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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT QUALITY ASSURANCE ADMINISTRATIVE PROCEDURE

Title: **INTERFACE CONTROL**

Procedure No.:
QAAP 3.7

Revision: **0**

Date: **10/11/90**

Page **1** of **7**

Concurrence

Date: **9-21-90**

Approval

Date: **9/25/90**

1.0 PURPOSE

1.1 This procedure provides instructions for identifying, describing, documenting, assigning responsibility for, and processing changes to interfaces at the **PROGRAM** level. **PROGRAM**-level interfaces shall be identified and defined, and interface responsibilities specified in the Waste Management System Requirements (WMSR) document and shall be fully described in the Waste Management System Description (WMSD) document. Approval and revisions of these interfaces shall be controlled as part of the OCRWM change control system.

2.0 SCOPE

2.1 This procedure applies to OCRWM-HQ personnel and OCRWM-HQ direct-support contractors responsible either for the identification or control of functional and physical interfaces, or the development and preparation of technical documents that address these interfaces. These interfaces include interfaces between system elements and systems external to the Waste Management System, and among system elements to ensure that all interface requirements are satisfied and inter-system and inter-element compatibility is achieved.

3.0 REFERENCES AND DEFINITIONS

3.1 REFERENCES

3.1.1 *Quality Assurance Requirements Document (QARD), DOE/RW-0214.*

3.1.2 *Quality Assurance Program Description Document (QAPD), DOE/RW-0215.*

3.2 DEFINITIONS

3.2.1 The definition of standard terms may be found in the glossary contained in reference 3.1.1.



3.2.2 External Interface: These are interfaces between system elements and elements external to the Waste Management System. They include interfaces with the owners or generators of spent nuclear fuel and commercial waste and with the DOE's defense waste program.

3.2.3 Interface: A place at which independent or interdependent systems meet and act on, communicate with, or contact each other.

3.2.4 Internal Interface: These are interfaces between two elements of the Waste Management System, such as transportation and the MRS facility or transportation and the repository.

4.0 RESPONSIBILITIES

4.1 ASSOCIATE AND OFFICE DIRECTORS

Associate and Office Directors have overall responsibilities for:

4.1.1 Interfaces associated with activities within their primary areas of responsibility.

4.2 ASSOCIATE DIRECTOR FOR SYSTEMS AND COMPLIANCE (S&C)

In addition to the responsibilities identified in Subsection 4.1, the Associate Director for S&C is responsible for:

4.2.1 Preparation and development of the WMSR.

4.2.2 The preparation and maintenance of this procedure.

4.3 BRANCH CHIEFS

Branch Chiefs are responsible for:

4.3.1 Control of interfaces assigned to them or solely within their primary area of responsibility.

4.4 BRANCH CHIEF, SYSTEMS ENGINEERING BRANCH (SEB)

Branch Chief, SEB is responsible for:

4.4.1 Coordination of the interface control process.

4.4.2 Approval of Interface Identification Forms.



5.0 GENERAL

- 5.1 Control of interfaces is necessary to assure that the flow of information, material, etc. across the boundary of the interface is effective and efficient. Steps for identifying and controlling interfaces are specified in Section 6.0 and documented using the Interface Identification Form (Attachment I).
- 5.2 Revisions or changes to the interfaces are also identified and controlled via use of Subsection 6.2 and documented in the Interface Identification Form.
- 5.3 The general steps described in Section 6.0 are shown in the Interface Flow Diagram (Attachment II).

6.0 PROCEDURE

6.1 NEW INTERFACES

Interfaces at the PROGRAM level shall be identified, defined, described, documented, and approved using the following process.

- 6.1.1 The interfaces shall be identified by comparing how system functions interact with each other and/or external systems using the functional allocation from the Waste Management System Requirements (WMSR) document, Vol. I.
- 6.1.2 The interface shall be defined in the "System Interface Definition" section of WMSR, Vol. I. The definition includes the title of the interface, the corresponding function, the organizations impacted, and a description of the interface.
- 6.1.3 The interface shall be described in more detail in the "Interfaces" section of WMSD.
- 6.1.4 The interface shall be documented on the Interface Identification Forms as indicated in Subsection 6.3. The potential interface shall be concurred in by the organizations responsible for each part of the interface and approved by the Branch Chief, Systems Engineering.
- 6.1.5 The interface shall be reviewed and approved along with the review and approval process for the WMSR Vol. I and the WMSD. The interface is controlled through the OCRWM change control procedures.



6.2 INTERFACE REVISIONS

- 6.2.1 Possible changes to interfaces may be identified by OCRWM personnel and OCRWM direct-support contractors responsible either for the identification or control of interfaces, or the development and preparation of technical documents that address interfaces. The proposed change shall be made via the Branch Chief of the responsible organization identified in Paragraph 6.1.2.
- 6.2.2 Revisions to existing interfaces shall be documented by the requesting organization via the Interface Identification Forms used in Subsection 6.1 and described in Subsection 6.3. The requesting organization should fill in steps 1, 2, 3, 5, & 6 on the forms and send the forms to the Systems Engineering Branch.
- 6.2.3 The proposed interface change shall be reviewed and evaluated by the Systems Engineering Branch and the responsible organizations identified in Paragraph 6.1.2.
- 6.2.4 The Interface Identification Forms shall be completed, reviewed, and approved as indicated in Subsection 6.3 for each potential interface change. The proposed interface change shall be concurred in by the organizations responsible for each part of the interface, and approved by the Branch Chief, Systems Engineering.
- 6.2.5 A revision to the WMSR and WMSD (if needed) may then be initiated or the proposed change accumulated for the next document revision as determined by the Branch Chief, Systems Engineering.
- 6.2.6 The interface change shall be reviewed and approved along with the review and approval process for the WMSR. The interfaces are controlled through the Program Change Control Procedures as applied to the WMSR document.

6.3 INTERFACE CONTROL FORMS

- 6.3.1 The interface proposal (new or change) is documented by filling out the forms given in Attachment I. This form identifies and describes the potential interface and gives the overall purpose and scope of the intended task or item. The information shall include at least the following:
- a) The Interface Control Number assigned by the Systems Engineering Branch (Step 4)



- b) A brief description of the interface characteristics such as weight, dimensional data, flow-rate, and quantity (Steps 1,3,& 5)
- c) The organizations responsible or systems impacted by the interface (Step 5).
- d) The purpose of this interface form submittal, including the rationale (Step 6). Why is it needed? When is it needed?

6.3.2 The completed Interface Identification Forms shall be reviewed and concurred with by the responsible organizations involved in the interface (responsible Branch Chiefs) (Step 8) and approved by the Branch Chief, Systems Engineering (Step 9).

6.3.3 The interface forms shall be filed as part of the WMSR documentation package. Approval of interfaces are accomplished per Program Change Control Procedure with approval of WMSR, Vol. I and WMSD.

7.0 RECORDS

7.1 Documents generated as a result of this QAAP shall be collected and maintained in accordance with requirements specified in QAAP 17.1, *QA Records Management*. At a minimum, the Interface Identification Forms (Attachment I) are considered QA records and shall be included in the records package for the WMSR.

8.0 ATTACHMENTS

8.1 Attachment I - Interface Identification Form

8.2 Attachment II - Interface Control Flow Diagram



**ATTACHMENT I
INTERFACE IDENTIFICATION FORM**

New _____ Change _____ Deletion _____

1) Interface Name: _____

2) Person making submittal: _____ Date: _____
Organization: _____

3) Type (Internal or External): _____

4) Interface Control Number: _____
(Assigned by Systems Engineering Branch)

5) Brief Description; Including Organizations or Systems Impacted by the Interface:

6) Purpose of Submittal; Reason for Change; (Why, when?): _____

7) If Document Change: Revise now: _____ File for next revision _____

8) CONCURRENCE:

Responsible Branch Chief: _____ Date: _____
Organization: _____

Responsible Branch Chief: _____ Date: _____
Organization: _____
(N/A if External Interface)

9) APPROVAL:

Systems Engineering Branch: _____ Date: _____



ATTACHMENT II
INTERFACE CONTROL FLOW DIAGRAM

