to maintain up to date analyses of the safety of such operations and analyses documented in a form that is auditable by DOE. Attachment I provides guidance in greater detail than the requirements of this Order."

SITE REQUIREMENT SOURCE: WHC-SME-SA 1.7.2A

The CM process ensures that requirements promulgated by federal, state, local, and tribal authorities are reviewed for applicability to the site/facility in a timely manner. Notification to organizations/programs should be timely and should solicit response as to applicability to specific operations/facilities

SITE REQUIREMENT SOURCE: WHC-SME-SA 1.7.2B

The applicability of requirements to specific structures, systems, components, processes, and procedures are determined using existing processes between DOE offices and between the DOE office and its contractors. The product of these determinations become commitments to be managed.

SITE REQUIREMENT SOURCE: WHC-SME-SA 1.7.2C

The compliance management function serves to ensure that proposed commitments are clear in terms of proposed action, scope, and organizational responsibility for fulfillment of the commitment or long term administration. This function also serves to ensure commitments made by the company to DOE or external regulatory entities are properly documented and recorded for subsequent follow-up action and as appropriate, long term administration.

1.7.3

Interfaces With Regulators

The CM process ensures that routine interfaces are established with regulators to ensure notification of new and changing commitments and/or requirements. These interfaces allow a means of clarifying requirements and interpretation of expectations. Centralization of this interface position ensures a unified approach to implementation of commitments/requirements.

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Implementing procedures for CM establish routine internal interfaces to ensure appropriate flowdown of commitments/requirements into the Operations organizations. Key Management Systems/Compliance Management interfaces are described in section 1.11.

Compliance Management serves to ensure routine functional interface and coordination for DOE On-Site Observer activities and Formal Audits, Inspections, or Reviews by DOE or external entities.

SITE REQUIREMENT SOURCE: DOF5482.1B Section 9.c

"Functional appraisals shall be conducted by qualified specialists and involve the head as well as the staff of the organization being appraised."

SITE REQUIREMENT SOURCE: DOE5482.1B Section 9.d

"Internal appraisals shall be conducted at the operating level by persons not directly responsible for performance of the activities being appraised."

FACILITY REQUIREMENT SOURCE: INPO-86-009 Chapter 1 Section C.9

"Interfaces with Outside Organizations

The staff at the nuclear station interface with many outside organizations, such as the bargaining unit, federal regulatory agencies, state regulatory agencies and commissions, local governmental bodies, industry oversight and advisory groups, and insurance companies. The responsibility for interfacing with and making commitments to outside organizations should be clearly defined and understood. Measures, including appropriate reviews, should be in place to ensure information provided to outside organizations is complete and accurate. Station management should not acquiesce to outside organizations to the extent that management's primary responsibility - personnel safety and plant safety and reliability - is compromised."

FACILITY REQUIREMENT SOURCE: INPO-90-015 Part OA.1 Criteria E

"Interfaces with supporting groups, including corporate, are clearly defined and understood."

FACILITY REQUIREMENT SOURCE: SEN-16B-91 Attachment Paragraph 4

"Responsibilities:

● **Contractor**

- Prepare a plan which identifies the scope of work that must be completed before restart or startup. The plan will also include status of compliance with DOE Orders."

SITE REQUIREMENT SOURCE: SEN-20-90 Paragraphs 1 and 6

"Since I assumed office last year, significant changes have been made and others initiated relating to improving the management of the Department's operations and activities. While much progress has been made, there is one area that needs your personal attention and involvement. We need to improve how we interact with oversight groups. The Department has too often create the impression that it is not receptive to criticism from outside or even within

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DOE. I want the underlying conditions that have created this perception changed.

We will have "arrived" at my objectives in this area when all departmental elements welcome with open arms any authorized outside visitors and dare them to find something out of line that has not (a) already been found; (b) already been placed into a prioritized remedial action plan; and (c) already been incorporated in any operational procedures that need temporary adjustments until corrective actions have been completed. If they do, they have done us a favor."

SITE REQUIREMENT SOURCE: WHC-SME-SA 1.7.3A

The CM process ensures that routine interfaces are established with regulators to ensure notification of new and changing commitments and/or requirements. These interfaces allow a means of clarifying requirements and interpretation of expectations. Centralization of this interface position ensures a unified approach to implementation of commitments/requirements.

SITE REQUIREMENT SOURCE: WHC-SME-SA 1.7.3B

Implementing procedures for CM establish routine internal interfaces to ensure appropriate flowdown of commitments/requirements into the Operations organizations.

SITE REQUIREMENT SOURCE: WHC-SME-SA 1.7.3C

Compliance Management serves to ensure routine functional interface and coordination for DOE On-Site Observer activities and Formal Audits, Inspections, or Reviews by DOE or external entities.

1.7.4

Integration and Exemptions

The CM process ensures that applicable requirements are formally integrated through development and/or modification of appropriate policies and procedures.

A process is established which ensures that commitments to safety that are binding upon the design, construction, or operation of the facility are incorporated into the appropriate facility SAR as part of the SAR development/update process.

The CM process also provides a process for preparation, review, and submittal of exemption requests.

FACILITY REQUIREMENT SOURCE: DOE5480.23 Attachment I, Section 3.a(2)

"SARs serve to define and control the safety basis and commitments for design, procurement, construction, and operation to assure safety at DOE nuclear facilities and selected nuclear operations. This Order defines the "safety basis" as the combination of information relating to control of hazards at a nuclear facility (including design, engineering analyses, and administrative controls) upon which DOE depends for its conclusion that activities at the facility can be conducted safely. The contractor takes the initiative to propose design, construction, operational, and maintenance commitments to assure facility safety. DOE approval action may include modification or addition to these commitments. This approach has the advantage of allowing contractors the freedom to tailor or adapt the DOE generic requirements to the specifics of the facility. The role of safety analyses and the SAR in

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recording the DOE-contractor consensus on how safety will be assured in ongoing nuclear operations is not just to support the initial safety review and approval for new facilities, but it must also define the basis for continuing operations. A corollary is that SARs must be kept up-to-date as facilities change or are modified. The process of preparing, submitting, reviewing, modifying, or approving SARs establishes the compliance basis for the nuclear safety program for each facility or operation in question. Likewise, the process for updating, upgrading, or amending SARs following DOE authorization is a vehicle by which the responsible contractor may amend and update its commitments to DOE that ensure the safety of the facility or operations."

FACILITY REQUIREMENT SOURCE: DOE5480.23 Attachment I, Section 3.b(2)(b)

"This Order requires contractors to identify in their SARs specific commitments with respect to the management and organization of facility engineering, construction, and operation programs as well as TSRs and to justify these commitments as appropriate for the facility. In this way, contractors can tailor their safety program to the particulars of the facility. DOE, in its review, will agree to or amend these commitments, so that the acceptable bounds for operation and the basis for facility-specific safety inspection and enforcement standards are known to the operating contractor at the time of approval or facility authorization. Once the new system of safety analysis and DOE review and approval has been implemented, DOE and its operating contractors will have a much clearer mutual understanding of the effect of DOE safety requirements on individual facilities. Furthermore, this Order requires periodic update of the SARs, including updating of the commitments."

FACILITY REQUIREMENT SOURCE: DOE5480.23 Attachment I, Section 4.d(1)

"Commitments.

This Order requires that contractors carry out their responsibilities in accordance with the assumptions and commitments set forth in pertinent DOE-approved SARs. In other words, contractors are required to adhere to commitments made in SARs and to conduct operations in such a way that the assumptions made in the SAR are valid. Such assumptions may include, for example, assumptions in accident analyses about the initial conditions of facility operation that might be prevailing prior to an accident, and assumptions made in such institutional safety programs as quality assurance, emergency planning, personnel training and maintenance plans, or surveillance programs. In general, such assumptions about plant conditions and modes of operation should define the outer bounds of the envelope of allowable facility operation. A safety margin should be employed in accident analyses to allow for uncertainties. This margin should be selected to allow for error in measuring how close to the limit of allowed operation the facility or operation is, together with an additional margin for the uncertainties in the accident analysis. Margins should be known, quantified, and documented in the SAR."

SITE REQUIREMENT SOURCE: DOE5480.23 Section 8

"Requirements - A contractor, as designated in writing by the PSO, who is responsible for the design, construction, or operation of DOE nuclear facilities shall be required to perform a safety analysis that develops and evaluates the adequacy of the safety basis for each such facility. The safety basis to be analyzed shall include management, design, construction, operation, and engineering characteristics necessary to protect the public, workers, and the environment from the safety and health hazards posed by the nuclear facility or non-facility

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nuclear operations. All contractors shall be held responsible for adhering to assumptions and commitments set forth in the safety analysis. Contractors shall be required to prepare, and shall submit to DOE for its approval, SARs documenting safety analyses for each DOE nuclear facility under their cognizance. Contractors responsible for conducting one or more non-facility nuclear operations are required to maintain up to date analyses of the safety of such operations and analyses documented in a form that is auditable by DOE. Attachment I provides guidance in greater detail than the requirements of this Order."

SITE REQUIREMENT SOURCE: DOE5480.23 Section 9.c

"Periodic Updates of Safety Analysis Reports. Contractors shall be required to review and update as necessary, SARs annually, pursuant to this Order to ensure that the information in each SAR is current and remains applicable. Revisions shall be submitted to the PSO at least annually and shall reflect all changes implemented up to 6 months prior to the filing of the updated SAR. The DOE approval of any Unreviewed Safety Question pursuant to DOE 5480.21, amendments to the TSRs, and the material submitted by the contractor to the PSO in support of these approvals shall be considered an addendum to the SAR until the information is incorporated into the SAR as part of the next annual update."

SITE REQUIREMENT SOURCE: WHC-SME-SA 1.7.4A

The CM process ensures that applicable requirements are formally integrated through development and/or modification of appropriate policies and procedures.

SITE REQUIREMENT SOURCE: WHC-SME-SA Section 1.7.4C

The CM process also provides a process for preparation, review, and submittal of exemption requests.

1.7.5

Tracking

The CM process ensures tracking of all requirements/commitments applicable to the site/facility and control of tracking through a central authority, program, or organization function. The tracking database facilitates maintenance of requirements/commitments, i.e., updating, changing, superseding, deleting, by cross references and interface indications at requirements linked through hierarchial or lateral relationships.

A process is established which ensures that verbal commitments made by authorized company representatives during meetings or other official exchanges with DOE or external regulatory entities are recorded for follow-up action and closure in a consistent manner.

A process is also implemented for the reconstitution and recording of relevant historical commitments including development of indexes and/or files of documentation related to such commitments.

SITE REQUIREMENT SOURCE: INPO-90-015 Part OA.1 Criteria I

"Commitments are routinely tracked and met."

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SITE REQUIREMENT SOURCE: WHC-SME-SA 1.7.5A

The CM process ensures tracking of all requirements/commitments applicable to the site/facility and control of tracking through a central authority, program, or organization function. The tracking database facilitates maintenance of requirements/commitments, i.e., updating, changing, superseding, deleting, by cross references and interface indications at requirements linked through hierarchical or lateral relationships.

SITE REQUIREMENT SOURCE: WHC-SME-SA 1.7.5B

A process is established which ensures that verbal commitments made by authorized company representatives during meetings or other official exchanges with DOE or external regulatory entities are recorded for follow-up action and closure in a consistent manner.

SITE REQUIREMENT SOURCE: WHC-SME-SA 1.7.5C

A process is also implemented for the reconstitution and recording of relevant historical commitments including development of indexes and/or files of documentation related to such commitments.

1.8

CORRECTIVE ACTION

The Corrective Action Functional Area provides a structured process to ensure that Tank Farm deficiencies are identified and dispositioned in a timely manner. This Requirements Identification Document (RID) describes some requirements as "facility," some as "site," and others as "generic." It is intended that facility requirements be those which are implemented only at the Tank Farms level; site, be implemented by site programs; and, generic be implemented by both Tank Farms and the site programs.

It is DOE policy that a system be provided for determining appropriate corrective action and ensuring that it is effectively taken (DOE 5000.3A).

Requirements not cited as DOE orders are provided as guidance in developing a robust CA program and should be interpreted as guidance in application of this RID.

PURPOSE

The purpose of this Requirements Identification Document is to identify, in one location, all of the facility specific requirements that are necessary to establish an effective and complete Corrective Action Program for the operation of the Tank Farms. The definition of a program as specified by this document is intended to address Defense Nuclear Facilities Safety Board (DNFSB) Recommendations 90-2 and 91-1 which call for the strengthening of DOE weapons complex activities through the identification and application of relevant standards which supplement or exceed requirements mandated by DOE Orders.

DEFINITIONS

Condition adverse to quality.

- an all-inclusive term used in reference to any of the following: failures, malfunctions, deficiencies, defective items, and nonconformances. A significant condition adverse to quality

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is one which, if uncorrected, could have a serious effect on safety or operability.

Corrective Action.

- Measures taken to rectify conditions adverse to quality and, where necessary, to preclude repetition.

SCOPE

This RID includes the portion of the corrective action program implemented by operators of the Tank Farms and those site requirements which affect the Tank Farms corrective action program.

INTERFACES

The major interface of the TF Corrective Action Program is with the TF and site Issue Management Program in evaluating new issues for risk level and determining the level of graded approach to be applied.

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Chapter II, Section 16

***CORRECTIVE ACTION**

Conditions adverse to quality shall be identified promptly and corrected as soon as practical. In the case of a significant condition adverse to quality, the cause of the condition shall be determined and corrective action taken to preclude recurrence. The identification, cause, and corrective action for significant conditions adverse to quality shall be documented and reported to appropriate levels of management; follow-up action shall be taken to verify"

FACILITY REQUIREMENT SOURCE: DOE5000.3A Section 6

"It is the policy of the Department to encourage a positive attitude toward reporting occurrences and that occurrences be consistently reported to assure that both DOE and DOE contractor line management, including the Office of the Secretary, are kept fully and currently informed of all events which could: (1) affect the health and safety of the public; (2) seriously impact the intended purpose of DOE facilities; (3) have a noticeable adverse effect on the environment; or (4) endanger the health and safety of workers. It is also the policy of the Department that there be a system for determining appropriate corrective action and for ensuring that such action is effectively taken. Specifically, it is DOE policy to ensure:

- a. Timely identification, categorization, notification, and reporting to DOE and contractor management of all Reportable Occurrences at DOE-owned or operated facilities;
- b. Timely evaluation of and implementation of appropriate corrective actions;
- c. Maintenance of a central DOE operational data base containing all occurrence reports;
- d. Review of Reportable Occurrences to assess significance, root causes, generic implications, and the need for corrective action; and

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- e. Dissemination of occurrence reports to DOE operations and facilities to prevent similar occurrences."

SITE REQUIREMENT SOURCE: DOE5700.6C Section 9.b(1)(c)

"Criterion 3 - Quality Improvement The organization shall establish and implement processes to detect and prevent quality problems and to ensure quality improvement. Items and processes that do not meet established requirements shall be identified, controlled, and corrected. Correction shall include identifying the causes of problems and preventing recurrence. Item reliability, process implementation, and other quality-related information shall be reviewed and the data analyzed to identify items and processes needing improvement."

1.8.1

Management and Organization

The organizational responsibilities and management of the corrective action program are clearly established and documented. The organizational responsibilities include deficiency review, corrective action responsibility assignment and CA approval. The administrative process includes establishment of appropriate Quality Assurance and record keeping process; capture of results for management review; and establishment of procedures and other guidance as appropriate.

1.8.1.1

Policy

No requirements identified for this subelement.

1.8.1.2

Duties, Responsibilities, and Authorities

No requirements identified for this subelement.

1.8.1.3

Staffing and Training

The TFF Corrective Action Program organization should be staffed by experienced individuals who are trained in interfacing site programs. This program element establishes the selection, training, qualification, and budgeting processes necessary to adequately and effectively perform corrective action activities.

Specific programmatic elements include: (1) development of a staffing plan to define the minimum staffing requirements anticipating personnel transfers and temporary conditions which may impact staffing (extensions in schedule, focus of investigations, etc.), and (2) development and maintenance of a list of selected management, technical, and support personnel to be used as corrective action investigators and evaluators "on call" in the instance of unique, specific facility events.

SITE REQUIREMENT SOURCE: DOE5700.6C Section 9.b(1)(b)

"Criterion 2 - Personnel Training and Qualification. Personnel shall be trained and qualified to ensure they are capable of performing their assigned work. Personnel shall be provided continuing training to ensure that job proficiency is maintained."

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1.8.1.3.1

Qualifications

No requirements identified for this subelement.

1.8.1.3.2

Training of Personnel

No requirements identified for this subelement.

1.8.1.4

Procedures

Requirements for development of procedures governing the operation of the TFF corrective action program include training, item screening, identification, documentation, reporting, assignment of responsibility, development of action plans, analyzing root causes, investigating, assignment of action responsibilities, tracking and trending, lessons learned analysis, action completion verification, and closure of corrective actions. Procedures should also include measures to ensure accountability for the performance of work and clear definitions of corrective action interfaces with on-site organizations, programs or committees.

SITE REQUIREMENT SOURCE: DOE5700.6C Section 9.b(2)(a)

"Performance

Criterion 5 - Work Processes Work shall be performed to established technical standards and administrative controls. Work shall be performed under controlled conditions using approved instructions, procedures, or other appropriate means. Items shall be identified and controlled to ensure their proper use. Items shall be maintained to prevent their damage, loss, or deterioration. Equipment used for process monitoring or data collection shall be calibrated and maintained."

1.8.1.5

Documentation

No requirements identified for this subelement.

1.8.2

Potential Deficiency Identification and Processing

The Tank Farms corrective action process should ensure that personnel are aware of the responsibility and process available to identify and evaluate potential deficiencies. Controls should be in place to delineate the processing of identified potential deficiencies in a timely and responsive manner. This process should include verification of the issue and interaction with the Issue Management Process at the facility or site level dependent upon organizational ownership of the issue and the representative risk.

FACILITY REQUIREMENT SOURCE: DOE4330.4A Chapter II, Section 11.b

"Periodic examinations of structures, systems, components, and equipment, particularly those important to the safe and reliable operation of a facility, shall be performed to determine whether deterioration is taking place and to identify and address technical obsolescence that threatens performance, safety, or facility preservation. Where the potential is identified for any event or condition to significantly affect safety margins, a formal program for resolving the problem shall be documented and implemented. These periodic examinations include both the condition assessment surveys addressed in this Order, as well as other facility

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inspections/appraisals required under Paragraph 5.d. and e. of this Order."

FACILITY REQUIREMENT SOURCE: DOE4330.4A Chapter II, Section 14.3.6[03]

"In addition to routine inspections, all personnel should be responsible for the prompt identification, correction (if feasible), or documentation of facility condition and housekeeping deficiencies during the normal course of their duties."

SITE REQUIREMENT SOURCE: DOE5480.19 Attachment I, Chapter VI, Section A, INTRODUCTION

"A program for the investigation of abnormal events should ensure that facility events are thoroughly investigated to assess the impact of whether the event is reportable to DOE in accordance with DOE 5000.3A, OCCURRENCE REPORTING AND PROCESSING OF OPERATIONS INFORMATION OF 5/30/90 and to identify corrective actions to prevent recurrence of the event. The program should include the investigation of "near miss" situations, thus reducing the probability of a similar situation recurring as an actual facility event. Abnormal events are not unique to the operating organization. Therefore, the guidelines of this chapter may have applicability in other areas besides operations. Required notifications associated with abnormal events are addressed in Chapter VII and in DOE 5000.3A. This chapter covers important aspects of the abnormal event investigation program."

1.8.3

Categorization and Screening

No requirements identified for this subelement.

1.8.4

Root Cause Analysis

The corrective action process should ensure that root cause analysis is performed for verified deficiencies with the level of root cause analysis dependent upon the magnitude of the problem (per the graded approach). Actions to prevent recurrence shall be developed which reflect the elimination of the root causes.

FACILITY REQUIREMENT SOURCE: DOE4330.4A Chapter II, Section 14.3.7[02]

"Reported deficiencies should be monitored to identify recurring, generic, and long-term problems. Action taken to resolve these problems should include a failure or root-cause analysis and not merely a correction of symptoms. For example, frequent low oil levels in operating pumps may be due to leakage or to an improper lubrication schedule. Adjustment to the lubrication schedule or additional training of personnel may be needed to maintain correct oil levels. Section 17 addresses the analysis of maintenance problems."

FACILITY REQUIREMENT SOURCE: DOE4330.4A Chapter II, Section 5.3.2(a)

"Corrective maintenance consists of all those actions performed to restore failed or malfunctioning equipment to service. Corrective maintenance activities should ensure that the condition that caused the failure is identified, corrected, and documented. Analysis should be performed to determine the root-cause or causes of failure and corrective action should be taken, including feedback into the preventive and predictive maintenance programs and maintenance training and qualification programs. Priorities for corrective maintenance should be established, based on plant objectives and the relative importance of the equipment."

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1.8.5

Assignment of Responsibilities

Each verified condition adverse to quality shall be assigned to an owner for development of the corrective action plan. The owner should be someone in the primary technical area of the problem. For larger problems, a process should exist by which a project meeting could be called to bring in all necessary disciplines to provide input to the corrective action plan and to accept responsibility for corrective actions in their technical area.

The process should allow the owner to then coordinate any other corrective actions outside of his/her own discipline with the receiving party. A process for arbitrating disagreements over accepting responsibility for actions should exist (eg., bump it up the management chain).

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment I, Chapter VI, Section C.5.d

"Corrective Action Determination.

Appropriate corrective action should be established for each event investigation, and specific personnel should be assigned responsibilities for the corrective action. Corrective action can take the form of procedure changes, training, design modifications, and changes to administrative controls. The final approval for corrective action should be made by the facility manager."

1.8.6

Corrective Action Tracking

A centrally controlled mechanism should be established to provide a means for tracking and a source of information on the status of corrective actions. Access to this mechanism should be provided to all organizations. This mechanism could be a site level corrective action tracking system which is maintained by a designated site organization with inputs from Tank Farms as to status of TFF actions.

FACILITY REQUIREMENT SOURCE: DOE4330.4A Chapter II, Section 14.3.7

"A list of all deficiencies not included in the work control system or some other corrective action system with responsibility for correction or disposition of each deficiency should be prepared. Personnel assigned corrective action should periodically report results of the actions planned or conducted to the inspection coordinator, and deficiencies should be tracked to completion."

1.8.7

Duties, Responsibilities, and Authorities

A process for verification of the adequacy of facility corrective actions shall be in place at the facility level. This should include peer review and incorporate a graded approach (i.e., more thorough review for those items of higher risk). This review is to give the facility owner confidence that the item is adequately closed and corrected before Quality Assurance and DOE perform their reviews.

SITE REQUIREMENT SOURCE: 10CFR50 Appendix B, Section XVIII

"Audits. A comprehensive system of planned and periodic audits shall be carried out to verify compliance with all aspects of the quality assurance program and to determine the effectiveness

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of the program. The audits shall be performed in accordance with the written procedures or check lists by appropriately trained personnel not having direct responsibilities in the areas being audited. Audit results shall be documented and reviewed by management having responsibility in the area audited. Followup action, including reaudit of deficient areas, shall be taken where indicated."

FACILITY REQUIREMENT SOURCE: DOE4330.4A Chapter II, Section 14.3.7[03]

"Follow-up of selected corrective action from previous inspections is necessary for evaluating the timeliness and effectiveness of the corrective action and obtaining the maximum benefit from the inspection program. Several methods may be used to accomplish this follow-up. For example, the inspection coordinator may select some previously identified deficiencies to verify that these deficiencies were corrected or are being corrected in a timely manner. This could be accomplished during each facility condition and housekeeping inspection."

1.8.8

Distribution of Experience Information

The CA Process should provide controls for analyzing experience information, developing and distributing information regarding events, causes, trends, and lessons learned to appropriate personnel and organizations, including DOE and other federal, state, tribal, and local agencies.

SITE REQUIREMENT SOURCE: DOE5000.3B Section 6

"6. POLICY. It is the policy of the Department to encourage a positive attitude toward reporting occurrences and that occurrences be consistently reported to assure that both DOE and DOE contractor line management, including the Office of the Secretary, are kept fully and currently informed of all events which could: (1) affect the health and safety of the public; (2) seriously impact the intended purpose of DOE facilities; (3) have a noticeable adverse effect on the environment; (4) endanger the health and safety of workers; or (5) adversely affect national security or the security interests of the DOE. It is also the policy of the Department that there be a system for determining appropriate corrective action and for ensuring that such action is effectively taken. Specifically, it is DOE policy to ensure:

- a. Timely identification, categorization, notification, and reporting to DOE management of all Reportable Occurrences at DOE-operated facilities or DOE-owned, contractor-operated facilities;
- b. Timely evaluation of and implementation of appropriate corrective actions;
- c. Maintenance of a central DOE Occurrence Reporting and Processing System (ORPS) data base containing all unclassified Occurrence Reports;
- d. Review of Reportable Occurrences to assess significance, root causes, generic implications, and the need for corrective action; and
- e. Dissemination of Occurrence Reports to DOE operations and facilities to prevent similar occurrences."

FACILITY REQUIREMENT SOURCE: DOE5480.19 Attachment 1, Chapter VI, Section C.8

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"Event Trending

Patterns of deficiencies such as operator errors or inadequate procedures should be trended. A periodic summary report of events, causes, and trends should be submitted to department heads, the facility manager, and appropriate managers. Department heads should ensure training programs include appropriate material from the summary report."

FACILITY REQUIREMENT SOURCE: DOE5480.26 Section 6.f (1)

"Facility Managers. As defined in paragraph 4 of this Order shall:

Assess facility Performance Indicators and other operations information, such as reportable occurrences, for trends in improving or deterioration conditions; and"

FACILITY REQUIREMENT SOURCE: DOE5480.26 Section 6.f (2)

"Facility Managers. As defined in paragraph 4 of this Order shall:

Identify lessons-learned and good practices that can be used to improve facility operations."

SITE REQUIREMENT SOURCE: DOE5480.26 Section 7.b (1), Sentence 1

"Trending and Analysis.

Contractors for each facility, group of facilities, or site shall review and assess their Performance Indicators and other operations information such as reportable occurrences."

SITE REQUIREMENT SOURCE: DOE5480.26 Section 7.b (1), Sentence 2

"Facility Managers shall assess their facility operating information for trends and indications of deteriorating/improving conditions and identify lessons- learned and good practices that should be used in their facility to prevent occurrences or to improve safety and/or operations."

1.9

OPERATIONAL READINESS REVIEW

The Operational Readiness Review (ORR) Functional Area provides a structured methodology for determining that a facility, project, process, or activity is ready for operation or restart in a safe and controlled manner. The ORR proceeds the readiness of the facility hardware, personnel, and procedures, and includes a determination of the level of compliance with DOE Orders.

It is the policy of the Department of Energy that new facilities shall be restarted only after documented reviews of readiness have been conducted and specified approvals obtained. The readiness review shall, in all cases, demonstrate it is safe to operate the facility. DOE Order, DOE 5480.RESTART, draft 8/12/93, establishes the actions to be taken, and assignments of responsibility for authorizing the restart of nuclear facilities. DOE Standard DOE-STD-3006-93, "Planning and Conduct of Operational Readiness Reviews," draft 8/11/93, describes a consistent and graded approach to the conduct of operational readiness reviews for restart of DOE nuclear facilities. Although the Order and the Standard are in draft status they provide definitive requirements and guidance for conduct of an ORR. This document has been prepared to ensure proper implementation of ORR's for Tank Farms.

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This document has been prepared solely based on the drafts of DOE ORDER, DOE 5480.Restart and DOE-STD-3006-93. These documents are expected to be approved in the near future and will supersede, or cause to be modified, existing guidance for ORR's issued by PSO's. The DOE ORDER explicitly provides for cancellation of SEN-16B-91 and the Departments Procedure for Restart of Reactors and Non-reactors Nuclear Facilities, February 26, 1992.

PURPOSE

This Requirements Identification Document applies to Tank Farms management programmatic controls, activities, personnel, and programs involved in executing the mission of Tank Farms.

The purpose of this Requirements Identification Document is to identify the specific requirements to be addressed in determining the need for and conducting the operational readiness reviews for the facilities. The requirements also provide a methodology for managing the scope and depth of the ORR consistent with the hazards and complexity of a facility.

Only requirements necessary for Westinghouse Hanford Company to determine the necessity for, and to implement, when required, successful ORRs for the facilities are identified. DOE or other approvals necessary to proceed with the ORR or facility restart are identified; however, requirements for conduct of DOE ORRs are not. Interfaces or coordination with oversight organizations necessary for the WHC ORR will be identified if specified in the requirements documents.

This Requirements Identification Document is structured to address the Approach and Organization, Plan of Action, Tracking and Closure, and Documentation for operational readiness reviews of Tank Farms.

DEFINITIONS: Refer to DOE Standard Planning and Conduct of Operational Readiness Reviews.

1.9.1

Approach and Organization

1.9.1.1

Determination

The determination as to whether an operational readiness review or readiness assessment is required for new facilities is the responsibility of Westinghouse Hanford Company. The DOE line management has a responsibility to ensure such determinations are done. The requirements for the determinations are specified in DOE Order DOE5480.RESTART with additional guidance provided by DOE Standard Planning and Conduct of Operational Readiness Review (ORR). The requirements for determination of the need for ORR and notification to DOE when an ORR is required are set forth.

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 4.2.1, Paragraph 1, Sentences 1, 2, and 3

"Determination of ORR Requirements. Periodically (at least quarterly) each responsible contractor should be required to identify all facility new start and restart activities planned for the future and propose those which will require an ORR be conducted by DOE and the responsible contractor. The responsible contractor will also propose the approval authority for each new start and restart action. The report from the responsible contractor will be known as

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the startup notification report."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.1.2

"Responsible Contractor Startup Notification Report. Periodically (recommended to be as least quarterly) the responsible contractor will develop a startup notification report or change to an existing report that identifies all known facility new starts and restarts. the report will identify the facility, specify whether an ORR or a readiness assessment is required to verify readiness to commence or resume operations and for facilities requiring an ORR, recommend an approval authority. The remarks should describe the basis for the recommended actions based on the criteria in DOE 5480.RESTART.

SITE REQUIREMENT SOURCE: DOE5480.RESTART-8-93 Section 7

"POLICY.

It is the Department's policy that new nuclear facilities shall be started up, and existing nuclear facilities which have been shutdown shall be restarted, only after documented reviews of readiness have been conducted and the approvals specified in this Order have been received. The readiness review shall, in all cases, demonstrate that it is safe to startup (or restart) the applicable facility. The readiness reviews are not intended to be tools of line management to confirm readiness. Rather the readiness review provide an independent review of readiness to start or restart operations."

SITE REQUIREMENT SOURCE: DOE5480.RESTART-8-93 Section 8.a.3.b

"Startups and restarts of nuclear facilities not requiring an Operational Readiness Review as defined in this Order shall have a Readiness Assessment performed prior to startup or restart. Responsibility for Readiness Assessments and startup or restart authority resides with the Operations Office Manager or designee. Requirements for Readiness Assessments will be defined in Operations Office procedures."

SITE REQUIREMENT SOURCE: DOE5480.RESTART-8-93 Section 9.e.(1)-(4)

"The contractor shall be required to:

- (1) Prepare implementing procedures for use in performing startup and restart activities in accordance with this Order;
- (2) Prepare plans-of-action for all contractor Operational Readiness Reviews and submit them to the cognizant DOE Operations Office for review prior to conduct of the Operational Readiness Reviews;
- (3) Notify the cognizant DOE Operations Office of planned Operational Readiness Reviews and Readiness Assessments;
- (4) Conduct Operational Readiness Reviews and Readiness Assessments in accordance with the provisions of this Order; and"

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1.9.1.2

Organization

The DOE Order and DOE Standard address requirements to appoint an ORR Team Leader and Team Members. Neither document specifies what part of an organization the Team is responsible to or reports to. Neither do the documents specify organizational support such as Readiness Review Boards. The organization requirement stressed is independence of the team from the organization responsible for starting up and managing the facility and prohibiting team members from review of their own work or work for which they are directly responsible. A Team Leader Handbook has been prepared as a part of the DOE Standard. Although the Handbook is intended for DOE personnel, it contains useful information for the WHC Team Leader. Some adaptation will be necessary, but without the Handbooks use deficiencies in the leadership of the Team Leader could result.

The organizational requirements follow.

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.1.5.1

"ORR Team Leader. This is a individual with the necessary qualifications for managing and conducting the ORR. The basis of the qualifications should include:

- Technical familiarity with the activities and functional areas being reviewed;
- Previous assessment experience;
- Demonstrated leadership and managerial skills; and
- Operational Readiness Review experience.

The ORR team leader should be a senior individual who is independent of the organization responsible for starting up and/or managing the facility or process being reviewed.

The ORR team leader is responsible for overseeing the ORR process, including:

- Defining ORR team membership;
- Planning, coordinating and conducting the ORR;
- Estimating the level of effort and schedule requirements;
- Establishing ORR objectives and milestones;
- Compiling or acquiring access to all necessary background information (e.g., description of process equipment and control measures); and
- Acting as the team interface with management.

A key responsibility of the team leader is selection and qualification of the team members. Each team member should have the following qualifications, as defined and verified by the team leader:

- Technical knowledge of the area assigned for evaluation. The knowledge should include experience working in the technical area.

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- Knowledge of assessment processes and methods. This knowledge may be gained through experience as an auditor or inspector or it may be gained through training and evaluated as an auditor or inspector or it may be gained through training and evaluated as acceptable by the team leader.

- Facility specific information which may be gained through a combination of required reading and facility tours and presentations.

The team leader shall ensure that the ORR records contain sufficient information to certify the qualification of team members. This would normally be through individual resumes and required reading and training records.

The extent of the team leader's responsibilities may require the individual to be formally released from other duties. The ORR team leader should be responsible for keeping management informed of the team's progress and findings."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.1.5.2

"ORR Team Members. The overall responsibility of the ORR team is to examine the aspects of the activity under review and to assure themselves, management, and the DOE that the equipment, procedures, and personnel associated with the activity are ready for startup and safe operation.

The ORR team may consist of plant personnel or external experts (company or contractor) who have been assembled at the request of the ORR team leader. The size and expertise of the ORR team will depend upon a number of factors including the complexity of the activity being reviewed, schedule requirements, and the scope and depth of the review.

Representatives from operations, environment and regulatory compliance, safety, engineering, technical and quality assurance organizations associated with the activity but not directly responsible for it may be selected as team members. An individual's knowledge of the particular systems, processes, safety documentation, or facility, as well as knowledge of the ORR process should be considered.

Team members are required to conduct a broad range of tasks including (but not limited to):

- Preparing the Implementation Plan;
- Developing acceptance criteria/performance objectives and related lines of inquiry for each review objective;
- Reviewing "as-built" drawings and other applicable procedures and documents;
- Compiling supporting documentation;
- Providing a determination that the activity complies with applicable environmental requirements and federal and state laws and regulation;
- Executing ORR criteria/performance objectives as assigned in the ORR plan or by the ORR team leadership;
- Verifying that all documentation of safety, quality, or environment issues are in place;

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- Concurring with the determination of operational readiness and the conclusions presented in the ORR report in the team members are of assessment;
- Submitting completed certification documentation for review and approval;
- Preparing supporting or special reports;
- Working with other ORR team personnel to ensure timely resolution of the checklist items; and
- Assisting, as required, by the team members in preparation of the ORR Report.

Qualifications of team members should not be based solely on technical expertise, but should also include skills in assessing, analyzing, judging, and communicating. Team members with technical skills in areas of safety, health, and conduct of operations are essential, as are those with specific knowledge of the hazards and processes to be evaluated. In no case shall ORR team members review their own work or work for which they are directly responsible."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.1.6

"Responsible Contractor Oversight Organizations. The level of participation of the responsible contractor's Oversight Organizations (e.g., Safety, Quality Assurance, Environment) in the ORR process will depend on the individual contractor's organization and the scope of ORR being performed. It is recommended that members from the Oversight Organizations participate in the review process as ORR team members. If other internal reviews are essential to achieving readiness of the facility, the Oversight Organizations may conduct separate reviews and assessments of the activity's readiness as deemed necessary. In those instances, the reviews should be completed prerequisite to the ORR."

1.9.2

Plan-of-Action

A Plan of Action for the ORR is required to be submitted to DOE four to six months before the projected date for the ORR. The requirements for the content of the Plan of Action are extensive and detailed and are identified below. The following additional requirements are specified by this document preparer:

As described in the Standard, a foundation for readiness is an approved safety basis as defined in the approved facility documentation. The commitments in the approved safety basis must be confirmed to be complete as a part of the ORR.

The commitments will include administrative,procedural,training,and system configurations necessary to assure safety in operations.

Additionally, the ORR must confirm that operability verifications and surveillance schedules to implement technical specifications or operational safety requirements are in effect.

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 4, Paragraph 2

"The Operational Readiness Review (ORR) is an activity to verify that line management has brought the facility to a state of readiness to commence or resume program work. The line management effort may include management self- assessment activities in preparation for the

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ORRs. Once line management concludes that readiness has been achieved, this state of readiness is verified by the contractor ORR and confirmed by the DOE ORR. Only then will the nuclear facility be authorized to resume program work or in the case of a nuclear reactor, be authorized to achieve criticality."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 4, Paragraph 3

"A foundation for readiness of the nuclear facility is an approved safety basis as defined in approved facility safety documentation, approved environmental documentation, a satisfactory safe working environment, and compliance with DOE Orders and requirements. The ORR team must verify that the necessary approved requirements documentation is in place and that procedures, personnel, and equipment and systems support the approved requirements. It is not the responsibility of the ORR team to approve the foundation documentation—only verify that is approved and that it has been implemented. Critical to a determination of the facility's compliance with DOE Orders and requirements is the Order Compliance program, including Compliance Schedule Agreements and approved Implementation Plans."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 4.2.2

"Responsible Contractor's ORR Plan-of-Action. Four to six months before the projected date for the contractor's ORR, the contractor will prepare and submit for approval the ORR Plan-of-action. The Plan-of-action will provide the proposed ORR scope and depth (section 5.1.7 and 5.9.1 < DOE-STD-ORR > discuss methods for scope definition), justifications for limitations to the scope, the prerequisites for starting the ORR, ORR schedule including estimated start date and duration, the proposed ORR team leader, and any other information required by DOE Order 5480.RESTART and information unique to the proposed ORR. the responsible contractor's submitted ORR Plan-of-action will be reviewed by the Operations Office manager or designee and approved or forwarded to the designated approval authority with a recommendation for approval. a copy will be sent to Environment and Health (EH) for review and comment as well. The designated approval authority will approve the contractor's Plan-of-action and return it for execution with copies to appropriate internal and external oversight organizations."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.1.1

"Summary of Contractor Operational Readiness Review (ORR) Process. The contractor ORR shall focus on the readiness of all hardware, personnel, procedures, and compliance with the applicable requirements.

a. The purpose of the contractor's ORR is to verify that nuclear facilities being started up or restarted:

- Are constructed in accordance with the approved design;
- Can be operated safely;
- Will perform as designed;
- Are designed and will be operated in conformance with applicable DOE Orders and regulatory requirements;

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- Will be operated so that no undue risk to employees, the public, or the environment results; and that

- All of the above items are properly and adequately documented.

b. The foundation for readiness of the nuclear facility is an approved safety basis as defined in approved facility safety documentation, approved environmental documentation, a satisfactory safe working environment, and compliance with DOE orders and requirements. The ORR must verify that the necessary approved requirements documentation is in place and that procedures, personnel, equipment, and systems support the approved requirements. It is not the responsibility of the ORR to approve the foundation documentation -- only to verify that it is adequate, approved, and that it has been implemented. Critical to a determination of the compliance with DOE orders and requirements is the Order Compliance Program which encompasses the facility being started including Compliance Schedule Agreements and approved Implementation Plans.

c. The contractor's ORR should provide a structured and independent appraisal of the activity to describe the actual state of readiness. The ORR is a verification that line management responsible for the facility has successfully achieved a state of readiness to commence facility operations. The ORR should not be used as a management technique to achieve a state of readiness to commence facility operations.

d. The responsible contractor ORR should include the following:

- Review of management and administrative processes for the activity;
- Inspection of the hardware;
- Observation of activities which indicate operational expertise;
- Interview and observations; and
- Examination of documentation.

An effective ORR process will provide assurance that these objectives are accomplished and documented. The verification of these objectives is accomplished by performance-based evaluations, which include (but are not limited to) field observations, interviews, observation of training evolutions, integrated system checkouts or cold run demonstrations, walkdowns of procedures, etc."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.1.3

"Responsible Contractor Operational Readiness Review Plan-of-Action. for new starts and restarts requiring an ORR, the responsible contractor management should provide an ORR Plan-of-Action that specifies the intent to conduct an ORR and briefly describe the proposed ORR process to the DOE. The Plan-of- action should clearly delineate management responsibilities, authority, and accountability for the ORR (as specified in the RESTART Order), and include the following:

- Notice of the intent to conduct an ORR;
- Team leader;

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- Prerequisite conditions;
- Definition of the scope and depth of the review;
- Estimated start date(s) of the review;
- Estimated time needed to conduct the review; and
- Request for a DOE point-of-contact.

reparation, content, and approval of the ORR Plan-of-action is described in section 5.9.1 < DOE-STD-ORR > in the event that the contractor has developed an approved new start or restart plan that includes the elements of the Plan- of-action, a separate contractor Plan-of-action will not be required."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.1.7

"Determining the Scope of the ORR. The scope of the ORR should include the identification of the processes and systems, documentation, and management controls (including procedures, personnel, and programmatic functions). The functional areas to be assessed during the ORR should be identified. A graded approach can be used as part of the process used to determine the scope of the review. Appendix 1 of this standard <DOE-STD-ORR-XX> contains a discussion of the graded approach.

Consideration for the development of the review scope should include, but not be limited to, the general guide shown in the Appendices 2 and 3 <DOE-STD-ORR- XX> . The list in the Appendices is not all inclusive and applicability may vary depending on the activity being reviewed, the objectives of the ORR, and the hazard classification of the activity. DOE Standard, DOE-STD-1027-92 provides a methodology and criteria for defining hazard classification.

A unique, first-of-a-kind, or complex activity should involve a review with a broader scope and depth than a routine restart of an existing activity. If applicable, attention should be given to the interface between new activities and existing functions.

The contractor ORR Plan-of-action described in section 5.9.1 <DOE-STD-ORR-XX> will specify the scope of the ORR."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.1.1

"General considerations. The responsible contractor and DOE each prepare an ORR Plan-of-action. The ORR Plan-of-action is the document that specifies the requirements for a facility startup or restart. Through the process of the ORR Plan-of-action, the proper authority with the Department of Energy concurs with or approves the steps in a new start or restart process. The ORR process is then conducted in accordance with the approved elements of the Plan-of- action. Once approved, the ORR Plans-of-action are distributed to responsible or interested groups within and outside the DOE.

The ORR Plans-of-action are forwarded via line management to the designated approval authority for the particular restart or new start. The approval authority will approve the Plans-of-action for the contractor and DOE ORRs.

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The amount of detail in each ORR Plan-of-action will vary with the complexity of the facility and the situation. As a rule of thumb, the level of detail must be adequate to justify to a skeptical reviewer the decisions being proposed. The detail must be adequate for preparers, reviewers, and the approver to defend the decisions being made.

The DOE ORR Plan-of-action is prepared by the Area Office of Operations Office facility management. The responsible contractor input to the ORR Plan-of-action or approved project startup plan will provide a starting point for the DOE ORR Plan-of-action."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.1.2.1

"Name of the Facility Being Started. The name must be specific to what is to be evaluated and started. For example, if a single process within a building is to be restarted, the facility name would be the process name. On the other hand if the process encompasses several buildings and an area, the name would be the encompassing process name."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.1.2.1.1

"Description of Facility. This includes buildings, systems, and processes included within the startup authority."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.1.2.1.2

"Identification of the Responsible Contractor. This is the contractor who will certify readiness of the facility to operate. It is normally the contractor who submits the responsible contractor ORR Plan-of-action."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.1.2.10

"Reviewers and Approver. List the individuals by name and title who prepared and will review this document. The signature indicates that they have reviewed the document and recommend approval by the approval authority listed above.

Name:

Office title:

Signature:

Date."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.1.2.11

"Distribution. This is a listing of the individuals and organizations who will receive copies of the ORR Plan-of-action following approval. Individuals and organizations will be listed who have both actions or interests in a new start or restart process. The following is a minimum list and may not be all inclusive.

Responsible contractor,
Operations Office,
Area Office,

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Program manager,
Designated team leader,
S-1,
EH-1,
DNFSB."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.1.2.2

"Designation of Action as a New Start or Restart. This is the identification as to whether the facility is being started for the first time or being restarted. It is reasonable that a new process within an existing building would be a new startup. Resumption of a process after an extended period of no operation would most reasonable be a restart."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.1.2.2.1

"New Start Action. The following elements or details of the facility will be included to support or create the basis for the recommended decisions.

- Hazard classification for new facility and basis for the designation (criticality, explosive, chemical, environmental, etc). In the event that no formal hazard classification has been made, a discussion of the relative hazard is appropriate.
- Acquisition costs for new facility or process."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.1.2.3

"Proposed Scope for the ORR. This is a key section in both responsible contractor and DOE Plans-of-action. The scope will be the top tier assessment objectives. In describing the ORR scope, a graded approach may be used. The scope should be derived from an application of the graded approach principles of Appendix 1 of this standard with the generic evaluation objectives listed in Enclosure 2 of DOE 5480.RESTART. The discussion should support the decision to eliminate the generic evaluation objectives which are not included. The DOE ORR Plan-of-action scope will consider the contractor ORR as well as DOE line management and oversight programs."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.1.2.4

"ORR Prerequisites. The ORR Plan-of-action should specify the prerequisites for the ORR. For the responsible contractor this may refer to the project management plan for the outage, specific safety basis documented or permit approvals, specific training events, etc. For the DOE ORR, this might include the contractor Readiness to Proceed Memorandum plus DOE line management preparations."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.1.2.5

"Estimated ORR Start Date and Duration. The date is for planning purposes only and should be the best estimate. Identification of a date is not to infer that the ORR start will be schedule driven rather than readiness driven. The DOE ORR estimated start dates, as well as the contractor ORR schedule, should be provided for information in the Contractor ORR Plan-of-action to assist DOE management in planning for the DOE ORR > "

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SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.1.2.6

"Proposed ORR Team Leader. The individual must have the necessary independence with the required experience and technical information consistent with the complexity of the facility and the specific ORR. The individual must meet the criteria discussed in section 5.1 <DOE-STD-ORR-XX> for the responsible contractor ORR and section 5.4 <DOE-STD-ORR-XX> for the DOE ORR."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.1.2.8

"Official to Approve Start of DOE ORR. In most circumstances, this will be the approval authority designated in the approved startup notification plans. Designation of the approval authority will be in accordance with the requirements of DOE 5480.RESTART."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.1.2.9

"Official to Approve Startup or Restart of the Facility. This is the individual specified in DOE 5480.RESTART based on a new start or restart circumstances. The specific approval authority is listed in the startup notification plan."

SITE REQUIREMENT SOURCE: DOE5480.RESTART-8-93 Attachment 2

"Each of the following areas at a minimum must be addressed when developing the scope of an Operational Readiness Review. Justification must be provided if it is determined that a particular area is not applicable or will not be reviewed.

1. There are adequate and correct procedures and safety limits for operating the process systems and utility systems;
2. Training and qualification programs for operations and operations support personnel have been established, documented, and implemented (the training and qualification program encompasses the range of duties and activities required to be performed);
3. Safety systems and systems essential to worker and public safety are defined and a system to maintain control over the design and modification of facilities and safety-related utility systems is established;
4. A program is in place to confirm and periodically reconfirm the condition and operability of safety systems, including safety related process systems and safety related utility systems. All systems are currently operable and in a satisfactory condition;
5. A process has been established to identify, evaluate, and resolve deficiencies and recommendations made by oversight groups, official review teams, audit organizations, and the operating contractor;
6. A review of the facility's conformance to applicable DOE Orders has been performed and nonconformance issues have been addressed;
7. Management programs are established, sufficient numbers of qualified personnel are provided, and adequate facilities and equipment are available to ensure operational support services (e.g., training, maintenance, waste management, environmental protection, industrial

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safety and hygiene, radiological protection and health physics, emergency preparedness, fire protection, quality assurance, criticality safety, and engineering) are adequate for operations.

8. A routine and emergency operations drill program, including program records, has been established and implemented;

9. An adequate startup test program has been developed that includes adequate plans for graded operations testing to simultaneously confirm operability of equipment, the viability of procedures, and the training of operators;

10. Functions, assignments, responsibilities, and reporting relationships are clearly defined, understood, and effectively implemented with line management responsibility for control of safety;

11. The implementation status for DOE Order 5480.19, "Conduct of Operations Requirements for DOE Facilities" is adequate for operations;

12. There are sufficient numbers of qualified personnel, to support safe operations;

13. A program is established to promote a site-wide culture and personnel exhibit an awareness of public and worker safety, health, and environmental protection requirements and through their actions, demonstrate a high priority commitment to comply with these requirements;

14. The configuration of safety systems, including safety-related process systems and safety-related utility systems, is consistent with assumptions made about such systems in the Safety Analysis Reports;

15. The technical and managerial qualifications of those at the DOE Field organization and at DOE Headquarters who have been assigned responsibilities for reviewing or approving: unusual occurrence reports, implementation plans for technical field activities, action plans for remedial or corrective measures for identified deficiencies, Compliance Schedule Agreements, and Order Compliance Programs are adequate. Field organization oversight programs including the Facility Representative are in place and functioning. (DOE Operational Readiness Review only); and

16. The result of the responsible contractor Operational Readiness Review are adequate to verify the readiness of hardware, personnel, and management programs for operations (DOE Operational Readiness Review only)."

SITE REQUIREMENT SOURCE: DOE5480.RESTART-8-93 Section 8.b.(1)

"Requirements applicable to startups or restarts involving Operational Readiness Reviews.

(1) A formal plan-of-action, Operational Readiness Review Implementation Plan, and final report shall be prepared by the organization performing the review. The resolution of all findings from the Operational Readiness Review shall be documented and maintained with the plan-of-action, Implementation Plans, and the final report."

SITE REQUIREMENT SOURCE: DOE5480.RESTART-8-93 Section 8.b.(2)

"Requirements applicable to startups or restarts involving Operational Readiness Reviews.

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(2) The Operational Readiness Review is a verification of line management having achieved readiness to startup the facility. Therefore, the prerequisite for starting the Operational Readiness Review is that line management certifies that readiness has been achieved. For the responsible contractor Operational Readiness Review, the plan-of-action approved by DOE shall specify the prerequisites for starting the Operational Readiness Review.

The prerequisites must be consistent with the scope of the Operational Readiness Review derived from as defined in Attachment 2. For the DOE Operational Readiness Review, as a minimum, the responsible contractor must have certified by formal correspondence that readiness to startup the facility has been achieved as documented by the responsible contractor Operational Readiness Review. In addition, the DOE-approved plan-of-action shall specify additional prerequisites such as certification of readiness to oversee facility operations by the Operations Office and Headquarters management."

SITE REQUIREMENT SOURCE: DOE5480.RESTART-8-93 Section 8.b.(3)

"Requirements applicable to startups or restarts involving Operational Readiness Reviews.

(3) The graded approach shall be applied to the Operational Readiness Review process when developing the scope of the review. Line management will develop the scope of the Operational Readiness Review and document it in the plan-of-action. The scope can be expanded at a later time by the Operational Readiness Review team, if appropriate. A minimum set of core requirements, as defined in Attachment 2, shall be addressed when developing the breadth of the Operational Readiness Review. The graded approach can be applied to both the breadth and depth of the Operational Readiness Review as defined by the core requirements. Justification must be provided in the plan-of-action when the graded approach is used to modify the scope of the Operational Readiness Review."

SITE REQUIREMENT SOURCE: DOE5480.RESTART-8-93 Section 9.e.(2)

"The contractor shall be required to:

(2) Prepare plans-of-action for all contractor Operational Readiness Reviews and submit them to the cognizant DOE Operations Office for review prior to conduct of the Operational Readiness Reviews;"

1.9.3

Implementation Plan

The Implementation Plan addresses the depth of the ORR, as well as the conduct of performance-based assessments and field assessments of component and system configurations. Interviews of personnel will be identified. Requirements are as follows:

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Appendix 1

"APPLICATION OF THE GRADED APPROACH IN ORR PLANNING

For the purposes of this appendix, the graded approach is defined as the process by which the readiness determination is adjusted in depth of detail required and magnitude of resources expended to be commensurate with the facility's potential impact on safety, environmental compliance, safeguards and security, and its programmatic importance, including present and future mission. The graded approach will be commensurate with:

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- (1) The relative importance to safety, safeguard, and security;
- (2) The magnitude of any hazard involved;
- (3) The life cycle stage of a facility;
- (4) The programmatic mission of a facility;
- (5) The particular characteristics of a facility;
- (6) The cause and circumstances of the facility shutdown; and
- (7) Other relevant factors.

With respect to ORR planning a graded approach is utilized to determine both the set of issues, i.e., the scope, and the level of detail, i.e., the depth. The combination of scope and depth forms the envelope within which the ORR is conducted and thus proper utilization of the graded approach is essential to conducting a successful ORR. The supporting principle governing the use of the graded approach must be that knowledgeable personnel analyze the factors surrounding the restart, determine the scope and depth of the review needed, and then document the determination of review scope and depth. Precise documentation would facilitate communication with knowledgeable outside officials that the proper level of review has been conducted and that readiness to operate has been accurately verified.

The scope and depth of an ORR can not be determined using a cookbook or formula approach. Scope definition depends on knowledgeable people identifying relevant topics based on their experience, the facility's characteristics, the facility's operating environment, the operating and support organizations' capabilities, and the risks associated with the proposed startup or restart. An aid that may be utilized in the development of the scope of the ORR is a MORT or readiness tree. The benefit of this tool is that it is a graphic representation of the elements which must be included.

Appendix 3 contains examples of full-scope readiness trees which have been useful in developing the scope of the ORR. Additionally, Recommendation 90-4 contains a list of topics the Defense Nuclear Facilities Safety Board considers necessary to fully scope a major ORR and which is included in Appendix 2 of this Standard. It is recommended that in applying the graded approach to scoping the ORR, to apply all of the full-scope topics until analysis and study show which topics can be safely and justifiably discarded. This approach should minimize the potential for inadequately scoping the ORR.

Once the issues have been identified, a review by knowledgeable people is needed to determine the appropriate depth to apply to each issue. Acceptance criteria are developed for each issue, which specify the level of detail that is appropriate for that issue. The following factors and their implications should be considered in developing the scope, i.e., for determining which full-scope topics to discard, and depth of the ORR:

-Physical modifications to the facility: Any modification must be assessed for its potential effect on facility hazards and risks, on the facility safety basis as documented in the SAR and associated TSRs, on facility procedures, on the need for personnel to be trained on the reconfiguration, etc. In addition, the integrity of the facility design baseline may need to be verified.

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-Procedural changes: Changed or new procedures must be reviewed to determine if they have been adequately verified and validated, if the operators have been adequately trained on the modified procedures, and if the procedures at the workstations clearly reflect the changes.

-Personnel changes: Continuity of the operations team must be assessed to determine if significant loss of "corporate memory" has occurred and, if so, has been adequately mitigated. Training and qualification of new and reassigned personnel must be verified.

-Length of shutdown: There is a characteristic loss of operator familiarity with normal facility operations that increases with the length of the shutdown. If the shutdown is unusually long, a review and possibly requalification of the operators may be necessary. There are also physical processes (corrosion, radioactive decay, evaporation, etc.) that may become important following an extended outage. The longer the outage and the more complex the activity during the outage, the more rigorous should be the review to identify unanticipated changes.

-Overall hazard characteristics of the facility: Obviously, the nature of the hazards, to safety and the environment, associated with a facility/process will be a major component in determining the scope and depth of the ORR. The scope and depth of an ORR for a facility that handles small quantities of tritium gas would not be as complex as one that handles large quantities of plutonium.

-The complexity of the activity: The size and complexity of the facility and/or process being reviewed will drive the size and complexity of the ORR. The depth of the review will require that reviewers be able to comprehend and accomplish the criteria provided them. The number of criteria developed is based on the size and complexity of the facility/process.

-A new process or facility versus the restart of an existing activity: A significantly new process would involve verification of training and qualification of workers and new procedures without any significant reference points available onsite. This would drive the ORR to be more thorough and comprehensive than the review for a process that has a significant experience base onsite.

-The programmatic significance of the subsequent operations: A facility/process that is intended for long-term programmatic operations would necessarily require a more comprehensive and thorough review in some specific area than would a temporary operation.

-Introduction of new hazards: The proposed facility evolution (startup or restart) must be evaluated for potential new hazards. While some new hazards will be obvious, a critical review is needed to identify subtle new hazards introduced by the startup of new facilities or modification of existing facilities. Modifications made to improve operations in one aspect may unexpectedly introduce hazards in a different area.

-Increase in existing hazards or risk: Modifications to the facility, personnel or procedures must be evaluated for their potential to increase the facility hazard level (e.g., by increasing the inventories of hazardous materials) or the facility hazard potential (e.g., by introducing a new mechanism for the release of hazardous materials).

-Operating history of the facility: The record of operational reliability, e.g., reliability during most recent operation, may identify issues to be addressed in the proposed ORR. Additionally, the nature of the facility/process transition to standby or shutdown status needs to be considered. A shutdown resulting from systemic safety concerns may require greater ORR scope and depth than would a shutdown in response to an individual safety concern.

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-Confidence in site-wide issues: Even if the proposed startup or restart does not directly involve changes to site issues (e.g., emergency preparedness, site fire response, environmental monitoring), it may be prudent to evaluate these in an ORR unless recent reviews have shown them to be acceptable. Startup or restart of a facility will be problematic within a significantly flawed site infrastructure. Conversely, a strong record of implementing DOE requirements, e.g., Conduct of Operations, would allow for a justifiable reduction in focus in that area in the ORR.

-Issues raised through other internal or external reviews: The ORR may need to verify that previously raised issues have been adequately addressed. These issues may be facility-specific or may relate to the site infrastructure within which the facility operates. Technical Safety Appraisals and Tiger Team reports are important sources of these issues. The facility's experiences in implementing the corrective actions and lessons learned may also provide a valuable perspective for determining the scope and depth of the ORR. Caution must be exercised in utilizing previous inspections as justification for eliminating a topic or limiting the depth of review. The adequacy of any previous review to be used in this manner should be evaluated carefully before relying on it.

-Previous ORR's performed for the facility or the site: Previous reviews may highlight issues to be considered or may provide the justification for doing a less detailed review if recent reviews and restart experience can be cited. A facility/process that undergoes frequent restarts would likely require only an independent verification by the Facility Representative that the restart procedure was utilized in order to satisfy the ORR requirements.

-Visibility of the facility/process: Perceptions raised by the startup or restart in the surrounding community or by the media may drive the ORR to be a greater scope and depth than anticipated. Potential conflicts may be neutralized by widening the scope and depth of the ORR.

-Extent to which the facility/process has been evaluated or operated using the standards and level of excellence being used in the ORR: In applying the graded approach the extent to which the facility has utilized or been evaluated against the current nuclear safety standards must be considered. A facility that has successfully operated using the DOE nuclear safety standards would likely only require an ORR scope and depth that verifies readiness to operate in those areas that have changed since the last time the facility operated. Conversely, a facility that has not successfully demonstrated its ability to operate using the nuclear safety standards, e.g., one that was shut down during the period during which most of the standards were implemented, would require a scope and depth that verified readiness to operate in most or all areas."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 4.2.4

"ORR Implementation Plan (DOE and responsible contractor). The approved Plan-of-action will be provided to the designated ORR team leader. The team leader will identify the necessary experts to conduct the ORR. the team leader, with the assistance of the team, will develop the Implementation Plan. The Implementation Plan is the plan for conduct of the ORR. It will include the checklists, evaluation criteria, documentation methodology, qualification requirements for team members, etc., as necessary to efficiently execute and report the results of the ORR. Section 5.9.2 < DOE-STD-ORR > describes the Implementation Plan in more detail."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.1.4

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"Responsible Contractor ORR Implementation Plan. Consistent with the scope and depth defined in the ORR Plan-of-action, a structured review plan should be prepared and implemented that identifies all of the necessary actions required for the determination of readiness to safely startup and operate the facility under review. If a previous ORR has been completed for the facility being reviewed, the ORR Implementation Plan and subsequent review should stress the items that have changed since the last review as well as the effectiveness of corrective actions. the ORR Implementation Plan is described in section 5.9.2 < DOE-STD-ORR >."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.1.8

"Determining the Depth of the ORR. The depth of the ORR will depend on many factors and a graded approach is necessary to ensure that the appropriate level of detail is provided by the ORR. Appendix 1 <DOE-STD-ORR-XX> provides guidance on applying the graded approach to determining the depth of the ORR. The depth of the ORR will be defined in the contractor ORR Implementation Plan."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.1.9

"ORR Evaluations. The ORR team should conduct performance-based assessments that include observing and documenting the responses of operating and support services personnel to normal and off-normal events as demonstrated by drills, preoperational test and exercises. In addition, field assessments should be conducted to verify that field configurations match the applicable supporting documentation. The ORR team should also conduct interviews with personnel, including management, to evaluate their readiness to conduct operations. The ORR Implementation Plan will guide the evaluations.

The ORR evaluations should place particular emphasis on structures, systems, and components that are safety related (relevant to public and worker safety and health) or of particular importance to the safety of the planned operation of the activity. The results of these evaluations shall be included in the ORR report.

Documentation of the methodology and results of the responsible contractor ORR assessment is important to the credibility of the review and the foundation for the follow-on DOE ORR. The value of the review will in large part depend on the record of the ORR, that is was thorough in execution as well as adequate in depth and scope. Section 5.5 and Appendix 4 of this standard <DOE-STD-ORR-XX> provides additional information on recording the results of the ORR."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.5, Paragraph 1

"Documentation of the ORR Results (Both Responsible Contractor and DOE). The validity of, and the ability to defend, the results of an ORR will depend in large part on the thoroughness with which the process and the observations are documented. The record of the ORR must be clear as to what was evaluated and the methodology used during the evaluation. The criteria in the Implementation Plan are the "what." The record must clearly record the "how" that leads to the conclusions reached concerning the particular criteria. The Implementation Plan will specify a standardized method to record the assessment process for each criteria including what was inspected, what records were reviewed, who was interviewed, and what procedures were observed.

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Form 1 (see Appendix 4 <DOE-STD-ORR-XX>) is a sample Assessment Form which can be utilized to describe the steps in the criteria evaluation process.

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.5, Paragraph 2

"The Implementation Plan will also provide a standardized method to identify deficiencies to the requirements identified within the criteria. Each deficiency, commonly called a "finding" must be clearly described. The finding must describe what is deficient, the reference to which it is deficient, and written in a manner permitting correction. Prior to being published, each finding should be identified as to whether or not, in the opinion of the ORR team leadership, it must be resolved as a prerequisite to start of operations. It may also be appropriate to identify the level of management (i.e. contractor, DOE Field, or DOE HQ) at which the finding should be closed. While the ORR team may assist the line management in reviewing the action taken on a finding, responsibility for closure should reside in the line. The Implementation Plan should describe the closure process and include the form of the closure documentation. Form 2 (see Appendix 4 <DOE-STD-ORR-XX>) is a sample Deficiency Form which may be specified to identify findings. Form 3 (See appendix 4 <DOE-STD-ORR-XX>) may be specified as the required documentation to describe corrective action and close the finding."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.2

"ORR Implementation Plans. The ORR Implementation Plan is developed by the team responsible for conducting the ORR. The Implementation Plan is approved by the team leader designated in the ORR Plan-of-action. This ORR Implementation Plan documents not only the process by which the team conducts the review, but also defines the rationale for that process. The documentation includes the selection of assessment and review areas, the review and assessment methodology, and the procedures by which the team will develop findings and conclusions and the criteria to be applied to categorize findings as prestart and post-start. The ORR Implementation Plan is the document that provides for the executing of the ORR scope and other details in the approved ORR Plan-of-action.

The ORR Implementation Plan should provide sufficient detail to serve as both information to management and guidance to the ORR team members. The ORR Implementation Plan details the objectives and sub-objectives of the review, the criteria against which the status of the objectives are to be evaluated, and the review methodologies that will provide factual evidence by which the facility's readiness is evaluated. This ORR Implementation Plan requires a thorough understanding of the facility and its associated issues. Pre-development on-site visits and interviews may be required before the ORR Implementation Plan can be adequately developed.

The ORR Implementation Plan should be provided to appropriate oversight groups, such as: EH, DNFSB, if applicable, and higher-level DOE management for review and comment, prior to commencement of the DOE ORR.

The following outline provides a suggested format for the ORR Implementation Plan:

I. Introduction/Background: Describes the activity that will be reviewed and the reason for shutdown (if a restart). This section provides background information that will provide the reader with enough information concerning the basic process, hazards, and issues associated with the activity to be reviewed.

II. Purpose: Describes the reasons why the review will be conducted, and provides the basic

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insights for the defined scope of the review.

III. Scope: The scope defines the physical and administrative boundaries of the facility, and justifies those defined boundaries and support function review relative to each of the following:

1. Readiness of plant and equipment;
2. Readiness of personnel (contractor and DOE);
3. Readiness of policies, procedures, and documentation (contractor and DOE);
4. Readiness of management systems (contractor and DOE);
5. Readiness of functional areas and program (contractor and DOE).

The scope section of the ORR Implementation Plan will describe the approved scope from the approved ORR Plan-of-action. Each scope element required by the Plan-of-action must be incorporated into the ORR Implementation Plan. The depth to which each scope element is evaluated will be specified and quantified by the Implementation Plan criteria and review approaches in the section VII.

The scope section should define the major objectives of the review. These objectives define the discipline or areas which are targeted for review and define the approach and guidelines which must be implemented for an organization to achieve a state of operational readiness.

IV. ORR Prerequisites: An important consideration to be discussed in this section is the prerequisite conditions to be met by the facility management prior to the start of the ORR (this section is appropriate to both the responsible contractor ORR as well as the DOE ORR). The formal method by which contractor line management will certify having achieved readiness and request the contractor ORR to commence should be discussed in the plan. The process by which the contractor separates gaining readiness through management actions, and verifying readiness through the ORR process should be noted. In addition, the process for receipt and approval of the Readiness to Proceed Memorandum as a prerequisite to the DOE ORR should be discussed in the DOE ORR Implementation Plan. It is appropriate that the status of the facility safety documentation including its definition of the safety envelope, required systems, procedures, and administrative controls be elements of the prerequisite conditions described in this section of the ORR Implementation Plan. The DOE ORR Implementation Plan should include readiness of DOE line management and Operations Office programs to monitor facility operations and prerequisites. The prerequisite section should refer to specific items such as project management plan, a readiness self-assessment plan, safety documentation such as SAR, TSR, etc. or environmental assessments or impact studies. The prerequisites should be described in terms of specific measurable completed items.

V. Overall Approach: Defines the generic approach by which the review will be conducted, as well as providing an introduction to the ORR process. The ORR Criteria and Review Approaches (CRAs) will be defined by the processes described in this section. The definition of the criteria by which findings will be classified as prestart and post-start should be defined here, as should the method for report preparation and open item resolution and methods of closure.

VI. ORR Preparations: Describes any preparations, including team pre-review site visits, document reviews, etc. that will be undertaken prior to the on-site review. A discussion of

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qualifications and training considerations for ORR team members could appear here.

VII. ORR Process: Describes the actual Criteria and Review Approaches that will be utilized to review the defined objectives and sub-objectives of the review. These CRAs should be developed in a format to include the following items:

A. Objective - a definition of the assessment area;

B. Criteria - which requirements will the objective be measured by, which may include regulatory requirements, etc.;

C. Review Approach - a definition of what combination of review of documentation, interviews of personnel, walkdown of systems, and observation of exercises and/or drills will be conducted to derive objective evidence by which the team will measure the defined criteria and assess the readiness of the particular objective or sub-objective;

D. Basis - a discussion of why the particular review is needed;

E. References - those requirements or regulatory standards that apply to this objective or sub-objective and safety documentation that contains the requirements associated with a particular objective or sub-objective.

This section may be unnecessary if the information is contained in Section V and the appendices.

VIII. Administration: Describes the mechanism for the ORR-related meetings, correspondence, communications, team structure, etc. of the review. The ORR team composition/organization, interface requirements, any oversight groups, and DOE organizations to be involved in the review should be discussed in this section.

IX. Reporting and Resolutions - The section should detail the methods that the ORR team will use to report review results. Elements described in Section 5.5, 5.8, and 5.9.3 of this standard <DOE-STD-ORR-XX> should be included.

X. Schedule: A discussion of the proposed schedule for any preparation, pre-review site visits, on-site review, conduct of review, report preparation, and closeout.

XI. Appendices: The appendices should include the check lists or other specific criteria evaluation and review documents which are to be utilized by the team members to conduct the individual assessments. They may also include reporting forms, writing guides, and other sections appropriate to stand alone in an appendix.

SITE REQUIREMENT SOURCE: DOE5480.RESTART-8-93 Section 8.b.(6)

"Requirements applicable to startups or restarts involving Operational Readiness Reviews.

(6) The Operational Readiness Review team shall determine the criteria to be used for the review based on the approved scope given in the plan-of-action and document the criteria in the Operational Readiness Review Implementation Plan. The Operational Readiness Review Implementation Plan is developed by the Operational Readiness Review team utilizing the approved Operational Readiness Review plan-of-action and generic Operational Readiness Review execution requirements. Many of the elements for development of the Operational

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Readiness Review Implementation Plan are described in the Operational Readiness Review standard."

SITE REQUIREMENT SOURCE: DOES480.RESTART-8-93 Section 8.b.(7)

"Requirements applicable to startups or restarts involving Operational Readiness Reviews.

(7) The Operational Readiness Review Implementation Plan is approved by the Operational Readiness Review team leader and used by the Operational Readiness Review team leader to execute the Operational Readiness Review. The Operational Readiness Review Implementation Plan is provided to the Office of Environment, Safety and Health for information."

1.9.4

Implementation

The Order clearly states the ORR will not be conducted until line management has determined the facility is ready to operate. The conduct of the ORR and subsequent documentation is deemed to be particularly important to the validity of, and the ability to defend the results of the ORR. The requirements follow.

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.5, Paragraph 1

"Documentation of the ORR Results (Both Responsible Contractor and DOE). The validity of, and the ability to defend, the results of an ORR will depend in large part on the thoroughness with which the process and the observations are documented. The record of the ORR must be clear as to what was evaluated and the methodology used during the evaluation. The criteria in the Implementation Plan are the "what." The record must clearly record the "how" that leads to the conclusions reached concerning the particular criteria. The Implementation Plan will specify a standardized method to record the assessment process for each criteria including what was inspected, what records were reviewed, who was interviewed, and what procedures were observed.

Form 1 (see Appendix 4 <DOE-STD-ORR-XX>) is a sample Assessment Form which can be utilized to describe the steps in the criteria evaluation process.

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.7 Paragraph 1

"ORR Follow-Up. The completion of the ORR and the finalizing of the report are not the end of the ORR process, nor the team's involvement in that process. Several actions will require the participation of the team leader, the senior members, team members, and team consultants (technical experts), as needed to support the team leader. The team leader should notify all team members of future involvement concerning closeout briefings, interpretation (and possible justification) of findings, review of corrective action plans for adequacy, and review of final closure actions. The team leader is responsible for determining when a team member should be consulted concerning the action plan or closure adequacy. Without such consultation and before deciding on closure adequacy, the team leader should be certain of the problems and required closure actions."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.7.1

"Post-ORR Presentations. The team leader must coordinate any follow-up meetings which include closeout meetings with the facility's management, debriefings of the team, and

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presentation of the report to upper management (responsible contractor, and DOE). The team leader may be required by the PSO (or other appointing authority) to present the team report to upper DOE management, and discuss the contractor corrective action plans and expected closeout and startup of the activity. Presentations may be required to internal or external interested groups as well."

SITE REQUIREMENT SOURCE: DOE5480.RESTART-8-93 Section 8.b.(8)

"Requirements applicable to startups or restarts involving Operational Readiness Reviews.

(8) The contractor will be required to perform its Operational Readiness Review after its line management certifies that the facility is ready to operate."

1.9.5

Tracking and Closure of Findings

The importance of proper documentation, including identification of pre-start or post-start resolution of findings is stressed in the Standard. The Standard also places the responsibility for closure on line management, not the ORR Team. The formality of closure is well defined for DOE ORR findings, but is less clear for the contractor. This writer has chosen to utilize the DOE formality as a requirement for the Westinghouse ORR. Requirements are as follows:

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.7.2, Paragraph 1, Items a. through d.

"Action Plans. The contractor and DOE must prepare corrective action plans for the correction of all findings assigned to each element. The action plan should be discussed in the closeout meeting, and should contain the following elements:

- a. The finding, as written in the report submitted by the ORR team, and whether the finding is a prestart or post-start finding.
- b. A detailed proposed action plan for addressing the deficiencies identified in that finding.
- c. The proposed dates by which the action elements will be completed. If the corrective actions for a finding are phased, then the dates for each phase should be detailed.
- d. If it is a post-start finding, a description of the risks and mitigating actions, if any, to be taken during the interim which will reduce the risks associated with the finding to an acceptable level before final correction. Include justification that the activity can proceed with acceptable risk."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.7.4

"Follow-up Reviews/Visits.

In some cases, the DOE or responsible contractor management may require that closure packages include a post-review and verification of closure of the finding by the team members appointed by the team leader. These reviews will be documented, and such documentation maintained with the closure documentation."

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1.9.6

Documentation

The requirements address the final ORR Report and the Readiness to Proceed Memorandum submitted for DOE approval and to initiate the DOE ORR. The formality and detail of both the Report and Memorandum are extensive. Requirements are as follows:

1.9.6.1

Final ORR Report

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.1.10

"ORR Report. An ORR report shall be prepared. the report should contain a brief summary of the review activities, the conclusions reached, the basis for those conclusions, and confirmation that findings were resolved along with explanations of any deviations. The report may also identify observations that would not impact startup, restart or shutdown but, if corrected, would lead to excellence in operations.

The report should include a section describing the lessons learned during the ORR, including a discussion of both the process and the technical issues identified. Section 5.8 of this standard <DOE-STD-ORR-XX> further discusses lessons learned.

The ORR report should also include a section that provides the ORR team members the opportunity to discuss differing professional opinions, non- judgmental general comments, and observations. The ORR report is described in more detail in Section 5.9.3 <DOE-STD-ORR-XX>."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.1.5

"Operational Readiness Review Team. The overall responsibility of the ORR team is to examine the aspects of the activity under review and assure themselves, management, and the DOE that the equipment, procedures, and personnel associated with the activity are ready for the startup and safe operation. To demonstrate independence, the senior members, including the team leader, shall not have direct responsibility for the work being reviewed. No ORR team member shall review his or her own work or work for which they are directly responsible."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.5, Paragraph 3

"The report of the ORR should include as appendices or attachments the individual criteria, assessment documentation as to how the criteria were evaluated, and findings documentation. Key findings and a summary of the findings, and the process used will be described in the body of the ORR report.

The report may also include an action plan by the responsible organizations for resolution of all open findings. See Section 5.9.3 <DOE-STD-ORR-XX> for additional detailed information for development of the ORR Report."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.7.2, Last Paragraph

"The final contractor ORR report and the contractor's response to the DOE ORR report should contain a schedule for resolving post-start findings, and describe the actions already taken, or

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planned to be taken, to resolve the prestart findings. This may be done through attachment of the approved action plan, as described above <DOE-STD-ORR-XX, Section 5.7.2, Paragraph 1>. The contractor's Readiness to Proceed Memorandum should provide adequate justification for startup with post-start findings."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.7.3

"Action Tracking/Closure Methodology. The ORR team leader should discuss all findings during the closeout meeting with the facility's responsible management (in the case of the DOE ORR, management will include both contractor and DOE). During this meeting, the team leader should discuss the expected requirements for closure of all findings. The team leader should also discuss the expected action plan development, submittal, and approval, as well as the mechanism by which the contractor will officially closeout findings and document those closures.

There is no DOE-wide required mechanism for documenting action item closure. This is generally accomplished by development of a closure package that is reviewed and certified by the facility management and further reviewed by DIE management. It may be desirable for the ORR team leader or other appropriate individual not responsible for the closure of the finding to review the closure packages as well. These procedures should be documented either in a facility wide requirement or within the individual ORR Implementation Plan. Closure packages should contain the following information:

- a. The finding, written verbatim from the original report, and identifying the finding as a prestart or post-start finding;
- b. The actions proposed in the action plan developed, submitted, and approved with the original completion schedule.
- c. The actual corrective action(s) taken, and the dates of completion of the corrective action(s).
- d. Signatures of appropriate facility management, as defined by the site procedures or within the ORR Implementation Plan. A draft closure form is provided as Form 3, "ORR Finding Resolution Form," in Appendix 4 <DOE-STD-ORR-XX>."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.8

"Lessons Learned.

All ORR reports must contain a section concerning lessons learned and should be used by both contractor and DOE to improve the ORR process. These lessons learned provide information concerning problems encountered by the review team, adequacies or inadequacies concerning the review, design and implementation, expertise, or any other relevant factors or information that may be utilized by future review teams.

A mechanism must be implemented to ensure that these lessons are transmitted to future review teams, and incorporated into the design and implementation of future reviews. The PSO readiness review policy should provide direction as to who is responsible to track such lessons and transmit them to those who will design and conduct future reviews. This person or organization should provide lessons learned to both the DOE and contractor organizations, as applicable to those organizations.

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The ORR process may also identify lessons learned which are applicable to similar facilities. Lessons learned in areas such as operations, procedures, design or documentation may be identified. The ORR team should include these lessons learned in the report as well. Facility management or DOE line management is then responsible for promulgation of these lessons learned in accordance with established procedures for lessons learned."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.3

"Operational Readiness Review Report.

The final product of the Operational Readiness Review process is the ORR report. This report documents not only findings and conclusions, but the process by which these were developed. The ORR report is the deliverable from the ORR. The ORR report is the basis for senior management decisions and must therefore accurately reflect the conditions found during the conduct of the ORR.

The ORR report documents the logic of the review and conveys the results of the review. It provides a summary of review activities and confirmation that the criteria and review approaches detailed in the Implementation Plan were followed, with explanations for any deviations from the Plan. The report also contains enough detail that the reader can follow the review logic of the ORR, traceable from the ORR Implementation Plan to the findings to the recommendation of readiness to proceed.

The report forms the basis for conclusions as to the effectiveness of the facility's ORR preparation, the contractor ORR, and the readiness of the facility to proceed with startup or restart. The report must also provide information concerning the readiness of the management system (both the contractor and DOE) to oversee and manage the activity. If deficiencies exist, the report defines those clearly as well as what inadequacies must be addressed before startup and after startup."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.3.1

"Report Format DOE Orders and guidance provide no direction concerning the format of the ORR. The following is a suggested format derived from a composite of past DOE ORR reports. A synopsis of each section is contained in the following paragraphs.

1. Title Page (Cover)
2. Signature Page
3. Table of Contents
4. Introduction
5. Executive Summary
6. Senior Advisor Evaluation
7. Team Evaluation
8. Evaluation of Objectives
9. Lessons Learned
10. Appendices

1. Title Page (Cover) - The cover and title page state the subject, and the date of the review or evaluation. The report cover should be as clean as possible, and should not contain any extraneous information, data, graphics, or pictures.

2. Signature Page - A signature page should be provided. The signatures on the final report are

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generally limited to the team leader and senior members of the team. However, team member signatures are permitted at the discretion of the team leader. Senior advisor signatures are desirable but not required.

3. Table of Contents - A Table of Contents should be provided to facilitate review of the report. The Table of Contents should identify, with page numbers, all sections and subsections of the report, illustrations, charts, and appendices.

4. Introduction - An introduction should provide information and background regarding the facility being reviewed, the reason(s) for shutdown (if a restart), the purpose of the review/evaluation, and the scope of the activity evaluation. Other information that should be provided include a brief discussion of:

- a. The overall objectives of the evaluation;**
- b. The review process & methodologies used in the review;**
- c. The team composition;**
- d. Definitions applicable to the review.**

5. Executive Summary - An executive summary may be provided, and is recommended. This summary is a two to three page synopsis of the review, findings, and readiness determination. The executive summary should introduce information, and direct the reader to those portions of the report that provide more detail concerning the information. Some suggested points for the executive summary include:

- a. A brief synopsis of the review activity, which provides information concerning the team's evaluation of readiness;**
- b. The readiness of the activity to proceed;**
- c. The management system adequacy to oversee the operation;**
- d. A summary evaluation of the adequacy of the ORR preparation (and possibly the ORR program); and**
- e. A synopsis of the significant problems, and significant strengths.**

6. Senior Advisor Report - A senior advisor report is optional, and is included at the discretion of the team leader. Generally, senior advisor reports are included for large reviews or evaluations, or in cases in which senior advisor composite review areas are logically divided in such a way that make the overall report more readable or understandable. In these cases, the senior advisor report provides a composite evaluation of the readiness of several review areas. The senior advisor report may consolidate or summarize these areas, but should not unnecessarily repeat information contained elsewhere in the report. Some suggested points for the senior advisor report include:

- a. Background concerning the review/evaluation;**
- b. Principal conclusions of the evaluation;**

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- c. Other conclusions;
- d. Observations derived from the evaluation;
- e. Preparation and signatures by senior advisors, concurred by team leader.

7. Team Evaluation - For each objective area, the report should discuss the objective, and provide conclusions as to the readiness for each major area. Conclusions as to the readiness of hardware, personnel, procedures, and the management system that controls each review area should be addressed, including key issues concerning the review area. The evaluation should discuss the prestart and post-start findings associated with the review and provide a conclusion as to the readiness of the facility to begin operation.

8. Evaluation of Objectives - This section provides the details concerning the review of each objective. The evaluation section provides a summary of the team review activities and conclusions for each objective defined in the Implementation Plan. All pre-start and post-start findings for the objective are identified, along with the justification for each finding. The report should identify deficiencies as findings (either prestart or post-start) along with the basis for the deficiency.

Any deviations from the Implementation Plan should be discussed, along with the reasons for the deviation(s), and what alternative actions were taken to compensate, if required. As the evaluation section provides the bases for the determination of readiness for each objective, it should discuss not only the deficiencies found during the review, but should also discuss those positive aspects that affected the determination. In addition, the ORR report should also identify as "Observations" those items which would not preclude startup, but if addressed, would lead to excellence in operations. This information may be included in an appendix which consists of the individual check lists with the accompanying appraisal and issue forms. See Appendix 4 for additional details.

9. Lessons Learned - The Report should identify lessons learned that may be applied to future ORRs. The ORR report should address the problems and the successes encountered in the review and evaluation process (what worked, what did not work). These activities should be documented to provide guidance on future ORRs.

10. Appendices - Appendices should be provided for data that support the actual report. Data that should be considered for appendices include:

- a. Implementation Plan
- b. Criteria and Review Approaches;
- c. ORR Activities Plan;
- d. Team List & Biographical Resumes;
- e. Evaluation of Sub-objectives;
- f. Pre-start Findings summary;
- g. Post-start Findings summary."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.3.2

***Other Report Considerations**

- a. Reference the ORR Implementation Plan;
- b. Demonstrate how plan was followed;

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- c. Account for any deviations from the plan;
- d. Make certain that all findings and observations are traceable;
- e. Relate findings to specific review objectives; and,
- f. Decide and state determination of readiness."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.3.3

"The Review Logic

The ORR report must document the logic of the review, relating any findings to the review objectives in the Implementation Plan. The report must detail the objectives of the review, explain how the review addressed those objectives, what criteria were used, and the methods by which those criteria were assessed. Finally, the report should describe the findings of the review, and explain how these findings relate to the conclusions of the team for each area and the review as a whole. A good method for documenting this logic is to utilize a numbering method for the ORR Implementation Plan, and relate this number system to the findings of the review. Using this methodology, one might develop an Implementation Plan with objectives using a certain alphanumeric character, relating the sub-objectives, as follows: Objective - A-3 - An adequate conduct of operations system is implemented in accordance with DOE Order 5480.19

Sub-objective A-3.1 - Appropriate measures are taken to ensure adequate shift transfer protocol.....

Sub-objective A-3.2 - An adequate program is in place to ensure that employees are protected from hazardous materials or equipment due to the inadvertent starting of equipment, opening of valves, switches.....

CRA - A.3.2-a The requirements of DOE Order 5480.19, Section IX are implemented to ensure adequate measures are taken to....

Finding A.3.2-a An effective lockout tagout program is not in place per the requirements of DOE Order 5480.19, Section IX,...."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.3.4

"Recommendation as to Readiness to Operate

The ORR report should provide a recommendation as to the readiness for activity to begin operation."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.3.5

"Differing Opinions

The ORR report should provide opportunity for team members to include:

- Differing professional opinions;
- Non-judgmental general comments;

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- Observations;
- Dissenting opinions of team members should be documented, and attached to the report.

While the team should strive to reach a consensus concerning all aspects of the review, DOE recognizes that professional judgement does not always allow complete agreement. In cases of disagreement, the team leader must make the final decision concerning the disposition of the finding or concern. However, discussion of all aspects of the finding should be provided in the report to allow the appointing authority all relevant information on which to form an opinion.

If a team member feels that aspects of his/her opinions have not been adequately represented, that member has the right to file a "minority report." This report should be attached to the report, identified as an appendix, for review by the approving authority."

SITE REQUIREMENT SOURCE: DOE5480.RESTART-8-93 Section 8.b(11)

"Upon completion by the contractor of Departmental Operational Readiness Review, a final report shall be prepared and approved by the Operational Readiness Review team leader. The final report will document the results of the Operational Readiness Review and recommend startup or restart of the nuclear facility. There shall be a statement in each Operational Readiness Review final report as to whether the facility will be operated in conformance with applicable DOE Orders, directives and Secretary of Energy Notices; and that any identified nonconformances or schedules for gaining compliance with the Orders have been justified in writing, have been formally approved, and in the opinion of the Operational Readiness Review team do not unduly diminish protection of the public health and safety, worker safety, or the environment. Additionally, there shall be a "Lessons Learned" section of the final report which may be applied to future Operational Readiness Review efforts."

SITE REQUIREMENT SOURCE: DOE5480.RESTART-8-93 Section 8.b(1?)

"The final report will be submitted to the approval authority identified in paragraphs 8a(4)(a) and (b) <DOE ORDER 5480.RESTART 8-93> and used by the approval authority as a basis to grant approval of start or restart of the nuclear facility."

1.9.6.2

Readiness to Proceed Memorandum

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 4.1.11, Sentences 1 and 2

"Declaration of Readiness to Proceed. Once the contractor ORR process has been completed, the contractor should develop an action plan which provides the methodology and the schedule for resolution of the findings from the ORR. Prior to forwarding the Readiness to Proceed Memorandum to DOE, the prestart findings shall be resolved and the action plan, including schedule of completion for the remaining findings, should be prepared."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.5, Paragraph 4

"The final report of the contractor's ORR should be an enclosure to the Readiness to Proceed Memorandum from the contractor. That report will indicate the status of resolution of prestart findings and an Implementation Plan for pos-start findings. The final report of the DOE ORR should be part of the endorsement to the Readiness to Proceed Memorandum which indicates

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that the conclusions reached by the DOE ORR support the recommendation in the endorsement."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.7.2, Last Paragraph

"The final contractor ORR report and the contractor's response to the DOE ORR report should contain a schedule for resolving pos-start findings, and describe the actions already taken, or planned to be taken, to resolve the prestart findings. This may be done through attachment of the approved action plan, as described above <DOE-STD-ORR-XX, Section 5.7.2, Paragraph 1>. The contractor's Readiness to Proceed Memorandum should provide adequate justification for startup with post-start findings."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.7.2, Paragraph 2

"The contractor should issue to DOE a final ORR report with the Readiness to Proceed Memorandum after all ORR prestart findings have been satisfactorily resolved. This may be accomplished by appending the action plan and closure packages (discussed below) to the ORR report."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.4.1

"Timing of the Readiness to Proceed Memorandum.

The Readiness to Proceed Memorandum should not be submitted until all actions required for startup or restart have been completed with the exception of a manageable list of open prestart items that have a well defined schedule for closure.

The principle that line management is responsible for bringing the facility to a condition of readiness to start operations and that the ORR verifies that readiness must not be disregarded. If there are an excessive number of open items at the time the Readiness to Proceed Memorandum is submitted to DOE the initial conclusion is that the responsible contractor's line management and ORR processes were not successful.

The following discussion concerning the acceptability of the open prestart items at the time the Readiness to Proceed Memorandum is provided:

- a. Each open item prerequisite to commencing facility operations must be identified as a part of the Readiness to Proceed Memorandum.
- b. The number of open items must be small. In evaluation of the number which is acceptable, one principle should be that every area to be evaluated by the DOE ORR must be sufficiently complete to permit evaluation. For example, a single finding or multiple findings that in aggregate means that some key program has not yet been developed and put in place would not be acceptable since the DOE ORR would be unable to review the adequacy of the program. Only if that program were to be in place prior to the end of the onsite portion of the ORR would a finding of this sort be acceptable as an open item in the Readiness to Proceed Memorandum.
- c. Each open item must be defined with an explicit corrective action plan. "Open ended" items such as the required environmental permits have not been requested or approved

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would not be acceptable in that many additional facility procedures and activities are potentially dictated by the corrective actions to the identified open item.

- d. Each open prestart item identified must have a reasonable plan of corrective action in place. The plan must be included with the identified open items in the Readiness to Proceed Memorandum. The schedule for completion of the corrective action plan must be consistent with the timing for the completion of the DOE ORR.

In summary, the open items should be few in number, well defined with a well defined corrective action plan, able to be completed on a schedule which is consistent with the DOE ORR schedule, and not be of such a nature individually or in aggregate to preclude an adequate review by the DOE ORR of any specific area."

SITE REQUIREMENT SOURCE: DOE-STD-ORR-XX Section 5.9.4.2

"Contents of Readiness to Proceed Memorandum.

The Readiness to Proceed Memorandum is a communication from an authorized individual of the responsible contractor to the DOE Operations or Area Office Manager. The communication will certify that the facility is in a state of readiness to commence operations following completion of the open prestart items identified and the DOE ORR. For each open item listed, a corrective action plan, including a schedule of completion, must be included. The communication should recommend a date for the DOE ORR to start. The DOE ORR completion schedule should be consistent with the final completion date for the identified open restart items. The Readiness to Proceed Memorandum should certify completion of the contractor's ORR as well as all items in the prestart management plan.

The Readiness to Proceed Memorandum should also include a status of DOE Order Compliance as it reflects the facility being started. Compliance Schedule Agreements (CSAs) and Order Implementation Plans that affect the facility should be identified with an indication of status of schedule completion. If the facility has not participated in an approved order compliance program, it will be necessary for the Contractor's ORR to conduct an order compliance review of the level 1 orders."

SITE REQUIREMENT SOURCE: DOE5480.RESTART-8-93 Section 9.e.(5)

"The contractor shall be required to:

- (5) Notify the cognizant Operations Office of readiness of the facility to startup or restart, after completion of the contractor Operational Readiness Review or Readiness Assessment."

1.10

LESSONS LEARNED PROGRAM

PURPOSE

The purpose of this Requirements Identification Document (RID) is to identify, in one location those attributes necessary to establish an effective lessons learned (LL) program and all of the facility specific requirements relating to the program for the Tank Farm Facility.

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Effective lessons learned programs include many aspects of improvement from both negative lessons of what not to do as well as positive lessons, how can we do it better. These lessons must be incorporated into the way of conducting business so that they will not have to be relearned.

One source of LL is the corrective action program wherein the root cause(s) of deficiencies that have occurred in organizations or programs are uncovered. Program improvements for prevention of those root causes are deduced. These potential improvements often represent "lessons learned." Lessons learned may come from a variety of other sources including external sources (DOE, NRC, other regulatory bodies or industry) or internal sources (site operational occurrences, deficiencies, audits, etc.). It is important that a process be developed to identify, capture, track, review, integrate in training and procedures (as appropriate), and apply those lessons learned which would improve some aspect of plant operations.

Effective lessons learned programs are site administered with representatives at each facility to ensure that both specific facility lessons learned and external lessons learned are reviewed and handled appropriately. The Tank Farm Facility should have an identified individual to administer the lessons learned program as it pertains to that facility.

Most requirements for lessons learned evaluations are associated with other programs such as Occurrence Reporting which do not state specific requirements for the programmatic aspects of handling and reviewing lessons learned. The basic requirement for determination of lessons learned and taking appropriate actions regarding them exists in DOE Order 5000.3A, Occurrence Reporting, and DOE Order 5480.19, Conduct of Operations. Various INPO documents also contain good practices which relate to identification and handling of lessons learned.

INTERFACES

The Tank Farm Facility LL Program interfaces with all site programs through the site LL program. The TFF designated representative provides the facility interface to this program. TFF groups or organizations provide identified lessons learned to the TFF LL representative who ensures that they are subsequently transmitted to the site lessons learned coordinator. Lessons learned coming in from the site LL organization for review are handled by the TFF LL representative.

1.10.1

Organization

A lessons learned program is established for the Tank Farm Facility by appropriate policies and procedures. The administration of this program is accomplished by experienced individual(s) as a permanent (collateral) duty.

1.10.1.1

Lessons Learned Program Policy

A program is in place at the TFF defining the basic requirements for the TFF Lessons Learned Program and the management commitment to carry out the program.

SITE REQUIREMENT SOURCE: DOE/EH0135 FR.6

"PERFORMANCE OBJECTIVE: Operating experiences should be evaluated, and appropriate actions should be undertaken to improve safety and reliability."

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SITE REQUIREMENT SOURCE: DOE/EH0135 FR.6.3

"In-house events are screened for significance and prioritized for evaluation."

FACILITY REQUIREMENT SOURCE: DOE5000.3A Section 8.c(2)

"Utilization. Contractors for each facility or group of facilities shall collect and disseminate to their personnel the operations information obtained from their facilities and the lessons to be learned from this information. Each Facility Manager should adopt the use of trending and analysis of this information for early indications of deteriorating conditions. Corrective actions should be taken for any identified deteriorating conditions. The Facility Manager should review the DOE operational data base to identify good practices and lessons learned from other facilities that can be used in his/her facility."

SITE REQUIREMENT SOURCE: DOE5480.26 Section 7.b (1), Sentence 2

"Facility Managers shall assess their facility operating information for trends and indications of deteriorating/improving conditions and identify lessons- learned and good practices that should be used in their facility to prevent occurrences or to improve safety and/or operations."

1.10.2

Sources of Lessons Learned

Sources of potential lessons learned encompass all site programs and management systems, trending is performed on issues and deficiencies found in those programs, and external information is reviewed at the site level by individuals with broad-based experience so that they can identify LL which may apply to site facilities.

SITE REQUIREMENT SOURCE: DOE/EH0135 FR.6.7

"7. A comprehensive evaluation is performed on applicable, significant industry operating experience, and appropriate corrective action is completed in a timely manner. Sources of significant operating experience information that are reviewed for applicability include:

- DOE and NRC letters, bulletins, and information notices;
- Supplier and architect/engineer reports;
- Facility event reports; and
- INPO operating experience information/documents."

1.10.2.1

Source Identification

The various sources of experience documents within the scope of the program are defined in writing. The range of sources includes Occurrence Reports and other documentation describing construction, engineering, and operating experiences at Hanford and other DOE facilities, commercial nuclear power plants, and other industries, as applicable.

SITE REQUIREMENT SOURCE: DOE/EH0135 FR.6.5

"5. Comprehensive reviews of system protective actions (e.g., scrams, high pressure/temperature shutdowns) include:

- Identification and resolution of the causes(s) of the protective action;

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- Identification and resolution of discrepancies between actual and expected system responses; and
- Documentation to support results and recommendations."

1.10.3 **Capture of Lessons Learned**

No requirements identified for this subelement.

1.10.4 **Distribution of LL to Employees**

The program procedures define the methodology for providing potential lessons learned which have been identified by the lessons learned representative to facility employees for their application and for determining whether plant or process improvements are appropriate. Procedures also provide a mechanism for verifying the employees have been apprised of the lessons learned.

FACILITY REQUIREMENT SOURCE: DOE5000.3A Section 8.c(2)

"Utilization. Contractors for each facility or group of facilities shall collect and disseminate to their personnel the operations information obtained from their facilities and the lessons to be learned from this information. Each Facility Manager should adopt the use of trending and analysis of this information for early indications of deteriorating conditions. Corrective actions should be taken for any identified deteriorating conditions. The Facility Manager should review the DOE operational data base to identify good practices and lessons learned from other facilities that can be used in his/her facility."

1.10.4.1 **Informal Distribution Processes**

The informal means of distributing LL consist of discussions at Plan-of-the-Day meetings, all hands meetings, or other such meetings, providing copies of the LL to applicable individuals, providing a lessons learned reading file with required initials once each document has been reviewed or combinations of the above. Significant LL which improve safety should receive priority and be presented or discussed at the first opportunity.

SITE REQUIREMENT SOURCE: DOE5480.19 Attachment I, Chapter VI, Section C.6, Paragraph 2

"It is important that the lessons learned from an event investigation be shared with all appropriate personnel who could benefit from the lessons learned. For example, a problem with an operations procedure might also exist in another department's procedures."

1.10.4.2 **Inclusion in Training Program and/or Procedures**

A process is in place to incorporate identified lessons learned in site and/or facility training programs and/or procedures at a speed related to the importance of the lesson learned.

SITE REQUIREMENT SOURCE: DOE5480.19 Attachment I, Chapter VI, Section C.7

"Event Training

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In-house events should be evaluated by the operations supervisor to determine if the event should be included in the training program for operations personnel. In some cases, due to the severity or possible safety consequences of some events, it is appropriate to train shift operations personnel on the event immediately. A mechanism should exist so that appropriate shift personnel could be immediately trained on an event when they next report for work."

RELATED REFERENCES

1. INPO-85-001-R01 Section OP.5 Criteria J
2. INPO-85-001-R01 Section MA.6 Criteria K
3. INPO-85-001-R01 Section MA.9 Criteria M.1

1.10.5

Lessons Learned Program Review

Site and facility procedures define requirements for periodic program review or self-assessment to ensure that lessons learned are being reviewed and distributed in a timely manner to those individuals who can apply the information.

1.11

KEY INTERFACES

The Management Systems Functional Area is a collection of systems and processes which service all other functional areas. As such there are no key interfaces but more appropriately an interdependency between all site programs/organizations and management systems and among the systems all processes discussed here.

WESTINGHOUSE HANFORD COMPANY

REQUIREMENTS

IDENTIFICATION

DOCUMENT

FACILITY:

**HIGH LEVEL WASTE STORAGE
TANK FARMS/242-A
EVAPORATOR**

FUNCTIONAL AREA:

Configuration Management

REVISION 0

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3.0 CONFIGURATION MANAGEMENT

INTRODUCTION

SCOPE

This Requirements Identification Document (RID) for the Configuration Management functional area is based on the Rev. C draft Environmental Safety and Health (ES&H) Configuration Guidelines (dated May 6, 1993) that were developed by the Department of Energy (DOE). The Configuration Management (CM) functional area for the Hanford Site Tank Farms includes the requirements for the programs, processes, and procedures to identify and maintain agreement between the design, as-built condition, and associated data and documentation for the important Systems, Structures, and Components (SSCs) of the Hanford Site Tank Farms. The requirements for a DOE facility CM program should contain the following:

- CM Policy and Directives - these provide management and facility direction and strategy.
- CM Plan - these contain a detailed program implementation plan and schedule.
- CM Procedures - these contain specific instructions and responsibilities for a fully developed program, including development, maintenance, assessments, administrative controls, and necessary interfaces.
- CM Assessments - these present a review of the present state and completeness of CM data, documentation and controls to establish needs and future actions.
- Change Control - This identifies methods to control configuration affected documents and databases.
- Technical Baseline (Design Basis) - This assists retrieval of specific design and requirements for important SSCs.
- Baseline Reconstitution - If the technical baseline is not defined or is not current, this describes activities to recreate/regenerate design and technical requirements.

The CM program should also ensure the following:

- The SSCs and computer software that are managed by the program are identified and documented.
- The technical baseline, defined as the physical and functional requirements for SSCs and computer software important to their performance, is identified and documented.

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- Changes to configurations are properly developed, reviewed, approved, issued, and implemented.
- A system is developed for recording, safeguarding, and indicating the status of technical baseline documentation on a current basis for use, reference, and reporting purposes.
- The physical and functional configuration of SSCs, computer software, and informational databases is consistent with the technical baseline documentation, including approved changes.

Currently, the state of regulation of the CM functional area is dynamic. A draft standard, DOE-STD-CM-XX (issued 05/93), has been distributed for comment; it provides the basis for DOE's acceptance of facility CM programs. This RID is based principally upon the proposed requirements of the draft standard and other DOE Orders that provide Configuration Management functions such as DOE 4700.1, Project Management System; DOE 4330.4A Maintenance Management Program; and DOE 5700.6C, Quality Assurance. These programs provide important input and perform Configuration Management functions that ensure consistency among design requirements, physical configuration, and facility documentation throughout the life of the facility. Commercial industry good practices, standards and "lessons learned" are utilized to provide supplementary guidance that is not contained within the DOE Orders and/or draft standard, as applicable. Additionally, the Configuration Management Functional Area addresses requirements contained in NQA-1-1989 and provides guidance consistent with INPO Report 87-006, "Report on Configuration Management in the Nuclear Utility Industry."

Key sections in this RID include:

- Program Management
- Technical Baseline
- Change Control
- Key Program Interfaces
- Baseline Reconstitution Program

Sub-elements provide further information and related references for the compliance of Hanford Site Tank Farms with DOE and industry CM program requirements.

This RID applies to the activities, personnel, structures, systems, components, and programs involved in executing the mission of the Tank Farms. The physical boundaries within which the requirements of this RID apply are the Single-Shell Tank Farms, Double-Shell Tank Farms, 242-A Evaporator-Crystallizer, 242-S,T Evaporators, Liquid Effluent Retention Facility (LERF), Purgewater Storage Facility (PWSF), and all interconnecting piping, valves, instrumentation, and controls. Also included are all piping, valves, instrumentation, and controls up to and including the most remote valve under Tank Farms control at any other Hanford facility having an interconnection with Tank Farms. The boundary of the structures, systems, components, and programs to which this RID applies is defined by those that are dedicated to and/or under the control of the Hanford Site Tank Farms.

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3.1

PROGRAM MANAGEMENT

This element addresses the overall guidance and direction for the CM program. Guidance should be communicated through formal policy documents such as directives, the CM program plan, and upper-tier CM governing procedures. The general aspects of management, policy, procedures, staffing, and training associated with the implementation of the CM program are covered in the Management Systems and Training functional area RIDs.

3.1.a Management and Organization

The scope of the CM functional area includes the procedures, processes, programs, interfaces and requirements pertaining to the identification and maintenance between the design , as-built condition and associated data and documentation for the important SSCs of the facility.

Management must provide policies, procedures, processes, necessary administrative controls, staffing, training, and assessments to develop, maintain, and monitor an effective CM program. Organization and staffing must include the means to interface across departmental lines to ensure adequacy and accuracy of design data, facility configuration and design and technical requirements.

3.1.b CM Policy

Management must develop and promulgate a CM policy that identifies the scope of the program at the facility level and articulates their strong commitment to that program.

3.1.c CM Plan

A CM plan must be developed to identify activities to be included in the scope of the facility specific CM program developed or enhanced. The CM plan should be based on an initial assessment and implementation considerations relative to the facility mission and projected lifetime. Additionally, the plan should include a specific schedule for the development and implementation of activities delineated in the plan for each program area.

3.1.d CM Procedures

Ideally, CM is the inherent execution of Engineering Design, Change Control, and Document Control processes and the management of the resultant data and information. Thus, the CM program must ensure that necessary implementing procedures exist to provide the necessary positive administrative controls for the development and maintenance of the design data and information created. CM procedures should also be developed for governing program requirements and activities.

SITE REQUIREMENT SOURCE: ASME-NQA-1A-1989-1A 18 Criteria, Section 8

This represents the best available guidance for the development of this functional area. This requirement does not, however, represent a contractual commitment on the part of Westinghouse Hanford Company.

"Controls shall be established to assure that only correct and accepted items are used or installed. Identification shall be maintained on the items or in documents traceable to the items, or in a manner which assures that identification is established and maintained."

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SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 1, Section 4.1

"The Program Management program element encompasses the following functions: program planning; development of criteria for the equipment scope of the SSCs to be included in the CM program; establishment of CM program concepts and terminology; control of CM interfaces; establishment of policy and criteria for CM databases; and establishment of CM procedures."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 1, Section 4.1.1

"A contractor authorized to manage/operate a DOE-owned nuclear facility should develop and implement an operational CM program that reflects appropriate consideration of the guidance contained in this standard. A graded approach should be used to determine the depth of detail necessary and the magnitude of resources to be invested in each CM program element and function. Implementation considerations such as the following, should be used to adjust the program criteria to provide an appropriate level of implementation: facility grades; structures, systems, and components (SSCs) grades; facility desired/remaining lifetime; facility operational status; and existing programs and procedures. Planning for the development and implementation of the CM program should include the following:"

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 1, Section 4.1.6

"Subsequent to DOE review of the CM program plan, implementation plan(s) and specific CM implementation Procedures consistent with the CM implementation plan should be developed. In addition, governing procedures that correlate the specific implementing procedures with the DOE- reviewed CM program plan should be developed and maintained. The CM program should include training on CM concepts, terminology, definitions, and procedures."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1, Paragraph 1

"The CM Program Management program element accomplishes the following specific functions: planning for the development and implementation of the CM program; establishing the criteria for the scope of the SSCs to be included in the program; defining key concepts and terminology; identifying and controlling important organizational and programmatic interfaces; establishing the necessary tools, such as CM databases; and developing and maintaining governing and implementing procedures. Each of the Program Management program element functions should be established and maintained throughout the life of the CM program. The Program Management program element function also coordinates overall CM program development and implementation and assures overall CM program effectiveness. CM program definition and development requires establishment of configuration management policy, philosophy, requirements, and strategies for development and implementation."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1, Paragraph 2

"The Program Management program element leads the development of the other CM program elements. The development of an effective CM program should be initiated promptly, where needed, to address known issues, to improve compliance with various DOE Orders, and to gain management benefits of improved safety, reduced errors, and increased efficiency. CM program development activities should be performed in a phased manner with milestone".

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SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.1, Paragraph 1

"The CM program planning phase is of critical importance because it sets the direction and tone for future development and implementation activities. Figure 2-3 provides an overview of major activities expected during the program planning phase by the various levels of the organization. The following deliverables should be developed during this initial phase: Corporate and Site/Division CM Policy Directives; and, Facility, Site/Division, and Corporate CM program plans. Typical major milestones for CM program plan development (with sample completion dates from the initiation of the program) are as follows:"

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.1, Paragraph 2

"As shown in Figure 2-3, CM policy development is a top-down activity, beginning with a general set of CM program requirements established at the corporate level. The CM directives should be issued initially at the highest level of management (corporate) and flow downward through site management or division management, whichever is organizationally appropriate. The site/division directive may serve as a management interface document between the corporate CM group and the facilities. In contrast to policy development, program planning starts at the facility level and flows up to the corporate level. The corporate CM program plan should be a consolidation of the facility CM program plans and should provide for implementation variations for different facilities based upon hazard levels, operational constraints, and other variables."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.1.1, Paragraph 3 and bullets

"Corporate CM Policy Directives. The corporate CM policy directive should accomplish the following objectives:

- Convey top management support;
- Define key roles and responsibilities;
- Specify the equipment scope criteria for the CM program; and
- Establish key concepts and terminology."

FACILITY REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.1.1, Paragraph 7

"Facilities should establish facility-specific criteria and guidance applicable to each type of design requirements. Most facilities have existing criteria that might be useful to define the bounds of each design requirement type. As an example, the Mission-Critical criteria may be defined as equipment whose failure could create a forced shutdown for 180 days or more. Also, facilities may have existing safety criteria, such as thresholds based on DOE 6430.1A, General Design Criteria (Section 1300-3.2). Each facility should re-review existing criteria, provide any additional criteria, guidance or clarifications, and formally establish the criteria within the CM program for design requirement categorization. The CM program plan should identify the facility-specific criteria for each design requirement type."

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SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.1.2, Paragraph 12

"The CM program plan should identify the organization(s) that will have overall responsibility to develop and implement the CM program. It should include current staffing and a summary of key personnel. It should include estimates of staffing necessary to complete CM program development along with a staffing plan to meet these needs. The program plan should identify key organizational interfaces and provide flowcharts, as appropriate, to show programmatic and organizational relationships and responsibilities."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.1.2, Paragraph 15

"In some cases, individual facility program plans may not be needed where the facility CM program can be fully described by an upper-tier program plan. The upper-tier program plan could be developed as the general program plan with additional descriptions and clarifications related to how it is applied to the individual facilities it covers. In some cases, certain program elements or functions serve multiple facilities. For example, document control could be established centrally for multiple facilities. In such a case, each facility program plan would not have to describe the central document control measures; they could be described once in the upper-tier program plan."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.1.2, Paragraph 16

"Through review of the CM program plan, the responsible DOE PSO signifies agreement with the proposed approach for meeting the program criteria, including the application of the implementation considerations. Once reviewed, the CM program plan serves as the basis for future audits and assessments of compliance and program effectiveness. The program plan should be treated as a living document; it should only be revised on an as-needed basis to reflect changes in program implementation. Proposed revisions to the CM program plan should also be reviewed by DOE."

FACILITY REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.1.2, Paragraph 2

"In contrast to CM policy development, CM program planning begins at the facility level and moves up through the site/division level to the corporate level. Figure 2-5 addresses steps necessary for developing the facility CM program plans. After the corporate and site/division directives are issued, facilities should apply the directives and begin development of their facility CM program plans. For example, the facility should adopt equipment scope criteria consistent with the upper level policy directives. The facility should review the corporate and site/division CM policy directives to determine whether the equipment scope criteria for SSC inclusion can be applied as-is or need modification or clarification at the facility level. The specific list of SSCs is not required as part of the facility CM program plan."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.1.2, Paragraph 7

"Program Plan Contents. A CM program plan should be developed and submitted to DOE for review and funding. The CM program plan should address each of the following topics: scope

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of SSCs to be included in the CM program; objective(s) of each program activity; description of each program activity; basis for the technical content of each CM program activity; organizational structure and staffing; interfaces; implementation priorities, milestone deliverables, and implementation schedules; and cost estimates. The CM program plan should also incorporate the program plans for the DR and MCA adjunct programs, although these portions may be submitted separately and subsequent to the plan for the main program."

REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.2, Paragraph 1

"Starting during development of the CM directives, and continuing during program planning and development, the CM program should identify and define the key programmatic and organizational interfaces. Defining effective and efficient interfaces, both internal and external, is critical to the workability of a CM program."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.2, Paragraph 4

"Program interfaces are those relationships established to ensure that key facility programs are properly identified and integrated to effectively support and maintain consistency between the design requirements, documents, and hardware. Program interfaces include those internal to the CM program, such as the interface between document control and change control, as well as those interfaces with other programs, such as design control, project (DOE 4700.1) control, the surveillance test program, the maintenance program, and any program or mechanism involved in defining, evaluating, and documenting changes. As the fundamental approach for implementing configuration management is to identify, upgrade, and integrate these existing programs, the Program Management program element should clearly identify these programmatic interfaces. Roles, responsibilities, and relationships between the program elements and functions should be defined and documented. Relationships to other programs that interface with the CM program should be clearly defined and documented."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.2, Paragraph 5

"Configuration management involves numerous interfaces among organizations. Organizational interfaces are those relationships established to ensure that key functional organizations (such as design engineering, operations, and maintenance) are aware of the roles, responsibilities and interactions required for adherence to the CM program requirements. Organizational interfaces can be internal interfaces within the facility, site, or corporate organization, as well as external interfaces with organizations outside the corporate structure. The Program Management program element should identify and control the organizational interfaces that can affect configuration management. Organizations and key personnel involved in developing, implementing, and managing CM program activities should be identified. Management expectations regarding their roles, responsibilities, and authorities should be clearly defined and documented. For the effort to be successful, management expectations should be communicated in writing to key personnel who should understand and accept their roles, responsibilities and authority through documented mechanisms such as directives plans, and procedures. Contractors might find it worthwhile to designate configuration management coordinators in each major organizational unit to assure that the interfaces are addressed adequately."

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FACILITY REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.2, Paragraph 8

"The Program Management program element should provide policy and procedures to assure that important vendor activities and information are consistent with the requirements of the CM program. To control vendor activities and ensure consistency, the CM program should require the review and approval of vendor procedures prior to commencement of work or impose the use of facility procedures for the conduct of vendor work at that facility. In addition, acceptance criteria should be established by the facility to define when vendor work has been completed satisfactorily and is ready for turnover to the facility. After turnover, vendor information used by facility personnel should be kept current and available by including it directly in the facility document control program. The facility should have sufficient resources and talent to judge the quality of work and ensure adequate control over vendor activities."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.4, Paragraph 12

"Implementing Procedures. The Program Management program element should also assure that appropriate implementing procedures are prepared for each CM program function. In contrast to governing procedures, the implementing procedures provide the detailed instructions for carrying out CM program functions. The individual program elements develop their own implementing procedures as needed to carry out their functions. The size of the operating organization influences the need to proceduralize CM activities. The larger the organization and the more numerous the interfaces, the greater the need for procedural controls."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.4, Paragraph 14

"CM Training. As policy, plans, and procedures are established, associated training should be provided to communicate expectations and to assure effective implementation. In addition to standardizing terminology and establishing an integrated system of procedures regarding CM activities, a formal training program in configuration management can be very important in properly orienting facility personnel. As such, the Program Management program element should establish and oversee CM program training activities, including initial awareness or orientation training, follow-up training on development and implementation of the CM program elements and functions, and subsequent refresher training, as needed. As defined in the program criteria, training should be provided on CM concepts, terminology, definitions, and procedures."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.4, Paragraph 15

"Training should be started early in the development of a CM program to acquaint users with the new concepts, to ensure a common understanding of the objectives, and to communicate responsibilities for implementing the CM program (i.e., configuration management awareness training). Culture change regarding configuration management is a fundamental part of successful CM program implementation. Training, supplemented by clear and documented expectations, and followed up with feedback and coaching, is an effective tool to promote necessary culture change."

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FACILITY REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.4, Paragraph 2

"Implementation Plans. In addition to the CM program plan, facilities should prepare one or more implementation plans that will provide more detailed guidance in the areas of scope, methods, organization, schedule, and budget. For example, an implementation plan may be prepared for the each CM program element. To effectively support program development and implementation, CM implementation plans should be established promptly following DOE review of the CM program plan."

FACILITY REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.4, Paragraph 4

"Implementation plans should also establish methods for measuring and controlling progress, including: objective parameters upon which progress can be measured; management accountability for CM development activities; regular internal status reports; and periodic management reviews to monitor progress and to resolve problems in a timely manner."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.4, Paragraph 5

"Governing Procedures. CM governing procedures should be developed after the CM program plan has been reviewed by DOE and should support the implementation plan. Governing procedures should be developed for each CM program element and adjunct program, and address each program element function and their relationships. The CM program plan should identify the CM governing procedures that will be developed."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.4, Paragraph 6

"The CM governing procedures provide the framework to integrate implementation of the CM program elements and functions. The CM governing procedures should indicate how the CM functions are carried out in the various implementing procedures and thus show compliance with the CM program plan. The governing procedures describe how and when the CM program element is invoked, and generally how its functions are executed with references to the detailed implementing procedures. Once the CM governing procedures are in place, the CM program should be able to accomplish its objectives and functions by adhering to these procedures, and maintaining and updating them as the program requires."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.4, Paragraph 7

"The primary goal of the governing procedures is to provide the overall coordination and integration of the various implementing procedures and implementing organizations. As an example, a governing procedure on document control would reference, describe, and show interfaces between the implementing procedures on subjects such as drawing change process, field change notice, design change notice, record retention, document distribution, identification of key words, document tracking, etc. Similarly, the change control governing procedure would identify implementing procedures for approved change mechanisms, conduct of technical reviews, approval of changes, implementation of changes, documentation of changes, etc."

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SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.2.1, Paragraph 2

"The CM program criteria indicate that the design requirements and the design basis should be formally established, documented, and maintained. The CM program should identify the various processes and procedures used to establish design requirements and design basis. For new facilities and physical changes to existing facilities, the CM program should assure that procedures are in place that adequately establish the associated design requirements and their design basis, and document them in a form amenable for use in the CM program. Documentation of design requirements includes correlation to associated SSCs and categorization by type: Nuclear Safety, ES&H, Mission-Critical, and Designer Options. Documentation of design basis includes correlation to associated design requirements. Once the design requirements and design basis are established and documented, the CM program should assure that processes and procedures are in place to maintain them so that they are complete and accurate."

FACILITY REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.2.1, Paragraph 4

"Design and Construction Turnover. The operational CM program should establish formal requirements for design and construction turnover of new facilities or new modifications. When effective interface can be established early in the design process, it is likely that the required design products will be provided and turnover can be successful. To assure effective turnover, the operational CM program should: (1) specify the format and content of design basis and design output documents at design inception to assure that they will be compatible with the CM program needs, (2) periodically monitor the preparation of design basis and design output documents, and (3) provide review and approval of format and content of final design basis and final design output documents and accept responsibility for their configuration management at turnover."

REQUIREMENT SOURCE: INPO-87-006 Section 2

This represents the best available guidance for the development of this functional area. This requirement does not, however, represent a contractual commitment on the part of Westinghouse Hanford Company.

"Configuration Management is an integral part of the plant change process. It encompasses selected plant structures, systems, components, computer software (e.g., programs and data) and documents important to safe and reliable operation. Both plant and corporate organizations produce and use items included in the configuration management program. Strong interfaces among organizations are required to maintain the quality of these items."

SITE REQUIREMENT SOURCE: INPO-87-006 Section 4

This represents the best available guidance for the development of this functional area. This requirement does not, however, represent a contractual commitment on the part of Westinghouse Hanford Company.

"Configuration Management is an integrated process that identifies existing plant design requirements and controls changes to ensure the following:

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- Selected plant structures, systems, components and computer software conform to the approved requirements.

- The plant's physical and functional characteristics are accurately reflected in selected plant documents (e.g., design, procurement, operating, testing, maintenance, and training)."

SITE REQUIREMENT SOURCE: INPO-87-006 Section 5.1

This represents the best available guidance for the development of this functional area. This requirement does not, however, represent a contractual commitment on the part of Westinghouse Hanford Company.

"There are four essential elements of configuration management.

- The evaluation process identifies, examines, and selects plant hardware, computer software, and documents that will be included in the configuration management program. The evaluation process also provides for periodic assessment of program elements throughout the life of the program.

- The design requirements consist of the original design bases that are updated to include all approved changes. The design requirements should be reflected accurately in output documents such as drawings, system descriptions, specifications, and procedures as determined by the utility.

- Modification or change control ensures that changes to the facility are properly identified, screened, designed, evaluated, implemented, and recorded. Modification or change control ensures that the design requirements are current and technically accurate.

- Document control identifies, stores, updates, and retrieves important plant documents throughout the life of the plant."

SITE REQUIREMENT SOURCE: INPO-87-030 Section 1.1.A

"The corporate organization is established in such a manner that the functions, assignments, responsibilities, and reporting relationships of individuals are clearly defined, understood, and effectively implemented. All major aspects of the nuclear operation are encompassed, with emphasis on line management control of safety and reliability."

SITE REQUIREMENT SOURCE: INPO-87-030 Section 1.2.B

"Corporate managers ensure an effective plant configuration management process is in place that identifies the documented design requirements, ensures a properly implemented design, and controls plant changes throughout the life plant."

SITE REQUIREMENT SOURCE: NIRMA-PP02-1989, Section 5, Paragraph 1

"Creating an integrated CM process depends upon the identification of the organizations that are either required to support the program goals or likely to be affected by configuration changes. Each organization's role and CM responsibilities must be clearly defined and formal interfaces between organizations must be established to ensure that CM information is effectively developed and disseminated."

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FACILITY REQUIREMENT SOURCE: NIRMA-PP02-1989, Section 6, Paragraph 1

"The final issue to be addressed is that of "implementation." To establish a formalized CM Program, the scope and level of detail appropriate for the facility must be defined, economic factors must be considered, and goals and objectives set for the implementation of the program. Finally, a program plan must be developed to achieve the stated goals and objectives. This plan should be structured such that the required activities and efforts focus on achieving the desired products as defined by the facility's plan and not necessarily what others may deem appropriate for their individual facilities."

SITE REQUIREMENT SOURCE: NIRMA-PP02-1989, Section 6.2.1

"These documents establish the fundamental CM Program philosophy and define the responsibilities and procedural controls necessary to ensure the program is effectively implemented. Guidance documents must be carefully coordinated with all interfacing organizations. They need to specify interfaces between these participating organizations for a given process or activity. Guidance documents internal to a single organization should include references to interface requirements where appropriate. Typical guidance documents include:

- Policy/Directive - This document identifies the management commitment to the CM Program, and defines the scope and level of the CM Program as discussed in Section 4.2.1.
- Organizational Charters and Responsibility Statements - These documents should identify each organization's functional responsibilities in the CM Program. Lines of authority, responsibility, and organizational interfaces should be clearly depicted.
- Procedures/Instructions - These documents establish the specific requirements for implementing the CM Program. Steps, responsibilities and interfaces must be clearly defined. Each procedure should also identify documentation requirements, flow, and records capture requirements.
- Position/Job Descriptions - These documents may provide an opportunity for identifying CM-related responsibilities and interfaces on an individual level."

SITE REQUIREMENT SOURCE: NIRMA-PP02-1989, Section 6.2.3

"Training is an essential part of a successful CM Program and specific training objectives and associated tools must be formulated and documented. Training methods may consist of any combination of conventional training approaches (e.g., reading lists, classroom instruction, on-the-job training). Controls, such as training lists, must be established to ensure that appropriate individuals receive the necessary training and that training is systematically updated when requirements and procedures are revised."

3.1.1

Program Boundary Definition

The scope of the Tank Farms CM program should be defined and documented in the Tank Farm CM Plan. The determination of CM program scope and boundaries for SSCs, and CM processes and activities should be based upon assumptions, criteria, and specific attributes that are established as part of CM program development and plan preparation.

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The CM plan should include the identification of affected SSCs within the scope of the CM program. The affected SSCs should be based upon carefully evaluated and defined system boundaries.

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.2.1, Paragraph 2

"The CM program criteria indicate that the design requirements and the design basis should be formally established, documented, and maintained. The CM program should identify the various processes and procedures used to establish design requirements and design basis. For new facilities and physical changes to existing facilities, the CM program should assure that procedures are in place that adequately establish the associated design requirements and their design basis, and document them in a form amenable for use in the CM program. Documentation of design requirements includes correlation to associated SSCs and categorization by type: Nuclear Safety, ES&H, Mission-Critical, and Designer Options. Documentation of design basis includes correlation to associated design requirements. Once the design requirements and design basis are established and documented, the CM program should assure that processes and procedures are in place to maintain them so that they are complete and accurate."

FACILITY REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.2.1, Paragraph 5

"To ensure a format amenable for use in the operational CM program: the design requirements and design basis should be differentiated, the design requirements should be correlated to the associated SSCS, the design basis should be correlated to the design requirements, the design requirements should be categorized (e.g., Nuclear Safety, ES&H, Mission-Critical, or Designer Options), and accurate as-built drawings should be provided. Timely recognition of these interfaces and appropriate coordination will save time and avoid additional costs after turnover."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.3.1, Paragraph 2

"Identification of Documents to be Included in the CM Program. Early in the CM program development process, a determination must be made regarding which documents are to be included in the CM program. The steps necessary to accomplish this are as follows:

- Identify document types used at the facility;
- Determine which document types should be in the CM program; and
- Determine which specific documents should be in the CM program."

SITE REQUIREMENT SOURCE: INPO-87-006 Appendix C

Typical Plant Documents That Should BE Considered for Inclusion in the Configuration Management Program

- System descriptions
- Component and Material design, installation, and procurement specifications
- Drawings
- Design Criteria

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- Design Baseline Analyses and Calculations
- Special Studies and Reports
- Procedures, guidelines and acceptance criteria
- Applicable Industry Codes and Standards
- Quality Assurance/Quality Control Documents
- Vendor Manuals and Bulletins
- Licensing Commitments
- Safety Analysis Reports
- Technical Specifications
- Modification Packages
- Instrument and control setpoint documents
- Plant component lists
- Hearing decisions
- Purchase Orders
- Regulatory Guides
- Codes of Construction
- Equipment Performance and Maintenance Records
- Welding qualification Records

3.1.2

Program Assessment

The CM plan for Tank Farms should provide for the initial assessment of the CM program elements. Subsequent periodic CM assessments should include programmatic (criteria and attributes) and physical configuration (walkdown) reviews of program effectiveness.

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.1.1, Paragraph 12

"Site/Division Planning for Initial Assessments. In addition to adapting and disseminating corporate CM direction, site/division managers should take the lead in planning and coordinating initial assessments. These initial assessments identify programmatic strengths and weaknesses to be used as a basis for CM program planning and for immediate corrective actions. As discussed in Chapter 1 of this standard, at least two vertical slice system assessments and two horizontal assessments should be performed relevant to each facility. Initial assessments may be conducted for groupings of comparable facilities. For example, if a site has three facilities of similar design using similar configuration management practices, one set of initial assessments on one of these three facilities could serve as a satisfactory basis for CM planning for the other comparable facilities. The site/division managers should perform the following steps to facilitate planning and coordination of the initial CM assessments."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.1.1, Paragraph 14

"Second, the specific representative facility(s), system(s), program(s), and topical area(s) should be selected for the initial assessments. Site/division managers should coordinate planning of initial assessments, including selection of assessment teams, training, and funding. Sites/divisions may elect to perform initial assessments beyond the minimum requirement; the subjects of the other assessments would be determined using judgement and anticipated need. The initial assessments are conducted in accordance with the requirements and guidance associated with the Assessments program element".

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SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.3, Paragraph 5

"The steps to develop effective CM databases should include the identification of those databases that contain CM-related information, the consolidation of related information into a few key databases, and the establishment of control mechanisms to ensure data quality and accuracy. An initial study should be conducted to identify existing Equipment and Document Databases, their contents and uses, responsible organizations, and locations. This initial study should reflect the results of and may be performed in conjunction with other initial assessments."

FACILITY REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.3.1, Paragraph 3

"First, a complete survey of document types in use should be conducted with support of the various organizations at the facility. Each organization should identify both the document types it prepares and the important document types it uses. Document types identified during the initial assessments should also be addressed."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.3.1, Paragraph 9

"Review and Upgrade of Existing Document Control Processes. For each document type to be included in the CM program, the adequacy of the existing document control process should be evaluated against each of the basic document control functions. A survey of existing document control processes should be conducted to identify each process that either identifies, stores, controls, tracks, or retrieves the included document types. After the Document Control program element is developed, documents within the CM program should be processed in a manner consistent with the model shown in Figure 2-14, as discussed in more detail in Section 3.3.2."

FACILITY REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.5.1, Paragraph 1

"The main objective of the initial CM assessments is to assess existing programs and processes related to configuration management (such as change control, the design process, and document control) to identify strengths and weaknesses as early in the development phase as possible to determine necessary upgrades. The extent of existing CM functional deficiencies can be determined by assessing the technical adequacy and consistency among the design requirements, physical configuration, and documentation. The magnitude and underlying cause(s) of these deficiencies can establish the foundation for immediate actions, interim improvements, and permanent CM programmatic improvements. These initial assessments should be performed by the facility(s) within the first year of CM program development, after program initiation, and should provide the technical basis for implementation as discussed in the facility and corporate CM program plans."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.5.3, Paragraph 1.(1)

"Periodic Program Effectiveness Assessments. These assessments periodically examine existing functions and processes related to the CM program to ensure that they continue to perform as

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expected and to identify improvements and enhancements, if needed. Similar to the initial assessments, periodic program effectiveness assessments use a combination of vertical slice and horizontal assessment methods. Periodic program effectiveness assessments are not intended to be compliance audits, but rather determinations of the effectiveness of the CM program as implemented. Objective measures and criteria to assess effectiveness should be defined and used. These periodic assessments should be used as the technical basis for adjusting the CM program by increasing or decreasing the controls, as appropriate.

These periodic program assessments should be performed after implementation at sufficient intervals (such as every 3 years for full vertical slice or horizontal assessments) to provide management with the assurance that these CM control programs are functioning as intended."

FACILITY REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.5.3, Paragraph 1.(2).6

"Periodic physical configuration assessments should be conducted in conjunction with periodic program effectiveness assessments. These periodic assessments should continue to test whether the physical configuration is accurately reflected in the facility as-built documentation. The methods and recommended follow-up actions for periodic physical configuration assessments are analogous to those for initial assessments."

FACILITY REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.5.3, Paragraph 1.(3).3

"Performance monitoring programs should be implemented to routinely monitor, collect (using calibrated instrumentation), trend, and analyze performance data (including thermal, hydraulic, electrical, and mechanical data) for SSCs within the CM program. The methods of implementation should include procedures, checklists, or other guidance documents necessary to conduct these activities. Specific facility personnel, such as the systems engineers, should be assigned to each SSC and held responsible for the performance monitoring activities on their SSC. This responsibility should include the establishment of performance goals and acceptance criteria consistent with the associated SSC design requirements. Examples of major tests that should be included in the performance monitoring program are as follows:"

SITE REQUIREMENT SOURCE: INPO-87-006 Appendix D

This represents the best available guidance for the development of this functional area. This requirement does not, however, represent a contractual commitment on the part of Westinghouse Hanford Company.

"Indications of configuration management problems can be identified by performing an assessment. Some utilities have performed self-assessments of safety systems at their plants and have found the results to be useful. The following points should be considered in developing an overall plan for assessing plant configuration.

- Identify Issues
- Review Experience
- Identify Plant Systems
- Perform Initial Inspection
- Develop Long Range Plan"

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SITE REQUIREMENT SOURCE: INPO-87-006 Section 6

This represents the best available guidance for the development of this functional area. This requirement does not, however, represent a contractual commitment on the part of Westinghouse Hanford Company.

"Evaluation

When establishing a new configuration management program or modifying an existing one, an evaluation to assess the current plant and document status is recommended. The scope of this evaluation is based on many factors and, therefore, will be plant and utility specific. The following are examples of factors to consider: the age of the plant, the types of existing information systems, and the number of past and planned system modifications.

As part of this evaluation, some utilities have performed assessments of selected safety systems. Configuration management enhancements are then made based on the results of this assessment.

If current design requirements are found to be incomplete as a result of an assessment, a program may be needed to establish and maintain these requirements."

FACILITY REQUIREMENT SOURCE: INPO-87-030 Section 2.7.B

"Day-to-day activities associated with the nuclear station(s) are independently monitored to provide objective feedback to line management on the quality of personnel and equipment performance, workmanship, and attention to detail. (Note: Monitoring activities should be performed by others, as well as quality assurance personnel.)"

SITE REQUIREMENT SOURCE: NIRMA-PP02-1989, Section 6.3, Paragraph 9

"The program reviews conducted by the CM task group should consider at least the following objectives:

- Procedures are in place to establish and maintain the CM Program.
- Data bases minimize duplication and exhibit presence of an integrated data management system.
- Essential and technical records contain the design basis information.
- Document control system activities ensure the proper control and dissemination of current information.
- Maintenance work activity programs ensure the necessary information is directed to the CM Program.
- Change Control Program activities ensure the necessary information is directed to the CM Program.
- Training program ensures the necessary change information is incorporated.

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- Vendor information update controls ensure technical information is directed to the CM Program.
- Computer hardware and software is available to manage the type of volume of information necessary to implement the CM Program.
- Records management systems provide for capture and appropriate retrieval of historic records.

3.1.3

Document and Database Control

Implementation of the CM program requires that Tank Farms configuration affecting design input and output documentation, other technical requirements (SAR and Technical Safety Requirements) and data/information accurately reflect implemented design and as-built conditions.

The CM Document Control element requires the identification, processing, control, tracking, storage and retrieval of design documents and other technical requirement documents important to facility SSCs.

CM databases should employ adequate administrative controls to ensure the validity of required data and information.

A CM Controlled Document List be developed for all documents that are under the cognizance of the facility CM program.

SITE REQUIREMENT SOURCE: ASME-NQA-1-1989-1A Section 6

This represents the best available guidance for the development of this functional area. This requirement does not, however, represent a contractual commitment on the part of Westinghouse Hanford Company.

"The preparation, issue, and change of documents that specify quality requirements or prescribe activities affecting quality shall be controlled to assure that correct documents are being employed. Such documents, including changes thereto, shall be reviewed for adequacy and approved for release by authorized personnel."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 1, Section 4.1.5

"Databases, and associated policy and criteria, should be established to identify, store, control, and retrieve information important to configuration management."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.3, Paragraph 1

"The extent, complexity, and interrelationships of the CM-related information to be managed requires that information systems such as databases, logs, indexes and cross-reference tracking systems, and change status tracking systems be carefully and effectively developed. Objectives in the design of such systems include: minimizing the potential for conflicting versions of the same information in more than one system; maximizing the flexibility and search capabilities; establishing clear accountabilities for generating information to be tracked as well as tracking

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the information; ensuring information is accessible to those who need it; preventing unauthorized change to the information; establishing a single authority for any given information; and minimizing redundant labor and duplication."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.3, Paragraph 2

"Experience has shown that well coordinated and controlled databases become primary focal points for effective CM programs. There are two general types of CM databases that need to be established and controlled: Equipment Databases and Document Databases. Equipment Databases provide information that relate to the SSCs within the CM program, while Document Databases relate information about the documents, including their status. Properly designed and well-managed CM Equipment and Document databases are essential configuration management tools that support many functions important to safe facility operation. Equipment and Document databases are included in the scope of the CM program because they contain and relate vital CM information."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.3, Paragraph 3

"The Program Management program element should identify general contents of the two database types (CM Equipment Databases and CM Document Databases). The actual format, content, and capabilities of both the Document and Equipment databases should be adapted based on the identified needs and intended uses. Document and Equipment databases should be sized considering future needs by allowing for significant expansion of the number of data fields and types of information. The Program Management program element should also identify controls for database development, implementation, and revision, especially those necessary to establish and maintain the quality of information."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.3, Paragraph 4

"Because of the importance of these databases to the CM program, the Program Management program element should define policies and procedures for establishing and controlling equipment and information databases used to implement the CM program. A corporate CM directive may be used to define general policy and criteria for CM equipment and document databases. The CM program plans should discuss the steps necessary for developing (or validating) and controlling these databases."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.3, Paragraph 7

"Procedures should be developed to control the quality of information within these databases (including approvals, validation and verification of information, access and security provisions, and revisions); and methods for retrieval consistent with the needs of the users. Special controls should be instituted to ensure that any database used for configuration management purposes will be protected to prevent inadvertent or unauthorized changes of the data. To be effective, the data collection function must be ingrained into each CM-related process and specified in written procedures. Collection of the necessary data should be facilitated and standardized, and should be consistent with the normal flow of information. Data collection should be supported by forms that are designed to prompt the owner/user for the necessary

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information in a format that enables ready identification of the specific fields as well as verification that the necessary information is present, coordinated, and approved."

FACILITY REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.1.3, Paragraph 8

"Equipment Databases should specify equipment classifications, contain or reference equipment design requirements, and cross-reference supporting CM documentation. These databases should provide current information on facility SSCs and associated documents within the CM program, with emphasis on design documents. An acceptable approach that has proven successful elsewhere is the development of a computerized CM master Equipment Database that includes every facility component. A unique identifier is assigned to each component based on system, component type, and component function prior to inclusion into the database. This database can serve as the primary source of relevant information on hardware and instrumentation, including component documentation, testing, and operation. Equipment Databases are discussed further in the implementation guidance for the Design Requirements program element."

FACILITY REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.2.1, Paragraph 22

"CM Equipment Database. The CM Equipment Database should be established to cross-reference the CM program SSCs to their design requirements, design basis, and associated documentation. This database may be used as the primary documentation of design requirements. The database should use the best available design information to fill the database fields. This Best Available Design Information comes from three basic sources: (1) existing design information, (2) new or revised design information, and (3) reconstituted design information."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.3, Paragraph 1

"The objective of the Document Control program element is to identify documents to be controlled within the CM program and maintain them so they remain consistent with the physical configuration and design requirements. The Document Control program element provides the following functions: identifying the types and specific documents to be included within the CM program; storing documents within the CM program; controlling and tracking documents within the CM program; including change status; and retrieving documents within the CM program in a timely manner. Review and approval of document changes and revisions is addressed by the Change Control program element."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.3.2, Paragraph 10

"As defined in the program criteria, the Document Database should have the capability to identify documents within the CM program based on their relationship to: particular SSCs (such as a particular pump); types of SSCs (such as motor operated valves); technical topics (such as fire protection); and other relational data (such as a specific vendor) necessary for adequate identification of documents. This information should be integrated with information discussed above for document control and tracking, such as information regarding pending

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changes. Consideration should be given to assigning key words or using fully searchable text files for the most important documents."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.3.2, Paragraph 11

"Availability and retrieval times should be established based on the needs of document owners and users. If the documents are necessary for the day-today operation of the facility, they should be available on a real time or short turnaround basis (e.g., controlled copies of procedures and P&IDs should be located in a central area such as the control room). Conversely, if the documents are not routinely needed and, if time permits, a retrieval time of 24 hours or more may be acceptable (e.g., design basis information used by the design engineering organization for physical change preparation). Many documents included in the CM program fall into the latter category where immediate access is not needed. The selection of appropriate retrieval times should formally solid and consider input from the document owners and the ultimate users of the documents. This should be followed by periodic monitoring to ensure that document retrieval requirements continue to be adequate. Many facilities employ satellite document distribution centers to encourage use of controlled copies and to facilitate timely retrieval from diverse work locations."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.3.2, Paragraph 7, bullets only

- " • Procedures that specify the document identification, control, storage, and retrieval requirements should be developed and implemented to ensure consistency and to properly manage the Document Control program. These procedures should also establish responsibilities and methods for each document control function. Document change notices (DCNS) should be used as a vehicle for notification of document changes or pending document changes.
- A Secure File of the original document master copies should be established and maintained. The original master copies should not be distributed from the secure master file; automatic document distributions and document retrieval upon request should provide copies, but not the original master. Strict controls should be established for the viewing of original master copies. Appropriate access and security precautions should be established to ensure that the document master file is adequately controlled and kept current.
- A Controlled Document Distribution List should be established and maintained to identify the controlled documents and holders of up-to-date copies. The Controlled Document Distribution List is a compilation of lists developed by the various functional groups or owners. Document owners should be responsible for the identification of users requiring controlled copies of selected documents; the document users provide their input to the owners. Timeliness guidelines should be implemented for distribution of new or revised controlled documents. At some facilities, the most important changes are required to be posted within 24 hours; less important changes within 72 hours; and least important changes within 7 days. Document copies should be distributed automatically to identified document holders, including satellite document distribution centers, as defined by the Controlled Document Distribution List. The Control Document Distribution List is an important tool in assuring that only the current versions of documents controlled within the CM program are in use. Controlled documents should be provided to and used by personnel performing work.

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- Written Acknowledgment should be provided by the document control organization to the originating organization when document change notices are received. In response, the document holders should provide written receipt acknowledgment back to the document control organization that the document issuance or revision has been received and their controlled copy has been updated (i.e., any required page changes have been incorporated). The controlled copies in use should be periodically reviewed to ensure accuracy and consistency with the document master copies.
- Notification of Pending Changes should be provided by the document control organization to those on the Controlled Document Distribution list. DCNs may be used for this notification. Further, the Document Database should receive notice of pending changes and the document master copy should be marked or appended with a copy of the associated DCN. Pending changes are those changes that have been approved for implementation, or approved changes that have been implemented in the field, but for which the document revision has not been completed. This includes those changes for which conceptual design has been approved and the design change is in process.
- Superseded and Canceled Documents should be controlled with appropriate measures to ensure that only correct documents are in use. If superseded or canceled documents are provided upon request, they should be clearly labeled as such.
- Timely Incorporation of Changes into the document master copy should be accomplished after approval of each DCN by the document owners. Backlogs of document change notices should be controlled and minimized by establishing and implementing appropriate methods. Ideally, each document change should be immediately incorporated via document revision to prevent a backlog, which, if not controlled properly, can affect the accuracy and usability of the documents. Large backlogs are difficult to control and have caused problems at other facilities. Where elimination is not practical, the number of outstanding DCNs should be limited by establishing a threshold. For example, DCNs may be allowed to accumulate to a limit, such as two to five per document, based on complexity and overlapping changes. Facilities may prioritize incorporation of changes based on SSC grade or importance to facility operation. Once that limit has been reached, outstanding DCNs are processed together and the document is revised only once. The number of document changes that are allowed to remain outstanding prior to implementing a document revision should be determined based on the document priority, the complexity of the changes, and the overlap of the changes. These thresholds should be set by the owners, considering the users, with periodic monitoring to ensure that the thresholds are effective.
- A Document Database should be used as a mechanism for tracking document status, identifying current revision status, and tracking pending changes. This database should contain basic information about the document, including changes and related notices (such as change notices and physical changes in progress). Accordingly, this database will identify the document by number, the functional group or document owner, the document type, the current revision number, the current document status (e.g., in revision, recently revised, needs to be revised, etc.), information regarding pending changes, outstanding document change notices, and any other information necessary for control and tracking. As discussed below, the Document Database also supports the document retrieval function with associated information such as retention times, storage location, retrievability guidelines, keywords, and other information to support document identification and retrieval. The Document Database should be controlled in accordance with policy established by the Program Management element."

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SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.3.2, Paragraph 8

"Retrieval of Documents. Fundamentally, the document retrieval function must assure that documents are retrieved in a timely manner upon request, and when a copy of a document is issued, that it is the most recent version. The status of the controlled documents should be available to the affected organizations. Additionally, the retrieval function ensures that information regarding pending changes, including references to detailed information, is supplied to anyone requesting the latest copy of the document. For example, if a drawing is requested, the document control organization should also provide the requester with a list or copies of existing change information (such as outstanding document change notices, pending changes, and related physical changes in progress). This will alert the requester to upcoming changes that could affect the retrieved document."

SITE REQUIREMENT SOURCE: DOE/EH0135 OA.7.1

This represents the best available guidance for the development of this functional area. This requirement does not, however, represent a contractual commitment on the part of Westinghouse Hanford Company.

"The Safety Analysis Report and Technical Specifications/Operational Safety Requirements are current, and mechanisms are in place for updating whenever additional analyses, facility changes, etc., occur."

SITE REQUIREMENT SOURCE: INPO-87-006 Section 5.3 (para. 6 to end)

This represents the best available guidance for the development of this functional area. This requirement does not, however, represent a contractual commitment on the part of Westinghouse Hanford Company.

"Document Control

Determining which documents are to be controlled and where they should be located, can prove to be a major effort.

An effective document control program must strive to consolidate and reduce the volume of controlled documents. For the plant and corporate support organizations to perform their intended functions, the control of key documents under the configuration management program must ensure that necessary documents are technically correct and readily accessible.

- **As Built Documentation**

The as-built information or the design as it has been implemented by construction must be incorporated accurately into plant documents. Physical verification of actual plant conditions may be necessary. Any deviations for the design requirements must be evaluated by the design organization.

- **Post-Maintenance Modification Testing**

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Testing of maintained or substituted equipment should be performed to ensure that the equipment is consistent with the design requirements prior to returning the equipment to service.

- **Training**

Plant personnel should be made aware of changes or modifications and trained, as appropriate, prior to returning the modified system to operation. The impact of changes or modifications on the simulator and its associated computer codes is another training area that should be evaluated for potential impact.

- **Procedures**

Plant procedures should be reviewed for impact and updated as appropriate prior to returning a system to operation. Consideration should also be given to including design engineering in the periodic review of operating and maintenance procedures to ensure that the design intent of the system has not been changed."

SITE REQUIREMENT SOURCE: INPO-87-030 Section 2.4.A.6

"Design documentation and records are developed, stored, kept current, and made readily available to appropriate personnel consistent with utility the configuration management program. These documents provide the following:"

SITE REQUIREMENT SOURCE: INPO-87-030 Section 2.4.A.6.a

"design requirements reflecting the current functional and operational requirements for the plant"

SITE REQUIREMENT SOURCE: INPO-87-030 Section 2.4.A.6.b

"design inputs such as applicable industry codes and standards, environmental requirements, regulatory commitments, design calculations, and analyses (including assumptions, inputs and references), and vendor information used in the preparation of the final design"

SITE REQUIREMENT SOURCE: INPO-87-030 Section 2.4.A.6.c

"computer programs, models, calculative methods, and other analytical tools used in the design process"

SITE REQUIREMENT SOURCE: INPO-87-030 Section 2.4.A.6.d

"special design evaluations, such as measures to enhance radiological protection, that are documented and permanently stored with the final package"

SITE REQUIREMENT SOURCE: INPO-87-030 Section 2.4.A.6.e

"inspection, examination, and test records that establish equipment conformance to design requirements"

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SITE REQUIREMENT SOURCE: INPO-87-030 Section 2.4.A.6.f

"design outputs (e.g., system descriptions, setpoint documents, vendor manuals, design and vendor drawings, specifications, equipment test results) that accurately reflect the as-built conditions and current design bases"

SITE REQUIREMENT SOURCE: INPO-87-030 Section 2.4.A.6.g

SITE REQUIREMENT SOURCE: INPO-87-030 Section 2.4.A.6.h

"design history of the plant(s) through the control of orderly, complete, and consistent design change packages"

SITE REQUIREMENT SOURCE: NIRMA-PP02-1989, Section 4.2.2.2, Paragraph 1

"To support the CM Program, the document control program must ensure that: 1) current configuration information is reflected in appropriate documents, 2) updatable configuration documents, and associated changes, are properly approved and authorized for release, 3) current copies of documents and related changes are distributed to appropriate organizations for their use, 4) documents potentially affected by configuration changes are identifiable and updated when required and 5) the current status of all configuration documents is effectively tracked and available to affected organizations. The effective control of configuration documents is essential to the success of the CM Program, not only because it establishes the physical evidence necessary to give the program credibility, but because the documents are the vehicles used to communicate configuration information to affected organizations."

SITE REQUIREMENT SOURCE: NIRMA-PP02-1989, Section 4.2.3.2, Paragraph 1

"CM-related information is not only generated by a variety of organizations at various stages of processes or activities, but it is also required by various organizations with different needs and perspectives. Therefore, the CM Program must establish the capability to track and retrieve current documents, historical records and other information by multiple attributes such as modification numbers, document number, document subject, component number, component name, status, etc. Although it is possible to use stand-alone manual or automated logs, registers, indices and data base systems successfully, this approach does not effectively encourage sharing information. This independent system method is also cumbersome and labor-intensive at best, and it encourages a lack of consistency in the data entered into more than one system."

SITE REQUIREMENT SOURCE: NIRMA-PP02-1989, Section 4.2.3.3, Paragraph 1

"The extent, complexity, and interrelationships of the CM-related information to be managed requires that information systems such as data bases, logs, indices, and cross-reference tracking and change status tracking systems be carefully developed. Development should include appropriate verification and validation of application software. The design objectives of such systems should:"

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3.2

TECHNICAL BASELINE

The identification, documentation and control of the technical baseline is the nucleus of the CM program. When a technical baseline is not available or maintained current, actions may be necessary to control its reconstitution as discussed in section 3.2.2.

The processes for identification and documentation of design requirements for the SSCs within the scope of the CM Program should be defined. This establishes the facility specific technical baseline for the SSCs including the system/facility boundaries, the design input documents, and design output documents for the SSCs.

FACILITY REQUIREMENT SOURCE: ANSI N45.2.11 Section 3.2

This represents the best available guidance for the development of this functional area. This requirement does not, however, represent a contractual commitment on the part of Westinghouse Hanford Company.

The design input shall include but is not limited to the following where applicable:

1. Basic functions of the SSC
2. Performance requirements
3. Codes standards and regulatory requirements
4. Design conditions such as pressure, temperature, fluid chemistry and voltage.
5. Loads such as seismic, wind, thermal
6. Environmental conditions
7. Interface requirements
8. Material requirements
9. Mechanical requirements
10. Structural requirements
11. Hydraulic requirements
12. Chemistry requirements
13. Electrical requirements
14. Operational requirements

SITE REQUIREMENT SOURCE: ASME-NQA-1A-1989-1A 18 Criteria, Section 3

This represents the best available guidance for the development of this functional area. This requirement does not, however, represent a contractual commitment on the part of Westinghouse Hanford Company.

"The design shall be defined, controlled, and verified. Applicable design inputs shall be appropriately specified on a timely basis and correctly translated into design documents. design interfaces shall be identified and controlled. design adequacy shall be verified by persons other than those who designed the item. Design changes, including field changes, shall be governed by control measures commensurate with those applied to the original design."

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SITE REQUIREMENT SOURCE: ASME-NQA-1A-1989-1A 18 Criteria, Section 3S-1.2

This represents the best available guidance for the development of this functional area. This requirement does not, however, represent a contractual commitment on the part of Westinghouse Hanford Company.

"Applicable design inputs, such as design bases, performance requirements, regulatory requirements, codes and standards, shall be identified and documented, and their selection reviewed and approved by the responsible design organization."

SITE REQUIREMENT SOURCE: DOE5700.6C Attachment 1, Chapter II, Section A, Criterion 6.a

"A process should be established and implemented for design using sound engineering/scientific principles and appropriate standards, such as General Design Criteria (DOE 6430.1A). Provisions should include control of design requirements, inputs, processes, outputs, changes, records, and organizational interfaces."

SITE REQUIREMENT SOURCE: DOE5700.6C Attachment 1, Chapter II, Section A, Criterion 6.b

"Design input, such as the design bases, reliability requirements, and fire protection requirements, should be correctly translated into design output, such as specifications, drawings, procedures and instructions."

SITE REQUIREMENT SOURCE: INPO-87-006 Section 5

This represents the best available guidance for the development of this functional area. This requirement does not, however, represent a contractual commitment on the part of Westinghouse Hanford Company.

"The design requirements consist of the original design bases that are updated to include all approved changes. The design requirements should be reflected accurately in output documents such as drawings, systems descriptions, specifications, and procedures as determined by the [facility]."

FACILITY REQUIREMENT SOURCE: NIRMA-PP02-1989, Section 4.2.1, Paragraph 2

"Task 1 - Identifying Pertinent Configuration Items

The identification of the total population of configuration items to be governed by the CM program consists of the following steps:

- Defining the criteria and scope for the configuration items to be included in the program.
- Defining the level of detail of the functional and physical characteristics to be maintained.
- Identifying the facility systems, structures, components, and software (SSC) encompassed by the defined criteria and scope.

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- Identifying the facility documentation required to support the identified SSC to the level of detail defined for the program."

3.2.1

Establishing The Technical Baseline

The establishment of a technical baseline includes system and component level "grading", SSC equipment listing, system and process boundary development, equipment database, and phased implementation of the activities by stages. A review of SSC systems includes:

- Identify facility systems
- Apply the SSC inclusion criteria to determine which systems will be included in the CM program
- Identify the types of technical requirements which apply to each system
- Assign a system grade based on technical requirements that apply

Components should be graded when sufficient information is available to make component level determinations of CM significance.

A list of SSCs should be developed in conjunction with a CM equipment database which will provide an essential tool for the effective retrieval, use, and control of the CM SSC data and information.

SITE REQUIREMENT SOURCE: NIRMA-PP02-1989, Section 4.2.1, Paragraph 3

"Task 2 - Establishing Design Basis Documentation (DBD)

The establishment of appropriate design basis documentation is essential to ensure the utility can verify that the SSC are properly designed and are in complete compliance with the requirements to which the utility is committed. The efforts expended to date by nuclear utilities in developing such documentation have varied greatly. Three basic methods have been employed in developing end products which provide varying degrees of detail. The three alternatives and a recommendation are discussed below."

3.2.2

Reconstitution of the Technical Baseline

Technical baseline reconstitution is required for those facilities whose present documentation does not provide sufficient substantiation of the facility technical requirements. Retrieval and evaluation of the design basis information is required in those cases where adequate information is not available.

Reconstitution of the Technical Baseline involves a review and search to establish the requirements for SSC configuration. The level of effort required for this activity will depend on the existing condition of documentation, data and information, controls and life-cycle of the facility. Reconstitution of the Technical Baseline for the Tank Farm facility may include a review of on-hand information, a search of a defined set of information, a comprehensive search, and design requirement regeneration.

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SITE REQUIREMENT SOURCE: INPO-87-006 Appendix E

"When current design requirements do not exist or are incomplete, a reconstruction program may be needed to establish and maintain these requirements for the plant. An effective program would have the following features:

- Identification of Existing Documents
- Evaluation of Existing Documents
- Reverification of Selected Documents
- Control of Change"

SITE REQUIREMENT SOURCE: NIRMA-PP02-1989, Section 4.2.1, Paragraph 4

"● Method 1 - Design Basis Index Model

One method utilized in DBD generation efforts is to develop a catalog of all design information available concerning each system. Information in the catalog includes items such as unique identifiers, title, (or description), location, and applicability (e.g., sites, units, systems, components, etc.). The catalog can be cross-referenced in a data base to highlight relationships between configuration items and: 1) license requirements and 2) design information (calculations, system information, drawings, etc) that comprise the design basis for the plant. Thus, the design basis index method provides a qualitative listing (or road map) to the design data. Data base queries refer users to source documents containing engineering data and other related"

SITE REQUIREMENT SOURCE: NIRMA-PP02-1989, Section 4.2.1, Paragraph 5

"● Method 2 - User Needs Model

User needs at some facilities have identified that Operations and Maintenance (O&M) are the probable primary users of a DBD. Consequently, these facilities structure their DBD to support O&M personnel and not necessarily the Engineering group. The User Needs Model DBD typically contains: (a) references to controlled documents which provide more detail on system design and component bases, (b) criteria for system operation, inspection and testing and design basis evolution information, and (c) a compilation of open items. The design basis evolution section provides an historical perspective of each configuration item throughout its lifetime. The open item listing provides a catalog of "unavailable" design basis material which should be prioritized and worked off as time or need permits. In summary, the User"

SITE REQUIREMENT SOURCE: NIRMA-PP02-1989, Section 4.2.1, Paragraph 6

"● Method 3 - ANSI N45.2.11 Model

ANSI N45.2.11 provides a checklist of 28 items to consider in the review of nuclear power plant designs. This listing has general industry acceptance as the framework for the review and evaluation of SSC as well as a method to utilize in system design work. The ANSI Model is used as a reference to determine what design basis information should be captured and included in a DBD data base. Such a data base provides a logical framework for design and system engineering use; however, it does not readily lend itself to use by O&M personnel as does the User Needs Model. The ANSI N45.2.11 Model DBD contains the qualitative data which supports the "why's" of design requirements."

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SITE REQUIREMENT SOURCE: NIRMA-PP02-1989, Section 6.3, Paragraph 3

"The plan must also focus on two basic issues:

- Getting the configuration baseline documentation to the desired level of integrity and completeness, and
- Having adequate programs in place to ensure proper maintenance of the configuration baseline."

SITE REQUIREMENT SOURCE: NIRMA-PP02-1989, Section 6.3, Paragraph 4

"The basic steps in the Plan should include:

- Assessment of the adequacy of: 1) existing documentation considered as configuration baseline documents and 2) existing programs.
- Recommended Action Plans for enhancements to: 1) the configuration baseline documents and 2) existing programs.
- Implementation of the Action Plans."

SITE REQUIREMENT SOURCE: NIRMA-PP02-1989, Section 6.3, Paragraph 5

"Actions Plans for upgrading configuration baseline documentation must be closely coordinated with those associated with enhancements to existing programs. The designs/features/requirements of the systems must ensure that configuration baseline documents can and will be properly maintained."

3.2.2.1

Program Management

The CM program should establish the necessary program management tools and controls that should be to guide the reconstitution process. The program should make use of the routine items discussed in the Program Management Section 3.1.

Controls should be in place to ensure that a Technical Baseline Reconstitution plan is developed, with a clear definition of the program objectives and scope, approaches to be used, selection and prioritization of systems and topical areas to be addressed, identification of key programmatic interfaces, definition of the process for maintaining the reconstituted data/information and incorporation of any new requirements resulting from facility modification during reconstitution.

Controls should be established to transition the reconstituted technical baseline information into the normal CM control process.

3.2.2.2

Program Implementation

This element describes the essential steps in the reconstitution process,

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3.2.2.3 Identification of Existing Documentation

The status of existing documentation should be determined, with focus on which documents currently exist, where they are located, their condition (legibility), and how they can be retrieved. Controls should be in place to ensure that the functional and physical characteristics of the SSCs and computer software to be captured are defined and that the management practices are established including controls for information databases used

3.2.2.4 Evaluation of Existing Baseline Information

Existing technical baseline information should be evaluated and information that is applicable to the Tank Farm facility configuration assembled into packages. The adequacy and accuracy of data/information should be verified and validated to ensure that the information is appropriate and correct, that proper methods and assumptions were used and that it matches the existing physical and functional characteristics of the facility.

Programmatic controls should be in place to ensure that the processes and criteria used for the evaluation are defined such that they identify any missing or incomplete data/information. Additionally, the verification and validation processes should be defined and controlled such that they ensure consistency with the current facility functional and physical characteristics.

3.2.2.5 Regeneration of Missing or Incomplete Information

Controls should be established to define the criteria for determining the need for regeneration and, when needed, ensuring that partial or incomplete baseline information is regenerated through appropriate means such as reanalysis, updating/developing design specifications or testing. The regenerated information should be incorporated in the previous evaluation step and should be subject to the same level of verification and validation.

3.2.2.6 Resolution of Deficient or Open Items

Controls should be established to ensure that any deficiencies or open items that evolve from the evaluation, regeneration or documentation of known conditions regarding baseline information are prioritized, evaluated, tracked and dispositioned. These controls should determine the safety significance of the deficient or open item and ensure that is handled through the appropriate

3.3 CHANGE CONTROL

The CM program should provide sufficient controls to ensure engineering, maintenance and operational changes do not affect the safety of the facility and that configuration affecting changes are reflected in necessary documents and databases. This would include assuring that appropriate procedures, training, staffing, interfaces and reviews to ensure the affect of changes are appropriately addressed, incorporated and communicated.

SITE REQUIREMENT SOURCE: ASME-NQA-1A-1989-1A 18 Criteria, Section 3

This represents the best available guidance for the development of this functional area. This requirement does not, however, represent a contractual commitment on the part of Westinghouse Hanford Company.

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"The design shall be defined, controlled, and verified. Applicable design inputs shall be appropriately specified on a timely basis and correctly translated into design documents. design interfaces shall be identified and controlled. design adequacy shall be verified by persons other than those who designed the item. Design changes, including field changes, shall be governed by control measures commensurate with those applied to the original design."

FACILITY REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.4.1, Paragraph 6

"Mechanisms for temporary physical and document changes need to be identified for inclusion in the formal change control processes."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.4.1, Paragraph 7

"Determine Which Mechanisms Should be Controlled. After the various sources of change have been identified, a determination should be made regarding which of those processes alter configuration and, therefore, require formal controls. Formal control measures should be provided for any change process that affects either (1) the physical configuration, as defined by the SSCs included in the CM program, or (2) the facility documents included in the CM program. An example of a change mechanism that might be out of scope is the control of scaffolding that can not affect an SSC within the CM program (i.e., no system interaction through falling, etc.) or its associated documentation."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.4.2, Paragraph 3

"Change processing should be defined by procedure for each approved change mechanism. Streamlining of internal program forms and documents is important to improve comprehensibility and ease-of-use. This applies to each CM program element, but is particularly applicable to the Change Control program element, which directly interfaces with the most organizations and personnel. Effective internal forms and documentation associated with the change control program element have the following attributes: they facilitate complete and timely change identification and control, they are user-friendly and encourage participants to fully make use of them, and they provide management tracking and reporting."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.4.2, Paragraph 4

"Change processing should identify the grade of the SSCs involved with the change. Change processing may vary based on the SSC grade. For example, different review and approval levels may be required."

SITE REQUIREMENT SOURCE: DOE-STD-CM-XX Chapter 2, Section 3.4.2, Paragraph 5

"Technical Reviews. Many technical reviews are performed as part of the change process. Effective change control requires that formal, multi-disciplined, technical reviews be performed for each change. Some of these are necessary to maintain configuration and some are defined as a matter of good management practices. The technical reviews defined by the CM program criteria to maintain configuration can be grouped into these areas: design

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envelope review; identification of affected hardware and documents; identification of post-implementation acceptance criteria; and safety and mission reviews."

SITE REQUIREMENT SOURCE: DOE5700.6C Attachment 1, Chapter II, Section A, Criterion 6.c

"Changes to final designs, field changes, modifications, and nonconforming items dispositioned "use as is" or "repair" should be justified and subject to design control measures commensurate with the original design. The work should include assurance that the design analyses for the item are still valid. Changes should be approved by the original design organization or a technically qualified designate."

3.4

KEY PROGRAM INTERFACES

The CM functional area provides an overall framework and infrastructure to control the technical baseline of the Tank Farm facility. Key interfaces include CM and Management Systems, Engineering Design, Construction, Operations, Maintenance, and Nuclear Safety. These interfaces must be defined in implementing procedures to ensure an effective CM program.

SITE REQUIREMENT SOURCE: INPO-87-030 Section 2.4.A.4

"Effective design interface controls exist between organizations performing engineering work affecting nuclear power plant design. These interfaces may be internal (e.g., between utility organizational units) or external (e.g., between the utility and contract engineering groups). The identification and control of interfaces should support effective configuration management. The design interface controls consist of the"

SITE REQUIREMENT SOURCE: INPO-87-030 Section 2.4.A.4.a

"Identification of organizational responsibilities and assignment of key design personnel who are knowledgeable in the function and operational characteristics of plant systems"

SITE REQUIREMENT SOURCE: INPO-87-030 Section 2.4.A.4.b

"requirements that contracted design engineering work is consistent with the utility's work control, design process, procurement support, document control, and quality assurance programs"

SITE REQUIREMENT SOURCE: INPO-87-030 Section 2.4.A.4.c

"establishment of communication channels between the design engineer and the appropriate plant counterparts during the conceptual design process to verify plant input is incorporated into the conceptual"

SITE REQUIREMENT SOURCE: INPO-87-030 Section 2.4.A.4.d

"formal conceptual and preliminary design reviews by plant personnel before major engineering resources are committed to the detailed design and before long-term procurement commitments are made"

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SITE REQUIREMENT SOURCE: INPO-87-030 Section 2.4.A.4.e

"long-and short-range planning of modifications that ensures proper interfaces with major plant activities"

SITE REQUIREMENT SOURCE: INPO-87-030 Section 2.4.A.4.f

"methods to periodically review the progress of engineering work and to realign priorities, as necessary"

SITE REQUIREMENT SOURCE: INPO-87-030 Section 2.4.A.4.g

"specifications and engineering support to assist the responsible procurement organization(s) in the proper selection of materiel, equipment, qualified vendors, and documentation"

SITE REQUIREMENT SOURCE: INPO-87-030 Section 2.4.A.4.h

"technical data and active engineering support needed to develop or update plant procedures and training materials"

SITE REQUIREMENT SOURCE: INPO-87-030 Section 2.4.A.4.i

"design engineering support in the field to facilitate coordination during construction, post modification testing (including preoperational and nondestructive testing), plant operations during initial startup, and subsequent operation."

3.4.1

Management Systems

CM policies and procedures and supporting requirements for Document Control-Records Management are elements of the Management Systems functional area. Management Systems provides the necessary infrastructure and ensures that positive administrative controls are in place to support CM program development, implementation and maintenance. CM policies and procedures must be developed and promulgated by management in accordance with requirements identified in the Management Systems functional area.

3.4.2

Engineering Design

The design process is established in accordance with requirements specified in the Engineering Design functional area. The CM program must effectively control the data and information that is used as design input and created as design output by the Engineering Design function.

3.4.3

Construction

Construction uses the controls of the CM program to complete work activities, modifications and facility changes while the CM program accepts as input information from construction activities such as field reports, walkdown (as-built) data, and field/drawing change requests.

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3.4.4

Operations

The CM program ensures the adequacy, accuracy and currency of the drawings, procedures and data/information used to operate the facility. The technical requirements identified and controlled by the CM program are used by procedure developers and operators to control equipment and systems within safe operating envelopes. Changes to either the design or the equipment installed are translated to effective operations via the CM process.

3.4.5

Maintenance

The interface between the Maintenance functional element and CM include the provision of and as-built drawings, vendor documentation and design data and information to support conduct of maintenance/work activities and maintenance procedure development. Maintenance activities can also contribute to configuration changes in the accomplishment of work (spare part replacements and minor modifications).

3.4.6

Nuclear Safety

The CM program helps ensure that the information used for Nuclear Safety analyses is accurate, complete and up to date. The CM process should ensure that the impact of design and facility changes will be identified and addressed to ensure that the SSCs are operated and maintained within the maximum safe limits. The Nuclear Safety functional area should also ensure that appropriate safety requirements are included in the CM controlled technical baseline of the Tank farm facility.

3.4.7

Training

Training is required for personnel to perform certain CM program specific activities. Additional training is required for a broader spectrum of the Tank Farms facility staff to provide awareness of the CM program, its elements and functions.

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