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CONTENTS

1.0	PURPOSE	1
2.0	SCOPE	1
3.0	QUALITY ASSURANCE PROGRAM REQUIREMENTS	2
3.1	ORGANIZATION	2
3.1.1	Company President	5
3.1.2	Quality Assurance	5
3.1.3	Transportation and Packaging	6
3.1.3.1	Transportation and Packaging Function Responsibilities	6
3.1.3.1.1	Packaging Safety Engineering Responsibilities.	7
3.1.3.1.2	Packaging Design Engineering Responsibilities	8
3.1.3.1.3	Hazardous Materials Operations Responsibilities	8
3.1.3.1.4	Traffic Operations Responsibilities.	9
3.1.3.1.5	Transportation Programs and Training Responsibilities	10
3.1.4	Procurement and Materials Management	10
3.1.4.1	Materials Management Responsibilities	10
3.1.4.2	Equipment/Services Procurement Responsibilities	11
3.1.5	Emergency, Safety, and Quality Services	11
3.1.5.1	Safety Function Responsibilities	11
3.1.5.1.1	Packaging and Shipping Approval	
3.1.5.1.2	Packaging and Shipping Safety	
3.1.5.1.3	Health Physics Responsibilities	13
3.1.5.1.4	ALARA Policy Program.	13
3.1.5.2	Safety Analysis and Regulation Function Responsibilities	13
3.1.5.3	Safeguards and Security Function Responsibilities	14
3.1.6	Waste, Analytical and Environmental Services	15
3.1.6.1	Solid Waste Disposal Function Responsibilities	15
3.1.6.1.1	Generator/Waste Acceptance Services	
3.1.7	ICF Kaiser Hanford	15
3.1.7.1	Fleet Operations, Transportation, and Maintenance Services Responsibilities	15
3.1.7.2	Training Services Responsibilities	16
3.1.8	Packaging and Shipping Subcouncil	17
3.1.9	All Organizations	17
3.2	QUALITY ASSURANCE PROGRAM	18
3.3	DESIGN CONTROL	18
3.4	PROCUREMENT DOCUMENT CONTROL	19
3.5	INSTRUCTIONS, PROCEDURES, AND DRAWINGS	19
3.6	DOCUMENT CONTROL	20
3.7	CONTROL OF PURCHASED ITEMS AND SERVICES	20

CONTENTS (cont.)

3.8	IDENTIFICATION AND CONTROL OF ITEMS	20
3.9	CONTROL OF PROCESSES	20
3.10	INSPECTION	21
3.11	TEST CONTROL	22
3.12	CONTROL OF MEASURING AND TEST EQUIPMENT	22
3.13	HANDLING, STORAGE, AND SHIPPING	22
3.14	INSPECTION, TEST, AND OPERATING STATUS	23
3.15	CONTROL OF NONCONFORMING ITEMS	23
3.16	CORRECTIVE ACTION	23
3.17	RECORDS	23
3.18	AUDITS	24

CONTENTS (cont.)

4.0 QUALITY ASSURANCE PROGRAM INDEX	25
REFERENCES	45

LIST OF FIGURES

1	Hazardous Materials Packaging, Shipping and Transportation Interfaces and Internal Responsibilities	3
	(Sheet 1)	
	Hazardous Materials Packaging, Shipping and Transportation Interfaces and Internal Responsibilities	4
	(Sheet 2)	

LIST OF TABLES

1	Packaging, Shipping, and Transportation Interfaces	2
2	Regulatory and Advisory Interfaces	2

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QUALITY ASSURANCE PROGRAM PLAN FOR THE HAZARDOUS MATERIALS TRANSPORTATION AND PACKAGING PROGRAM

1.0 PURPOSE

The purpose of this document is to describe implementation of the Westinghouse Hanford Company (WHC) Quality Assurance (QA) program by the Transportation and Packaging Function (T&P). This document, known as a Quality Assurance Program Plan (QAPP), identifies those elements of the WHC QA program implemented to meet QA requirements associated with hazardous materials transportation and packaging. This QAPP only covers the implementation accomplished through Level I and II manuals. Implementation of QA requirements below Level II manuals is the responsibility of the organizations conducting hazardous material transportation and packaging activities. This QAPP covers activities under the jurisdictional authority of the WHC.

Implementation of the WHC QA program, as described results in compliance with requirements established in NQA-1, "Quality Assurance Program Requirements for Nuclear Facilities," DOE Order 5700.6C, "Quality Assurance," and in Title 10, Code of Federal Regulations, Part 71 (10 CFR 71), *Packaging and Transportation of Radioactive Material*, Subpart H, "Quality Assurance." The QAPP covers the quality affecting activities identified in the U.S. Department of Energy (DOE) orders, both Headquarters (HQ) and the Richland Operations Office (RL); in the U.S. Department of Transportation (DOT), the U.S. Environmental Protection Agency (EPA), and the U.S. Nuclear Regulatory Commission (NRC) regulations; in the International Atomic Energy Agency (IAEA) guidelines; and in the WHC manuals.

The QAPP describes how WHC policies and procedures are applied to ensure the quality associated with the Transportation and Packaging Program and compliance with the controlling requirements.

2.0 SCOPE

This QAPP covers activities related to hazardous materials transportation performed on and off the Hanford Site under the jurisdictional authority of WHC. Some of the activities are design, fabrication, testing, cleaning, assembly, inspection, repair, loading, unloading, modification, documentation, use, and maintenance.

The need for revision of this QAPP will be evaluated periodically. The evaluation will take place within 12 months, plus or minus 3 months, of the current release and/or review date or whenever a significant change is made to the controlling documents. Hazardous Materials Operations (HMO) is responsible for conducting the evaluation and revising the QAPP, or updating the Review Record if no changes are required.

Hazardous Materials Operations completed the last full document review and evaluation on September 15, 1994. The preceding sentence coupled with the revision record for the QAPP records the review and evaluation. The record change occurs when HMO updates the sentence upon completion of a full review and evaluation.

3.0 QUALITY ASSURANCE PROGRAM REQUIREMENTS

3.1 ORGANIZATION

The WHC organizational structure, functional responsibilities, level of authority, interfaces, and lines of communication for activities affecting quality are found in the *Quality Assurance Manual*, WHC-CM-4-2. The organizational structure used to ensure quality in T&P is established in the *Hazardous Materials Packaging and Shipping* manual, WHC-CM-2-14.

Organizations conducting activities associated with hazardous materials transportation and packaging must comply with applicable requirements. Shippers have the overall responsibility for ensuring that the applicable requirements associated with a shipment are met. This includes ensuring the requirements for activities conducted for them by other organizations are met. Conducting T&P activities, in accordance with requirements in WHC-CM-2-14, results in external interfaces with the organizations listed in Tables 1 and 2. The interfaces are accomplished by the WHC organizations discussed below.

Table 1. Packaging, Shipping, and Transportation Interfaces.

- U.S. Department of Energy
- U.S. Department of Energy-Richland Operations Office
- U.S. Nuclear Regulatory Commission Licensees
- Other U.S. Department of Energy Contractors
- Common Carriers
- U.S. Department of Energy Safeguards and Security Division
- U.S. Department of Energy Safety and Environmental Protection Division
- U.S. Department of Energy Facilities and Site Services Division

Table 2. Regulatory and Advisory Interfaces.

- U.S. Department of Transportation
- U.S. Department of Energy
- Interstate Commerce Commission
- U.S. Nuclear Regulatory Commission
- International Atomic Energy Agency
- U.S. Environmental Protection Agency
- Washington State Department of Ecology

Figure 1. Hazardous Materials Packaging, Shipping, and Transportation Interfaces and Internal Responsibilities. (sheet 1 of 2)

PROJECTS AND SITE SERVICES

Figure 1. Hazardous Materials Packaging, Shipping, and Transportation Interfaces and Internal Responsibilities. (sheet 2 of 2)

The WHC policy for shipping and receiving is established by the company president. The Transportation and Packaging Charter is documented in the WHC-CM-1, Company Policies and Charters which highlights the responsibilities and interfaces involved for implementing compliance issues including quality assurance.

The manual, WHC-CM-2-14, Hazardous Material Packaging and Shipping implements the hazardous materials packaging and transportation program throughout the company and for subcontractors under Westinghouse Hanford Company. This manual provides the specific directions to be followed by WHC and ICF Kaiser employees to implement the source requirements. The manual identifies responsibilities for specifically identified and general organizations and individuals.

This section of the QAPP identifies responsibilities significant to the transportation and packaging programs that are assigned in company controlled manuals or source documents. The source document for the responsibility is listed at the end of the responsibility. The source document listed is the lowest level document in which the responsibility is identified.

3.1.1 Company President

The President, WHC, establishes and ensures compliance with company policies. WHC-CM-1, "Company Policies and Charters" identifies in the President's Office responsibilities, "Internal Audit Charter" that the President's office is tasked with the independent review of internal management and control structure throughout WHC. These reviews encompass compliance with WHC policies, plans, and procedures and applicable federal, state, and local laws, DOE directives, and contractual provisions. (PO/IA)

3.1.2 Quality Assurance

The WHC QA function is responsible for assisting in the establishment of an appropriate QAP for T&P-related activities, for review and approval of the plan, and for assessing the effectiveness of the program.

The WHC QAP requirements are defined in WHC-CM-4-2, QR 2.0. This includes the organizational structure, functional responsibilities, levels of authority, interfaces, and lines of communication for activities affecting quality.

Quality Assurance conducts the following T&P activities:

- Implementing the QA requirements identified by this QAPP (WHC-CM-2-14, Part II)
- Auditing compliance to requirements identified by this QAPP (WHC-CM-2-14, Part II)
- Verifying packaging quality tests (WHC-CM-4-2, QR 11.0)

- Inspecting reusable packagings for integrity verification (WHC-CM-2-14, Part II)
- Reviewing and approving packaging, packing, and shipping procedures (WHC-CM-2-14, Part II)
- Reviewing and approving SARPs (WHC-CM-2-14, Part II)
- Identifying overview activities of the T&P to be performed by the QA organization (WHC-CM-2-14, Part II)
- Performing receiving and fabrication inspections (WHC-CM-2-14, Part II)
- Inspecting reusable fissile, Type A and Type B packagings for integrity verification, as requested (WHC-CM-2-14, Part II)
- Providing surveillance of selected parts of the T&P and quality contract inspections when requested (WHC-CM-2-14, Part II).

3.1.3 Transportation and Packaging

The T&P function of the Waste, Analytical and Environmental Services (WAE) is assigned overall management responsibility for implementation of and compliance with WHC-CM-1, for import/export, household goods, classified, sensitive, oversize, overweight, and hazardous materials (including radioactive, hazardous waste, and mixed waste) shipments. This overall management responsibility includes providing regulatory guidance and interpretative information for implementing and maintaining the shipping and receiving program activities onsite and offsite, and development and maintenance of procedures and manuals.

3.1.3.1 Transportation and Packaging Function Responsibilities. The T&P Function is responsible for the following activities:

- Obtaining formal interpretation of transportation and packaging regulations from the appropriate Federal and State agencies through DOE-RL (WHC-CM-2-14, Part II)
- Responding to DOE-RL inquiries concerning the overall packaging and shipping program (WHC-CM-2-14, Part II)
- Responding to inquiries from DOE-RL concerning packaging design, testing, evaluation or approval, and onsite use (WHC-CM-2-14, Part II)
- Ensuring that T&P procedures are developed and issued (WHC-CM-2-14, Part II)
- Ensuring Transportation and Packaging personnel are trained to conduct assigned activities (WHC-CM-4-2, QR 2.0)

- Ensuring that required written procedures are prepared and followed for activities conducted by Transportation and Packaging associated with the packaging and transportation of hazardous materials (WHC-CM-4-2, QR 5.0)
- Identifying documents generated as a result of T&P-related activities conducted by the Transportation and Packaging function that are QA records. Ensuring that such documents are indexed and properly dispositioned in accordance with the requirements in WHC-CM-3-5 (WHC-CM-4-2, QR 17.0; DOE Orders 1540.2; 5480.3; DOE-RL Order 5480.1, Chp III; 49 CFR 173.400 through 478; 10 CFR 71).

3.1.3.1.1 Packaging Safety Engineering Responsibilities. Under the T&P Function, this group is responsible for the following:

- Approving engineering documents when the design affects radioactive/hazardous material shipping container design (WHC-CM-1, Company Policies and Charters)
- Testing prototype packages (WHC-CM-2-14, Part II)
- Preparing SARPs for onsite packaging used for shipment of radioactive materials (WHC-CM-2-14, Part II)
- Preparation of design criteria and specifications for hazardous material packaging for onsite shipment (WHC-CM-2-14, Part II)
- Reviewing and approving plant operating procedures covering radioactive material packaging and transportation (WHC-CM-2-14, Part II)
- Preparing and/or technical evaluating documentation for hazardous material packages including tiedown, content analysis, and DOT certification (WHC-CM-2-14, Part II)
- Ensuring Packaging Development personnel are trained to conduct assigned activities (WHC-CM-4-2, QR 2.0)
- Ensuring that required written procedures are prepared and followed for activities conducted by Packaging Development associated with the packaging and transportation of hazardous materials (WHC-CM-4-2, QR 5.0)
- Identifying documents generated as a result of T&P-related activities conducted by Packaging Development that are QA records. Ensuring that such documents are indexed and properly dispositioned in accordance with the requirements in WHC-CM-3-5 (WHC-CM-4-2, QR 17.0; DOE Orders 1540.2; 5480.3; DOE-RL Order 5480.1, Chp III; 49 CFR 173.400 through 478; 10 CFR 71).

3.1.3.1.2 Packaging Design Engineering Responsibilities. Under the T&P Function, the Packaging Systems Engineering group is responsible for the following:

- Coordination of DOE/NRC/DOT packaging applications (WHC-CM-2-14, Part II)
- Evaluating SARP-related analysis for regulatory compliance (WHC-CM-2-14, Part II)
- Ensuring regulatory compliance of WHC-certified packaging systems (WHC-CM-1)
- Ensuring Packaging Systems Engineering personnel are trained to conduct assigned activities (WHC-CM-4-2, QR 2.0)
- Ensuring that required written procedures are prepared and followed for activities conducted by Packaging Systems Engineering associated with the packaging and transportation of hazardous materials (WHC-CM-4-2, QR 5.0)
- Identifying documents generated as a result of T&P-related activities conducted by Packaging Systems Engineering that are QA records. Ensuring that such documents are indexed and properly dispositioned in accordance with the requirements in WHC-CM-3-5 (WHC-CM-4-2, QR 17.0; DOE Orders 1540.2; 5480.3; DOE-RL Order 5480.1, Chp III; 49 CFR 173.400 through 478; 10 CFR 71).

3.1.3.1.3 Hazardous Materials Operations Responsibilities. Under the T&P Function, this group is responsible for the following:

- Serves as point of contact for the hazardous material shipping program at the Hanford Site. (Draft RLID 1540.1, WHC-CM-2-14, Part II)
- Provides technical support to hazardous material and hazardous waste and contaminated laundry shippers. (WHC-CM-2-14, Part II)
- Reviews operating organization procedures for hazardous material transportation applications. (WHC-CM-4-2, QR 5.0)
- Prepares and maintains this manual, the Quality Assurance Program Plan for Transportation, and supplies input into the WHC-CM-1, Company Policies and Charters for Transportation and Packaging. (WHC-CM-2-14, Part II)
- Provides transportation and packaging regulatory change communication and interpretation to hazardous material and hazardous waste shippers. (WHC-CM-2-14, Part II)
- Performs generator and disposal contractor assessments for hazardous waste transportation and packaging applications. (RLID 1000.1,)

- Coordinates all radioactive material shipments that require road closure when packages approved only for onsite use are transported over public access roadways on the Hanford Site. Hazardous Material Operations also controls the approved transportation plan that outlines requirements associated with these shipments. (WHC-CM-2-14, Part II)
- Inspects intra-area and inter-area nonradioactive hazardous waste shipments. HMO may also provide coverage for Traffic Operations offsite inspections as personnel are fully qualified. (WHC-CM-2-14, Part II)
- Reviews Hanford Site intra-area and inter-area radioactive shipment records to ensure compliance with applicable regulations as per applicable department procedures. (WHC-CM-2-14, Part IV)
- Maintains the system for issuing and controlling all routine radioactive shipment records. (WHC-CM-2-14, Part IV)
- Reviews the annual inventory of Type A and Type B radioactive material shipping packages as submitted by site facilities. This includes packages approved only for onsite use by a SARP, SEP, DAP. (WHC-CM-2-14, Part II and WHC-CM-4-2, QR 13.0)
(See Part II, section 1.2, item 10 under Operating Organizations)
- Coordinates occurrence reporting of transportation and packaging reportable occurrences as required by WHC-CM-1-3, MRP 5.12, "Evaluating Occurrences" and WHC-CM-1-5 Standard Operating Procedures Section 7.1.

3.1.3.1.4 Traffic Operations Responsibilities. Under the T&P Function, this group is responsible for the following:

- Interpreting regulations and requirements for offsite shipments when required (WHC-CM-2-14, Part II)
- Provides overall management responsibility of inbound and outbound offsite shipments of hazardous material and waste. (WHC-CM-2-14, Part, II)
- Verifies compliance with federal/state regulations, DOE Orders, and company requirements for all inbound and outbound offsite shipments of hazardous material, samples and waste for the Hanford Site. (DOE Order 1540.1A, WHC-CM-2-14, Part II)
- Performs a pre-release inspection of each outbound shipment including reviewing the shipping records for compliance with DOE Orders and other applicable regulations, requirements, and directives relative to the classification, description, packaging, marking, labeling, and tie-down of packages and certifying to the carrier that such packages leaving the Hanford Site are in proper condition for transport. (DOE Order 1540.1A, DOE Order 5480.3, WHC-CM-2-14, Part II)

3.1.3.1.5 Transportation Programs and Training Responsibilities. Under the T&P Function, this group is responsible for the following:

- Prepares formal training courses and provides instruction to qualify onsite personnel in the proper procedures for authorizing/certifying hazardous material and waste shipments according to DOT, DOE, U.S. Environmental Protection Agency (EPA), and Washington State regulations. (WHC-CM-2-14, Part II)
- Establishing requirements for conducting comprehensive evaluation of candidates and for certifying WHC-delegated, authorized shippers (WHC-CM-2-14, Part II)

3.1.4 Procurement and Materials Management

The Procurement and Materials Management (PMM) function of the Administration Department is assigned overall responsibility for supervising implementation of and compliance with the provisions of WHC-CM-1 for materials management for shipments not assigned to T&P. This QAPP does not cover those responsibilities. This document identifies the PMM responsibilities resulting from participation in activities associated with the T&P.

3.1.4.1 Materials Management Responsibilities. Under the PMM Function, Materials Management is responsible for the following:

- Having required radiation and contamination surveys of inbound and outbound shipments conducted. Evaluating results of survey for compliance and initiating notification of noncompliance to appropriate parties (WHC-CM-2-14, Part V)
- Having required inspection of offsite hazardous material shipments conducted (WHC-CM-2-14, Part V)
- Providing secure in-transit storage when required (WHC-CM-2-14, Part V)
- Releasing all outbound and accepting delivery of all inbound shipments (WHC-CM-2-14, Part V)
- Notifying appropriate parties of receipt, including QA if incoming inspection is required (WHC-CM-2-14, Part V)
- Ensuring Materials Management personnel are trained to conduct assigned activities (WHC-CM-4-2, QR 2.0)
- Ensuring that required written procedures are prepared and followed for activities conducted by Materials Management associated with the packaging and transportation of hazardous materials (WHC-CM-4-2, QR 5.0)
- Identifying documents generated as a result of T&P-related activities conducted by Materials Management that are QA records.

Ensuring that such documents are indexed and properly dispositioned in accordance with the requirements in WHC-CM-3-5 (WHC-CM-4-2, QR 17.0; DOE Orders 1540.2; 5480.3; DOE-RL Order 5480.1, Chp III; 49 CFR 173.400 through 478; 10 CFR 71).

3.1.4.2 Equipment/Services Procurement Responsibilities. Under the PMM Function, Equipment/Services Procurement is responsible for the following:

- Procuring packaging and components to required specifications (WHC-CM-2-1 *Procurement Manual and Procedures*)
- Procuring services associated with packaging activities to required specifications (WHC-CM-2-1 *Procurement Manual and Procedures*)
- Ensuring Equipment/Services Procurement personnel are trained to conduct assigned activities (WHC-CM-4-2, QR 2.0)
- Ensuring that required written procedures are prepared and followed for activities conducted by Equipment/Services Procurement associated with the packaging and transportation of hazardous materials (WHC-CM-4-2, QR 5.0)
- Identifying documents generated as a result of T&P-related activities conducted by Equipment/Services Procurement that are QA records. Ensuring that such documents are indexed and properly dispositioned in accordance with the requirements in WHC-CM-3-5 (WHC-CM-4-2, QR 17.0; DOE Orders 1540.2; 5480.3; DOE-RL Order 5480.1, Chp III; 49 CFR 173.400 through 478; 10 CFR 71).

3.1.5 Emergency, Safety and Quality Services

3.1.5.1 Safety Function Responsibilities. The Safety Function reports to the manager of the Emergency, Safety, and Quality Department. The safety activities related to quality are performed by the following groups.

3.1.5.1.1 Packaging and Shipping Approval Authority Responsibilities. The manager of the Safety Function serves as the WHC-designated packaging approval entity. The position carries the title of "Packaging and Shipping Approval Authority"

3.1.5.1.2 Packaging and Shipping Safety Responsibilities. Under the Safety Function, Packaging and Shipping Safety Review is responsible for the following:

- Conducting facility T&P appraisals (WHC-CM-2-14, Part II)
- Coordinating safety reviews of SARPs (WHC-CM-2-14, Part II)
- Performing annual audit of WHC hazardous material packaging and transportation operations (WHC-CM-2-14, Part II)

- Reviewing and concurrence with procedures associated with packaging and shipment of hazardous materials (WHC-CM-2-14, Part II)
- Reviewing and concurrence with engineering and procurement documentation associated with packaging and transportation of hazardous materials (WHC-CM-2-14, Part II)
- Conducting surveillance of operations associated with packaging and transportation of hazardous materials to ensure adherence to technical and safety aspects of program (WHC-CM-2-14, Part II)
- Ensuring Packaging and Shipping Safety personnel are trained to conduct assigned activities (WHC-CM-4-2, QR 2.0)
- Ensuring that required written procedures are prepared and followed for activities conducted by Packaging and Shipping Safety associated with the packaging and transportation of hazardous materials (WHC-CM-4-2, QR 5.0)
- Identifying documents generated as a result of T&P-related activities conducted by Packaging and Shipping Safety that are QA records. Ensuring that such documents are indexed and properly dispositioned in accordance with the requirements in WHC-CM-3-5 (WHC-CM-4-2, QR 17.0; DOE Orders 1540.2; 5480.3; DOE-RL Order 5480.1, Chp III; 49 CFR 173.400 through 478; 10 CFR 71).

3.1.5.1.3 Health Physics Responsibilities. Under the ESQ Function, the Health Physics group is responsible for the following:

- Providing radiation monitoring support for all packaging- and transportation-related activities (WHC-CM-2-14, Part II)
- Ensuring Health Physics personnel are trained to conduct assigned activities (WHC-CM-4-2, QR 2.0)
- Ensuring that required written procedures are prepared and followed for activities conducted by Health Physics associated with the packaging and transportation of hazardous materials (WHC-CM-4-2, QR 5.0)
- Identifying documents generated as a result of T&P-related activities conducted by Health Physics that are QA records. Ensuring that such documents are indexed and properly dispositioned in accordance with the requirements in WHC-CM-3-5 (WHC-CM-4-2, QR 17.0; DOE Orders 1540.2; 5480.3; DOE-RL Order 5480.1, Chp III; 49 CFR 173.400 through 478; 10 CFR 71).

3.1.5.1.4 ALARA Policy Program Responsibilities. Under the ESQ Radiological Control Function, the ALARA Program is supported by the Health Physics group as defined in the WHC-CM-4-11 manual. They are responsible for the following:

- Providing, as a part of the ALARA Program, criteria and standards to ensure ALARA practices are used in the packaging and shipment of radioactive materials (WHC-CM-2-14, Part II)
- Ensuring ALARA Program personnel are trained to conduct assigned activities (WHC-CM-4-2, QR 2.0)
- Ensuring that required written procedures are prepared and followed for activities conducted by the ALARA Program associated with the packaging and transportation of hazardous materials (WHC-CM-4-2, QR 5.0)
- Identifying documents generated as a result of T&P-related activities conducted by the ALARA Program that are QA records. Ensuring that such documents are indexed and properly dispositioned in accordance with the requirements in WHC-CM-3-5 (WHC-CM-4-2, QR 17.0; DOE Orders 1540.2; 5480.3; DOE-RL Order 5480.1, Chp III; 49 CFR 173.400 through 478; 10 CFR 71).

3.1.5.2 Nuclear Safety Responsibilities. The Nuclear Safety Function reports to the manager of the Emergency, Safety, and Quality Services. The Nuclear Safety function is responsible for the following:

- Approving Nuclear Criticality Specifications for fissile packages and the activities associated with the transportation and storage of them in accordance with DOE orders (WHC-CM-2-14, Part II)
- Ensuring personnel are trained to conduct assigned activities (WHC-CM-4-2, QR 2.0)

- Ensuring that required written procedures are prepared and followed for activities conducted by Nuclear Safety associated with the packaging and transportation of hazardous materials (WHC-CM-4-2, QR 5.0)
- Identifying documents generated as a result of T&P-related activities that are QA records. Ensuring that such documents are indexed and properly dispositioned in accordance with the requirements in WHC-CM-3-5 (WHC-CM-4-2, QR 17.0; DOE Orders 1540.2; 5480.3; DOE-RL Order 5480.1, Chp III; 49 CFR 173.400 through 478; 10 CFR 71).

3.1.5.3 Safeguards and Security Function Responsibilities. The Safeguards & Security Function reports to the manager of the Emergency, Safety, and Quality Services Department. The Safeguards & Security Function is responsible for the following:

- Controlling security of inbound and outbound shipments of special nuclear material (WHC-CM-2-14, Part II)
- Ensuring secure storage facilities (WHC-CM-2-14, Part II)
- Providing escort for onsite movement of special nuclear material when required (WHC-CM-2-14, Part II)
- Maintaining special nuclear material accountability (WHC-CM-2-14, Part II)
- Ensuring Safeguards & Security personnel are trained to conduct assigned activities (WHC-CM-4-2, QR 2.0)
- Ensuring that required written procedures are prepared and followed for activities conducted by Safeguards & Security associated with the packaging and transportation of hazardous materials (WHC-CM-4-2, QR 5.0)
- Identifying documents generated as a result of T&P-related activities conducted by Safeguards and Security that are QA records. Ensuring that such documents are indexed and properly dispositioned in accordance with the requirements in WHC-CM-3-5 (WHC-CM-4-2, QR 17.0; DOE Orders 1540.2; 5480.3; DOE-RL Order 5480.1, Chp III; 49 CFR 173.400 through 478; 10 CFR 71).

3.1.6 Waste, Analytical, and Environmental Services

3.1.6.1 Solid Waste Disposal Function Responsibilities. The Solid Waste Disposal Function reports to the manager of the Waste, Analytical, and Environmental Services. The safety activities related to quality are performed by the following groups.

3.1.6.1.1 Generator/Waste Acceptance Services Responsibilities. Under the Solid Waste Disposal Function, the Generator/Waste Acceptance Services are responsible for the following:

- Maintains liaison with non-WHC originators of radioactive waste material shipments and coordinates approvals required to package and transport these materials to WHC for waste burial, interim storage, analysis, or processing (WHC-EP-0063; WHC-CM-2-14, Part II)
- Prepares and maintains manuals that describe packaging requirements for storage and disposal of hazardous waste (WHC-EP-0063; WHC-CM-2-14, Part II)
- Ensuring personnel are trained to conduct assigned activities (WHC-CM-4-2, QR 2.0)
- Ensuring that required written procedures are prepared and followed for activities conducted by Waste Acceptance Services associated with the packaging and transportation of hazardous materials (WHC-CM-4-2, QR 5.0)
- Identifying documents generated as a result of T&P-related activities conducted by Generator/Acceptance Services that are QA records. Ensuring that such documents are indexed and properly dispositioned in accordance with the requirements in WHC-CM-3-5 (WHC-CM-4-2, QR 17.0; DOE Orders 1540.2; 5480.3; DOE-RL Order 5480.1, Chp III; 49 CFR 173.400 through 478; 10 CFR 71).

3.1.7 ICF Kaiser Transportation/Waste Handling, GSA and Support Services, Solid Waste Disposal, and Fleet Operations Responsibilities. The Fleet Operations, Transportation, and Waste Handling group is responsible for the following:

- Providing qualified driver and certified equipment for transporting hazardous materials when requested (WHC-CM-2-14, Part II)
- Ensuring Fleet Operations, Transportation, and Maintenance Services personnel are trained to conduct assigned activities (WHC-CM-4-2, QR 2.0)
- Ensuring that required written procedures are prepared and followed for activities conducted by Fleet Operations, Transportation, and Maintenance Services associated with the packaging and transportation of hazardous materials (WHC-CM-4-2, QR 5.0)

- Identifying documents generated as a result of T&P-related activities conducted by Fleet Operations, Transportation/Waste Handling that are QA records. Ensuring that such documents are indexed and properly dispositioned in accordance with the requirements in WHC-CM-3-5 (WHC-CM-4-2, QR 17.0; DOE Orders 1540.2; 5480.3; DOE-RL Order 5480.1, Chp III; 49 CFR 173.400 through 478; 10 CFR 71).

3.1.7.2 Training Services Responsibilities. Under the Transition Projects Department, the Training Services and Environmental Training group is responsible for the following:

- Training Program development (WHC-CM-2-14, Part II)
- Ensuring Training personnel are trained to conduct assigned activities (WHC-CM-4-2, QR 2.0)
- Ensuring that required written procedures are prepared and followed for activities conducted by Environmental Training associated with the packaging and transportation of hazardous materials (WHC-CM-4-2, QR 5.0)
- Identifying documents generated as a result of T&P-related activities conducted by Environmental Training that are QA records. Ensuring that such documents are indexed and properly dispositioned in accordance with the requirements in WHC-CM-3-5 (WHC-CM-4-2, QR 17.0; DOE Orders 1540.2; 5480.3; DOE-RL Order 5480.1, Chp III; 49 CFR 173.400 through 478; 10 CFR 71).

3.1.8 Packaging and Shipping Subcouncil

3.1.8.1 Packaging and Shipping Subcouncil Function Responsibilities. The Packaging and Shipping Subcouncil of the Safety and Environmental Advisory Council, which reports directly to the President, WHC, is charged with the following duties:

- Independent safety review of packaging systems and SARPs (WHC-CM-2-14, Part II)
- Safety review of significant changes to packaging systems and SARPs (WHC-CM-2-14, Part II)
- Providing recommendations to WHC Packaging Approval Authority (WHC-CM-2-14, Part II)
- Ensuring Packaging and Shipping Subcouncil members and personnel are trained to conduct assigned activities (WHC-CM-4-2, QR 2.0)
- Ensuring that required written procedures are prepared and followed for activities conducted by the Packaging and Shipping Subcouncil associated with the packaging and transportation of hazardous materials (WHC-CM-4-2, QR 5.0)

- Identifying documents generated as a result of T&P-related activities conducted by Packaging and Shipping Subcouncil that are QA records. Ensuring that such documents are indexed and properly dispositioned in accordance with the requirements in WHC-CM-3-5 (WHC-CM-4-2, QR 17.0; DOE Orders 1540.2; 5480.3; DOE-RL Order 5480.1, Chp III; 49 CFR 173.400 through 478; 10 CFR 71).

3.1.9 All Organizations

Any organization having hazardous materials that require packaging for transportation and/or transportation are responsible for the following:

- Characterizing the material, and pack in approved packaging (WHC-CM-2-14)
- Marking and labeling packages (WHC-CM-2-14)
- Certifying packages on radioactive or hazardous material shipment records as required (WHC-CM-2-14)
- Scheduling and arranging onsite transportation services (WHC-CM-2-14)
- Preparing packaging and shipping procedures when required (WHC-CM-2-14)
- Coordinating offsite shipments, including safe secure trailer shipments, with Transportation Logistics (WHC-CM-2-14)
- Verification prior to use that packaging is in unimpaired physical conditions and conforms to configuration authorized for use (WHC-CM-2-14)
- Contacting proper onsite organization to arrange for transportation (WHC-CM-2-14)
- When applicable, transporting repetitive onsite shipments incidental to production, such as samples and waste, on vehicles assigned to operating organizations (WHC-CM-2-14)
- Ensuring personnel conducting activities associated with hazardous materials shipments are trained to conduct assigned activities (WHC-CM-4-2, QR 2.0 and WHC-CM-2-14)
- Ensuring that required written procedures are prepared and followed for activities associated with the packaging and transportation of hazardous materials (WHC-CM-2-14)
- Identifying documents generated as a result of T&P-related activities conducted by the organization that are QA records. Ensuring that such documents are indexed and properly dispositioned in accordance with the requirements in WHC-CM-3-5 (WHC-CM-4-2,

QR 17.0; DOE Orders 1540.2; 5480.3; DOE-RL Order 5480.1, Chp III; 49 CFR 173.400 through 478; 10 CFR 71).

3.2 QUALITY ASSURANCE PROGRAM

This QAPP identifies the appropriate QA requirements from the WHC-CM-4-2 for the T&P. The QA program is formally documented in a controlled document system.

A matrix of the requirements identified in this QAPP versus the implementation procedures, Quality Assurance Program Index, is listed in Section 4.0. Only Level I and II procedures are identified.

3.3 DESIGN CONTROL

Engineering design activities for hazardous material packaging are accomplished in accordance with a documented and approved design plan. The responsible WHC design organization prepares applicable specifications, instructions, procedures, drawings, etc., to describe the associated activities in accordance with WHC-CM-4-2, "Design Control," QR 3.0. Interface dimensions are selected and defined as specified in WHC-CM-4-2, QR 3.0. Supplier controls are to be in accordance with WHC-identified requirements.

Design at WHC is conducted in accordance with *Standard Engineering Practices*, WHC-CM-6-1. The governing design criteria are the applicable regulatory requirements of the DOE, DOT, NRC, EPA, and IAEA. These requirements are supplemented by applicable performance codes and standards, design guides, company requirements, and functional needs. Supplier designs are approved by the responsible WHC design group before DOE review.

For radioactive material packages, a documented analysis of compliance with the regulatory requirements for design is prepared. When required, that document takes the form of a Safety Analysis Report for Packaging (SARP). The SARP is prepared in accordance with DOE Order 1540.2, and/or WHC-CM-2-14, as applicable. Exceptions or exemptions are obtained in accordance with DOE Order 1540.2 or DOE-RL Order 5480.1. The compliance documents are prepared, issued, and controlled as engineering support documents in accordance with requirements per WHC-CM-6-1.

Changes to design documents are initiated, approved, and controlled through the use of the Engineering Change Notice (ECN) in accordance with WHC-CM-6-1, "Engineering Document Change Control," EP-2.2.

Software is developed and controlled in accordance with WHC-CM-4-2. Software document control is in accordance with WHC-CM-6-1, "Development Control Requirements," EP-2.4.

3.4 PROCUREMENT DOCUMENT CONTROL

The procurement of packaging or associated packaging system components and services are controlled in accordance with *Procurement Manual and Procedures*, WHC-CM-2-1 to ensure conformance with specified hazardous materials packaging requirements. The design basis and related requirements necessary to ensure adequate quality are included or referenced in documents for the procurement of items and services. For radioactive materials packaging to be certified by the NRC, the program is in accordance with 10 CFR 71, Subpart H.

The design organization and QA review and approve fabrication plans and indicate where independent source verification is necessary in accordance with WHC-CM-2-1.

Requirements for the contents of procurement documents, procurement planning, supplier selection, bid evaluation, supplier performance evaluation, control of supplier-generated documents, control of changes in items or services, and acceptance of items or services are contained in WHC-CM-2-1 or *Materials Management Manual*, WHC-CM-2-2, while QA requirements for procurement are specified in WHC-CM-4-2, "Procurement Document Control," QR 4.0.

Changes to supplier design documents are processed in accordance with the methods specified in WHC-CM-6-1, EP-2.2.

3.5 INSTRUCTIONS, PROCEDURES, AND DRAWINGS

Activities associated with hazardous materials packaging are performed in accordance with methods prescribed by WHC-CM-2-14 and the requirements in WHC-CM-4-2, "Instructions, Procedures, and Drawings," QR 5.0.

The WHC designs are translated into engineering drawings per WHC-CM-6-1, "Engineering Drawing Requirements," EP-1.3. Supplier designs are prepared in accordance with methods specified in the consensus standards identified in purchase specifications and approved by WHC. For radioactive material packaging requiring NRC or DOE certification, the supplier's designs are prepared in accordance with 10 CFR 71, including Subpart H.

Fabrication is conducted, verified as acceptable, and controlled with approved travelers, or an equivalent work order system that represents the requirements specified in WHC-CM-4-2, "Inspection," QR 10.0, for supplied fabrications. All fabrication of hazardous material packagings, regardless of where they are conducted, are to be in accordance with approved procedures.

Hazardous materials packages containing greater than Type A quantities of radioactive material are prepared following written procedures in accordance with WHC-CM-2-14.

3.6 DOCUMENT CONTROL

Preparation and change of design documents at WHC are performed in accordance with WHC-CM-6-1, EP-1.2; "Engineering Specification Requirements," EP-1.3; and EP-2.2.

Documents affecting quality are approved based on definitions described by WHC-CM-3-5, Section 12.7 "Approval of Environmental, Safety, and Quality Affecting Documents". Impact of changes are evaluated by the cognizant design engineer against the original design base and any applicable changes to the regulatory design requirements.

Suppliers are to demonstrate that their internal document control system is in compliance with 10 CFR 71, Subpart H when package requires NRC or DOE certification.

3.7 CONTROL OF PURCHASED ITEMS AND SERVICES

The procurement of items and services associated with T&P are controlled through the issue of purchase orders in accordance with the requirements of WHC-CM-2-1 and WHC-CM-2-2. The design, design base, and other supporting requirements necessary to ensure adequate quality are prepared in accordance with WHC-CM-6-1, and included or referenced in the procurement package prepared for the purchase of packaging or associated components.

3.8 IDENTIFICATION AND CONTROL OF ITEMS

The identification of materials or items ordered to specifications, standards, or codes are maintained throughout fabrication, assembly, storage, and installation in accordance with WHC-CM-4-2, "Identification and Control of Items," QR 8.0.

Work performed at WHC is to be in accordance with WHC-CM-4-2, QR 8.0. Work performed by the suppliers is to be in accordance with their approved internal procedures.

3.9 CONTROL OF PROCESSES

Special processes at WHC are controlled by approved procedures in accordance with Control of Nondestructive Examination, WHC-CM-4-2; QI 9.1, Welding Manual, WHC-CM-6-10; and WHC-CM-4-2, "Control of Processes," QR 9.0. Control procedures specify the preparatory steps, processing details, conditions to be maintained during each step, and the requirements for records.

Special processes performed by suppliers are to be in accordance with their approved internal procedures demonstrating appropriate documented control of personnel, equipment, and method as specified in the purchase order.

Supplier welding requirements and performing procedures are to be prepared in accordance with the methods specified in requirements 5 and 9 of NQA-1, for radioactive material packaging requiring certification by NRC or DOE in accordance with requirements of Section 71.111 and 71.119 of 10 CFR 71, Subpart H, and approved by WHC before use.

3.10 INSPECTION

User-conducted inspections are performed in accordance with written quality assurance approved procedures in accordance with WHC-CM-2-14. Quality Assurance-conducted inspections are performed in accordance with Inspection and Test Plans. Inspection hold points and inspection criteria are included in fabrication travelers or work instructions.

Quality Assurance inspection personnel are qualified before the inspection in accordance with WHC-CM-4-2, QR 10.0. Inspection performed by vendor personnel is done in accordance with their approved internal procedures.

Reusable radioactive material packaging (RAMPAK) require periodic QA inspections. Users are responsible for ensuring that the inspection is current. The cognizant engineer (individual) for the package is responsible for scheduling the QA inspection. Leak testing, when required by an NRC or DOE certified package as a part of the periodic inspection, is conducted by NDE personnel. Inspections are done on a periodic basis established by engineering or regulatory requirements. When RAMPAK are expected to be out of service for periods exceeding their inspection bases, they are placed into a suspended category and inspected before use. The results of an inspection are documented and evaluated for acceptability before the proper tag is attached to the packaging.

During WHC design and fabrication activities, inspections are conducted as required by regulatory requirements and as specified by engineering in design documents. Procurement documents establish vendor responsibilities for inspection.

Before packing, all hazardous materials packaging are visually inspected by the user to ensure the packaging is in unimpaired physical condition. Visual inspections include inspection of surface conditions, weld and structural integrity, the condition of flange faces or sealing areas, gaskets, seals, gauges, rupture disks, valves, pressure relief devices, the condition of tiedown members (if applicable), and leak tightness of the packaging in accordance with WHC-CM-2-14.

After packing and before shipment, users visually inspect packages for proper installation of closure, labeling, and marking in accordance with applicable regulatory requirements identified in WHC-CM-2-14. Leak testing before shipment, when required by an NRC or DOE certified package, is conducted by NDE personnel in accordance with WHC-CM-4-2, Q.I. 2.6.

Before shipment of RAMPAK, the user is to verify that the requirements of 49 CFR 173.474 are met.

Packaging not meeting design criteria are tagged as nonconforming and removed from service in accordance with WHC-CM-4-2, "Control of Nonconforming Items," QR 15.0.

3.11 TEST CONTROL

All testing of hazardous materials packaging required by 49 CFR 107 through 178 and 10 CFR 71, to verify conformance of an item or activity to specified requirements and to demonstrate satisfactory performance is planned and executed in accordance with WHC-CM-4-2, "Test Control," QR 11.0. When applicable, the testing is to be conducted in accordance with the requirements of WHC-CM-6-1, "Testing Practices," EP-4.2.

Tests conducted by suppliers are to be conducted in accordance with approved test plans and procedures. Test reports reflect that the criteria are being met and approved by QA for packagings requiring NRC or DOE certification.

3.12 CONTROL OF MEASURING AND TEST EQUIPMENT

The WHC control of measuring and test equipment (M&TE) is in accordance with WHC-CM-4-2, "Control of Measuring and Test Equipment," QR 12.0, and IEEE 498, Requirements for the Calibration & Control of Measuring and Test Equipment Used in Nuclear Facilities. Institute of Electrical and Electronic Engineers, N.Y., N.Y. IEEE, 1990

The vendor is to maintain control of M&TE in accordance with approved internal procedures that have been verified by WHC QA as meeting applicable requirements for QA.

3.13 HANDLING, STORAGE, AND SHIPPING

Packaging, handling, shipping, and storage of hazardous materials packaging and parts which are purchased, fabricated, shipped, or stored by or for WHC are controlled to prevent damage or loss and to provide adequate safety of personnel involved. This is to be accomplished in accordance with the following:

- *Quality Assurance Manual*, WHC-CM-4-2, "Handling, Storage, and Shipping," QR 13.0
- *Hanford Hoisting and Rigging Manual*, DOE-RL-92-36
- *Hazardous Materials Packaging and Shipping*, WHC-CM-2-14
- *Document Control and Records Management Manual*, WHC-CM-3-5.

The vendors are to conduct handling, storage, and shipping in accordance with their QAP.

Specific handling, storage, and shipping requirements specified for packaging in its approval documentation are to be written into the procedures covering the use of the packaging in accordance with WHC-CM-2-14.

3.14 INSPECTION, TEST, AND OPERATING STATUS

Indication of the inspection, test, and operating status of WHC packaging associated with T&P is to be conducted in accordance with WHC-CM-4-2, "Inspection, Test, and Operating Status," QR 14.0. The owner/custodian of a package ensures that required inspections and tests are conducted. Quality Assurance ensures the correct tags are affixed.

The supplier of any item or service is to conduct his/her activities in accordance with his/her QAP.

3.15 CONTROL OF NONCONFORMING ITEMS

Nonconformance reporting, control, and dispositioning are in accordance with WHC-CM-4-2, QR 15.0. The owner/custodian of a package ensures that items or packagings that do not conform to specified requirements or whose conformance is indeterminate are controlled to prevent inadvertent use.

The supplier of any item or service is to conduct his/her activities in accordance with his/her QAP.

3.16 CORRECTIVE ACTION

Corrective action is in accordance with WHC-CM-4-2, "Corrective Action," QR 16.0. The owner/custodian of a package ensures that when unsatisfactory conditions are identified that corrective action is taken and documented.

The supplier of any item or service is to conduct his/her activities in accordance with his/her QAP.

3.17 RECORDS

Records that furnish documentary evidence of quality for hazardous materials packaging and packages are maintained in accordance with the requirements of WHC-CM-4-2, QR 17.0. The T&P-related records are handled in accordance with the requirements established in WHC-CM-3-5.

Test records, test plans, and test reports containing results are to be in accordance with WHC-CM-6-1 and include the following as a minimum:

- Item tested
- Date of test
- Name of tester or data recorder
- Type of observation
- Results and acceptability

- Test report is included in the final data package.

Records of the M&TE calibrations are maintained in accordance with WHC-CM-4-2, "Quality Assurance Records," QR 17.0 and requirements identified in Section 3.18 of this QAPP.

The supplier of any item or service is to conduct his/her activities in accordance with his/her QA program and supply copies of all quality records requested in the procurement documents or required by regulatory requirements.

The T&P program is charged with identification of the records that are to be placed into the QA records system in WHC-CM-4-2, QR 17.0. Regulations, standards, and company requirements specifically require the generation and retention of the records identified in WHC-CM-2-14. It is the responsibility of the organization generating such records to ensure the record contains all the required information and for placing the records into the QA record system in accordance with WHC-CM-3-5.

3.18 AUDITS

Audits of WHC packaging and packing activities associated with the T&P is to be conducted in accordance with WHC-CM-4-2, "Audits," QR 18.0. Quality Assurance schedules and performs quality audits.

User inspections are subjected to spotchecks and audits by QA personnel in accordance with WHC-CM-2-14.

The vendor of any item or service is to conduct his/her activities in accordance with his/her QAP.

4.0 QUALITY ASSURANCE PROGRAM INDEX

QUALITY ASSURANCE PROGRAM INDEX

TABLE OF CONTENTS

1.0	Organization	27
2.0	Quality Assurance Program	27
3.0	Design Control	27
4.0	Procurement Document Control	30
5.0	Instructions, Procedures, and Drawings	31
6.0	Document Control	32
7.0	Control of Purchased Items and Services	37
8.0	Identification and Control of Items and Services	38
9.0	Control of Processes	39
10.0	Inspection	39
11.0	Test Control	40
12.0	Control of Measuring and Test Equipment	40
13.0	Handling, Storage, and Shipping	40
14.0	Inspection, Test, and Operating Status	41
15.0	Control of Nonconforming Items	41
16.0	Corrective Action	42
17.0	Quality Assurance Records	42
18.0	Audits	43
19.0	Software Quality Assurance Requirements	43

Criteria
NQA-1/
10 CFR 71
Subpart H

Title

WHC-CM-4-2
QR\QI

Implementing
Procedures

Description

1.0	Organization	QR 1.0	WHC-CM-2-14, Part II, Section 1.0	Identifies organization of hazardous material packaging and shipping program.
2.0	Quality Assurance Program	QR 2.0	WHC-CM-2-14, Part II, Section 1.0	Defines responsibilities for organizations participating in the Hazardous Materials Packaging and Shipping Program.
	Indoctrination of & Training of Personnel	QR 2.0		Defines QA requirements for indoctrination and training of personnel, other than NDE
	Quality Assurance Program Planning	QI 2.2		
	Qualification and Certification of Nondestructive Examination Personnel	QI 2.6	WHC-CM-4-39	Identifies QA requirements for activities conducted under ASNT, SNT-TC-1A.
	Management Assessment of Quality Assurance Program Effectiveness	QI 2.7		
3.0	Design Control	QR 3.0	WHC-CM-6-1, EP-1.1, Engineering Document Identification	Defines engineering document and establishes engineering document identification system.

Criteria
NQA-1/
10 CFR 71
Subpart H

Title

WHC-CM-4-2
QR\QI

Implementing
Procedures

Description

EP-1.2, Engineering
Specifications
Requirements

Defines procedures and responsibilities associated with the preparation, review, approval, release, and revision of engineering specifications.

EP-1.5, Interface
Control

Defines the procedures and responsibilities associated with the infiltration and maintenance of interface control drawings and documents.

EP-1.7, Engineering
Document Approval and
Release Requirements

Identifies the requirements and responsibilities associated with the review and approval of engineering documents for initial release and subsequent revision.

EP-1.10, Engineering
TBDs/Hold

Defines requirements and responsibilities associated with engineering documents, which include requirements to be determined.

EP-1.11, Preparation
of Design Analysis
Reports, ASME Design
Reports, and ASME
Load Capacity Data
Sheets

Establishes the requirements and responsibilities for the preparation, documentation, and retention of design analyses.

Criteria NQA-1/ 10 CFR 71 Subpart H	Title	WHC-CM-4-2 QR\QI	Implementing Procedures	Description
			EP-2.3, Waivers	Establishes method for documenting and approving departures from engineering requirements identified in specifications, drawings, engineering procedures, and other engineering documents.
			EP-2.4, Modification Control	Establishes engineering requirements for configuration controls that apply to the authorization and control of modifications. It also establishes requirements to ensure modifications are properly designed, reviewed, approved, installed, tested, and documented.
			EP-4.1, Design Verification Requirements	Establishes the requirements and procedures governing design verification.
				Establishes requirements for the preparation, review, approval, and revision of Engineering Practices and Engineering Instruction.
				Establishes guidelines for the format and content of engineering documents.
				Instructions for minimum software documentation requirements.
	Document Control		WHC-CM-3-10 SP 6.1	

Criteria NQA-1/ 10 CFR 71 Subpart H	Title	WHC-CM-4-2 QR\QI	Implementing Procedures	Description
4.0	Procurement Document Control	QR 4.0	WHC-CM-2-1, PM	The <i>Procurement Manual and Procedures</i> sets forth the general procurement policies and practices used by WHC. The policies and practices govern WHC's procurement actions.
			PP1, Purchase Requisition	Instructions for preparation of purchase requisitions.
			PP6.3, Emergency Requisitions	Instructions for emergency procurement to ensure expeditious and cost-effective processing.
			PP7.4, Rental/Lease Acquisitions	Policy and procedures to be followed when renting or leasing.
			PP15.2, Best Qualified Source Selection	Guidance on the selection of qualified suppliers.
				Guidance on types and methods for use in special contractual arrangements.
			PP23.3, Procurement of Hazardous Material	Instructions for procurement of hazardous materials.
				Instructions for procurement of services.

Criteria NQA-1/ 10 CFR 71 Subpart H	Title	WHC-CM-4-2 QR\QI	Implementing Procedures	Description
			PP43.1, Unauthorized Procurement	Instructions on how to ratify an unauthorized procurement action. Identifies QA activities, interfaces, and responsibilities associated with preparation and administration of procurement.
	Procurement Document Control	QI 4.1		Provides instructions in the control of procurement documents for procured materials, equipment, and services.
	External Service Control	QI 4.2		Defines the QA requirements for external work orders used by WHC to procure items or services from other Hanford Site contractors and the review process by QA of work orders.
5.0	Instructions, Procedures, and Drawings	QR 5.0	WHC-CM-6-1, EP-1.2, Preparation of Engineering Specifications	Defines procedures and responsibilities associated with the preparation, review, approval, release, and revision of engineering specifications.
			EP-1.3, Preparation of Engineering Drawings	Defines requirements and responsibilities associated with the initiation, preparation, approval, release, and revision of drawings.

Criteria NQA-1/ 10 CFR 71 Subpart H.	Title	WHC-CM-4-2 QR\QI	Implementing Procedures	Description
			EP-1.12, Supporting Documents	Establishes requirements for the identification, preparation, approval, release, revision, and accountability of supporting documents.
			WHC-CM-2-14; Parts III, IV, and V	Establishes general procedures that control activities associated with the Hazardous Materials Packaging and Shipping Program.
6.0	Document Control	QR 6.0	WHC-CM-1-3, MRP 2.16, Controlled Manual System	Identifies the system used to control WHC manuals. Manuals are used to disseminate company policies, requirements, and administrative procedures.
				Identifies the requirements and responsibilities for control of unclassified documents.
			WHC-CM-3-6	Establishes a uniform publications system to control unclassified publications.
			WHC-CM-3-5 Sec. 12.7	Identifies method for determination of approval levels for documents based on importance to safety and quality.

WHC-IP-0705

Criteria
NQA-1/
10 CFR 71
Subpart H

Title

WHC-CM-4-2
QR\QI

Implementing
Procedures

Description

WHC-CM-2-1,
PP1,

Instructions for establishing number
and coding for purchase order to
identify associated requirements.

WHC-CM-3-6

This manual identifies the Uniform
Publications System established to
control unclassified documents
produced for or by WHC under the
prime contract.

PS-2-01,
Speech/Article
Publication

Identifies the system used for
control of speeches and articles
prepared for public release.

PS-2-02, External
Publications

Identifies the system used for
control of external publications,
formal scientific, technical,
engineering, etc., prepared for
public release.

PS-2-03,
Miscellaneous Reports

Identifies the system used for
control of publications intended for
release that cannot be prepared to
WHC prescribed format and/or
standards.

PS-2-04, Sponsor-
Limited Publications

Identifies the system used for
control of publications prepared for
release to DOE, DOE-designated
contractors, or other Federal agency
program sponsors.

WHC-IP-0705

Criteria
NQA-1/
10 CFR 71
Subpart H

Title

WHC-CM-4-2
QR\QI

Implementing
Procedures

Description

PS-2-05, Supporting
Documents

Identifies the system used for control of engineering documentation. Specifies WHC-CM-6-1, *Standard Engineering Practices* as source of system details.

P2.6, Formatting
Controlled Manuals

Identifies WHC-CM-1-3, *Management Requirements and Procedures*, MRP 2.16, "Controlled Manual System," as source of information on system for control of company manuals.

P2.7, Internal
Publications

Identifies the system used for control of publications prepared for internal WHC use.

PS-3-01, Federal
Agency Technical
Publications

Identifies the system used for control of publications prepared for external Federal agency publications.

PS-3-02, Federal
Agency Administrative
Publications

Identifies the system used for control of publications prepared for internal Federal agency publications.

PS-4-01, Public
Communications
Publication

Identifies the system used for control of publications intended for distribution to the public by DOE, its contractors, or grantees.

Criteria
NQA-1/
10 CFR 71
Subpart H

Title

WHC-CM-4-2
QR\QI

Implementing
Procedures

Description

PS-5-01, General
Information Products

Identifies the system used for control of publications outside of DOE Order 1340.1A intended for audiences outside of WHC.

WHC-CM-6-1,
EP-1.1, Engineering
Document
Identification

Defines engineering documents and establishes the engineering document identification system.

EP-1.2, Engineering
Specifications
Requirements

Defines procedures and responsibilities associated with the preparation, review, approval, release, and revision of engineering specifications.

EP-1.3, Engineering
Drawing Requirements

Defines requirements and responsibilities associated with the preparation, approval, release, and revision of drawings.

EP-1.6, Engineering
Data Transmittal
(EDT)

Defines the procedure, requirements, and responsibilities associated with transmitting engineering documents for review, approval, release, information, post-review, or transfer of custody.

EP-1.7, Engineering
Document Approval &
Release Requirements

Identifies the requirements and responsibilities associated with the review and approval of engineering documents for initial release and subsequent revision.

Criteria NQA-1/ 10 CFR 71 Subpart H	Title	WHC-CM-4-2 QRA/QI	Implementing Procedures	Description
			EP-1.10, Engineering TBDs/Hold	Defines requirements and responsibilities associated with engineering documents, which include requirements to be determined.
			EP-1.11, Design Analysis Report Requirements	Establishes the requirements and responsibilities for the preparation, documentation, and retention of design analyses.
			EP-1.12, Supporting Documents Requirements	Establishes the requirements for identification, preparation, approval, release, revision, and accountability of supporting documents.
			EP-2.2, Engineering Document Change Control	Defines procedures, requirements, and responsibilities associated with the development review, approval, release, and incorporation of changes to engineering documents.
			EP-2.3, Engineering Procurement Waivers	Establishes method for documenting and approving departures from engineering requirements identified in specifications, drawings, engineering procedures, and other engineering documents.

WHC-IP-0705

Criteria
NQA-1/
10 CFR 71
Subpart H

Title

WHC-CM-4-2
QR\QI

Implementing
Procedures

Description

EP-2.4, Development
Control Requirements

Establishes engineering requirements for configuration controls that apply to the authorization and control of modifications. It also establishes requirements to ensure modifications are properly designed, reviewed, approved, instated, tested, and documented.

EP-3.3, Vendor
Information

Defines the requirements and procedures for the identification, receipt, acceptance, tracking, distribution, revision, and filing of documents provided by vendors.

EP-4.1, Design
Verification
Requirements

Establishes the requirements and procedures governing design verification.

7.0

Control of
Purchased Items
and Services

QR 7.0

WHC-CM-2-2

Provides guidance on shipping, receiving, Central Stores, site warehousing, material control, excess utilization, and surplus sales activities conducted by WHC.

Section 2, Receiving
and Shipping
Procedures

Identifies procedures to be followed when receiving or shipping materials, includes instructions on control of materials.

Criteria
NOA-1/
10 CFR 71
Subpart H

Title

WHC-CM-4-2
QR\QI

Implementing
Procedures

Description

Section 3, Disbursing
Procedures

Identifies procedures to be followed
when disbursing materials, includes
instruction on control of materials.

Section 4, Material
Control Procedures

Identifies procedures to be followed
to provide material control.

Section 5, Site
Warehousing Services
Procedures

Identifies procedures to be followed
for warehousing and control of
materials.

Procurement
Planning and
Proposal
Evaluation

| QI 7.1

| WHC-CM-2-1, PP7

| Identifies policy covering
acquisition planning.

Supplier
Evaluation

QI 7.2

WHC-CM-2-1, PP 15.2

Identifies policy covering supplier
evaluations.

Source
Surveillance and
Inspection

QI 7.3

Identifies buyer and quality
assurance responsibilities
associated with procurement

8.0

Identification
and Control of
Items

QR 8.0

WHC-CM-2-2,
Section 4, MCP-1,
Identifying and
Controlling
Materials, Parts, and
Components

Identifies procedure to be followed
when controlling material, parts,
and components.

WHC-IP-0705

Criteria NQA-1/ 10 CFR 71 Subpart H	Title	WHC-CM-4-2 QR\QI	Implementing Procedures	Description
	Identification and Control of Items		Section 5, SWSP-8, Receiving, Inspection, Storage, Issuance, and Return of WHC Procured ASME Code Material	Identifies procedures to be followed to control, receipt, inspection, storage, issuance, and return of WHC-procured ASME Code material.
9.0	Control of Processes	QR 9.0	WHC-CM-6-10	Identifies practices for welding, does not cover welding of reactor core or unique experiments components.
	Control of Nondestructive Examination	QI 9.1		Defines the procedures and responsibilities associated with the preparation, review, approval, release, and revision of Equipment Installation Instructions.
	Control of Welding and Brazing	QI 9.2		
10.0	Inspection & Surveillance	QR 10.0		Defines the QA program requirements for the establishment and execution of inspection and surveillance programs.
	Inspection Instruction for Manufacturing and Fabrication	QI 10.2		Provides instructions for the onsite inspection activities in the manufacturing and fabrication processes.

Criteria NQA-1/ 10 CFR 71 Subpart H	Title	WHC-CM-4-2 QR\QI	Implementing Procedures	Description
11.0	Test Control	QR 11.0	WHC-CM-6-1, EP-4.2, Testing Practices	Establishes administrative requirements for a test program. Establishes guidelines for contents of test plans.
12.0	Control of Measuring and Test Equipment	QR 12.0		
	Operator Calibrated Measuring and Test Equipment	QI 12.2		Instructions for the operator to calibrate equipment.
	Calibration Control of Plant Installed Instruments	QI 12.3		Defines requirements for the acquisition and control of plant-installed measuring and test equipment to determine compliance with design, specifications, or other technical requirements.
13.0	Handling, Storage, and Shipping	QR 13.0		Defines the engineering requirements and responsibilities for the identification of parts and equipment that should be stocked as spares.

WHC-IP-0705

Criteria NQA-1/ 10 CFR 71 Subpart H	Title	WHC-CM-4-2 QR\QI	Implementing Procedures	Description
41	Handling of Corrosion- Resistant Materials During Receipt, Storage, and Transportation	QI 13.3	WHC-CM-2-2, Section 2, Receiving and Shipping Procedures	Identifies procedures to be followed when receiving or shipping materials, includes instructions on control of materials.
			Section 3, Disbursing Procedures	Identifies procedures to be followed when disbursing materials, includes instruction on control of materials.
			Section 5, Site Warehousing Services Procedures	Identifies procedures to be followed when warehousing materials, includes instruction on control of material.
			DOE-RL-92-36	Establishes basic practices to be used for hoisting and rigging at WHC.
14.0	Inspection, Test, and Operating Status	QR 14.0		Defines quality requirements for status indicators that identify the inspection, test, and operation status of items defined as Safety Class 1, 2, and 3.
15.0	Control of Nonconforming Items	QR 15.0	WHC-CM-2-14, Part II	Nonconformance reporting for the T&P.

WHC-IP-0705

Criteria
NQA-1/
10 CFR 71
Subpart H

Title

WHC-CM-4-2
QR\QI

Implementing
Procedures

Description

Nonconforming
Item Reporting

QI 15.1

Instructions to define the standard method for documenting, evaluating, and dispositioning nonconforming items by using the nonconformance report.

Nonconformance
Report Processing

QI 15.2

Defines the method for processing nonconformance reports generated by suppliers or internal WHC organizations.

16.0

Corrective Action

QR 16.0

WHC-CM-1-4, 1.0,
Corrective Action
Management System

Establishes the requirements and responsibilities for the management of corrective actions.

Trend Analysis

QI 16.1

WHC-CM-2-14,
Section II Subsection
2.3

Identifies procedure for monitoring of shipping papers to identify needs for corrective action.

Corrective Action
Request

QI 16.2

Quality Assurance
Bulletins

QI 16.3

Review and
Processing of
External Event
Reports

QI 16.4

17.0

Quality Assurance
Records

QR 17.0

WHC-CM-1-3, MRP 3.3,
Records Management
Program

Establishes WHC records management program.

WHC-IP-0705

Criteria NQA-1/ 10 CFR 71 Subpart H	Title	WHC-CM-4-2 QR\QI	Implementing Procedures	Description
			WHC-CM-2-15 Section 10.1	Establishes centralized training records management system.
			WHC-CM-3-5	Establishes WHC requirements for records identification and retention.
18.0	Audits	QR 18.0	WHC-CM-2-14, Part II Section 1.3	Establishes the requirements for Quality Assurance to conduct audits and surveillances of T&P.
	Audit Programming and Scheduling	QI 18.1		Defines the requirements and provides the procedure for the programming and scheduling of internal and external QA audits.
	Department of Energy-Richland Operations Office Quality Assurance Audits of Westinghouse Hanford Company	QI 18.3		Procedure for audits performed by DOE-RL QA to determine WHC compliance with and effectiveness in meeting applicable requirements.
19.0	Software Quality Assurance Requirements	QR 19.0	WHC-CM-3-10 SP 6.2	Provides requirements for the WHC control of computer software.

Criteria	Title	WHC-CM-4-2	Implementing	Description
NQA-1/ 10 CFR 71 Subpart H		QR\QI	Procedures	

ASME = American Society of Mechanical Engineers
 CM = Controlled Manual
 EDT = Engineering Data Transmittal
 EP = Engineering Practices
 MRP = Management Requirements and Procedures
 NRC = U.S. Nuclear Regulatory Commission
 PPI = Procurement Procedures
 PM = Procurement Manual
 PS = Publications Standards
 QA = Quality Assurance
 QAPP = Quality Assurance Program Plan
 QI = Quality Instructions
 QR = Quality Requirements
 SWSP = Site Warehouse Service Procedures
 T&P = Transportation and Packaging
 TBD = To be determined
 WHC = Westinghouse Hanford Company

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