



OFFICE OF CIVILIAN
RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE ADMINISTRATIVE PROCEDURE

TITLE: READINESS REVIEW

Procedure No.:
QAAP 2.6

Revision:
1

Date: 04/20/90

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Director, OCRWM

Date: 3/12/90

Director, OQA

Date: 3/7/90

1.0 PURPOSE

This procedure establishes the Office of Civilian Radioactive Waste Management (OCRWM) responsibilities and methods for conducting OCRWM-initiated Readiness Reviews.

2.0 SCOPE

This procedure shall apply to OCRWM review of readiness to start or continue a design phase, process, or other activity when it is determined that a formal review is necessary and as specified in the OCRWM Quality Assurance Controls Matrix for the associated OCRWM work. This procedure shall be used in verifying that specified prerequisites and programmatic requirements have been completed prior to the start or continuation of a design phase, process, or other activity.

3.0 REFERENCES AND DEFINITIONS

3.1 REFERENCES

- 3.1.1 "Quality Assurance Requirements for the Civilian Radioactive Waste Management Program," (QAR), DOE/RW-0214.
- 3.1.2 "Quality Assurance Program Description for the Civilian Radioactive Waste Management Program," (QAPD), DOE/RW-0215.
- 3.1.3 DOE Order 4700.1, "Project Management System."

3.2 DEFINITIONS

- 3.2.1 The definitions of standard terms may be found in the Glossary contained in reference 3.1.1.
- 3.2.2 Action-Items List - This list identifies items requiring disposition at designated times before the start or continuation of the design phase, process, or other activity undergoing review. The list is used during Readiness Review to verify whether the items are "Open" or "Closed."



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- 3.2.3 Cognizant Associate Director, OCRWM - The Associate Director, OCRWM, responsible for a specific Readiness Review. Generally, this will be the Associate Director, OCRWM, responsible for the functional area that is the subject of the Readiness Review.
- 3.2.4 Open-Items List - This list identifies items needing additional work before the items can be "Closed". The individual(s) or group(s) responsible for action(s) and expected time(s) for closure are shown.
- 3.2.5 Readiness-Review Board - A group appointed by the Cognizant Associate Director, OCRWM, to review and approve recommendations developed by the Start-up Team regarding start or continuation of a design phase, process, or other activity undergoing Readiness Review.
- 3.2.6 Readiness-Review Plan - A documented plan that defines the actions necessary for implementing a Readiness Review.
- 3.2.7 Readiness-Review Tree - A systematic analysis of major items to be reviewed using graphical displays of information designed to aid the user in recalling details that must be considered and the relationship of these details to one another.
- 3.2.8 Start-up Team - A group appointed by the Cognizant Associate Director, OCRWM, to perform activities associated with a Readiness Review.
- 3.2.9 Technical-Holds List - This list identifies items discovered during Readiness Review that could impact the schedule or have other significant consequences regarding the design phase, process, or other activity undergoing review. The kinds of items that would be listed include, but are not limited to, funding restraints, permitting delays, or budget considerations.
- 3.2.10 Technical-Holds Sheet - This document identifies a specific item discovered during Readiness Review that could impact the schedule or have other significant consequences regarding the design phase, process, or other activity undergoing review. Selected information from the Technical-Holds Sheet is compiled on the Technical-Holds List.



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4.0 RESPONSIBILITIES

4.1 DIRECTOR, OCRWM

The Director, OCRWM, or designee has the overall responsibility for:

- 4.1.1 Reviewing recommendation(s) of the Readiness-Review Board and authorizing the start or continuation of the design phase, process, or other activity undergoing review.

4.2 ASSOCIATE DIRECTORS, OCRWM

The Associate Directors, OCRWM, or designees are responsible for:

- 4.2.1 Determining if and when a Readiness Review should be performed;
- 4.2.2 Determining and approving the scope of the Readiness Review;
- 4.2.3 Establishing reviewer qualifications;
- 4.2.4 Appointing the chairperson(s) and members of the Readiness Review Board and Start-up Team, as appropriate; and

4.3 ASSOCIATE DIRECTOR FOR FACILITIES SITING AND DEVELOPMENT (ADFSD)

In addition to responsibilities identified in 4.2 above, the ADFSD or designee is also responsible for:

- 4.3.1 Preparation of this QAAP.

4.4 COGNIZANT ASSOCIATE DIRECTOR, OCRWM

In addition to responsibilities identified in 4.2 above, the Cognizant Associate Director, OCRWM, or designee is also responsible for:

- 4.4.1 Acting as the OCRWM liaison with the organization(s) preparing reports and documents to be evaluated during the Readiness Review;
- 4.4.2 Determining the mechanism for tracking and closure of items incorporated on the Open-Items List and Technical-Holds List, as appropriate, developed during the Readiness Review;
- 4.4.3 Approving Readiness-Review plans, Readiness-Review Trees, and Action-Items Lists; and
- 4.4.4 Approving Readiness-Review recommendations and reports.



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4.5 SUPERVISORS, OCRWM

The Supervisors, OCRWM, are responsible for:

- 4.5.1 Recommending initiation of a Readiness Review to the Cognizant Associate Director, OCRWM.

4.6 READINESS-REVIEW BOARD

The Readiness-Review Board (RRB) is responsible for:

- 4.6.1 Reviewing the Readiness-Review Plan, Readiness-Review Tree, and Action-Items List prepared by the Start-up Team prior to commencing a Readiness Review;
- 4.6.2 Reviewing, as appropriate, the Open-Items List, Technical-Holds List, and recommendations developed by the Start-up Team during the Readiness Review; and
- 4.6.3 Notifying the Cognizant Associate Director, OCRWM, regarding recommendations developed by the Start-up Team after the Readiness Review.

4.7 START-UP TEAM

The Start-up Team (ST) is responsible for:

- 4.7.1 Developing the Readiness-Review Plan, Readiness-Review Tree, and Action-Items List prior to initiating the Readiness Review;
- 4.7.2 Developing the Open-Items List and Technical-Holds List, as appropriate, during a Readiness Review; and
- 4.7.3. Reporting progress and recommendations regarding a Readiness Review to the Readiness-Review Board.

4.8 DIRECTOR, OFFICE OF QUALITY ASSURANCE (OQA)

The Director, OQA, or designee is responsible for:

- 4.8.1 Performing surveillance of Readiness Review, as required, to assure that the review conforms to the guidance in this QAAP; and
- 4.8.2 Providing resources and assistance in the Readiness Review, as requested.



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5.0 GENERAL

- 5.1** Determination of the need for a Readiness Review shall be made by the Associate Director, OCRWM, who has functional responsibility for the design phase, process, or other activity to which the review is related. This determination of need shall be made when developing the Quality Assurance Controls Matrix for the associated work and documented in that Matrix. The criteria to be used in making this determination are the same as those for grading in paragraph 5.3 of QAAP 2.3 plus the additional DOE criteria specified in DOE Order 4700.1 (reference 3.1.3).
- 5.2** In determining the scope of a Readiness Review, it must be decided if both a RRB and a separate ST are needed. On Readiness Review of smaller-segmented aspects of the design phase, process, or other activity, the RRB can also be the ST, thereby eliminating the need for a separate group. If only a RRB is appointed, the RRB shall perform both the ST and RRB functions defined in this procedure. (Attachment I provides administrative guidelines for conducting a Readiness Review.)
- 5.3** The Cognizant Associate Director, OCRWM, shall appoint members to the RRB and the ST, as applicable. The RRB and ST members may be OCRWM or support-contractor personnel, as deemed appropriate. Normally, the RRB and ST chairperson will be an OCRWM representative. The RRB and ST membership appointment(s) shall be documented.
- 5.4** The Cognizant Associate Director, OCRWM, shall develop, maintain, and provide specific qualification requirements for designated RRB and ST members. RRB and ST members shall be qualified by education and experience in the discipline subject(s) undergoing Readiness Review.
- 5.5** The Cognizant Associate Director, OCRWM, shall provide to designated RRB and ST members, written guidelines regarding reports and documents to be evaluated during the Readiness Review. Examples of reports and documents to be evaluated include, but are not limited to: results of applicable Management Assessments; Peer Reviews; Design Reviews; Technical-Document Reviews; and related Readiness Reviews.
- 5.6** The Cognizant Associate Director, OCRWM, shall develop, maintain and provide to designated RRB and ST members, written instructions that establish or reference appropriate review and acceptance criteria that shall be used by RRB and ST members to perform the Readiness Review. Example references containing such review and acceptance criteria include, but are not limited to: applicable industry codes; standards; NUREGS; Federal Regulations; study plans; and Site Characterization Plan.
- 5.7** The mechanism for resolving and closing "Open" Items and Technical Holds, as appropriate, generated by the Readiness Review must be determined prior to dissolution of the RRB and ST. This mechanism shall be documented to assure tracking and proper closure of the "Open" Items and Technical Holds.



6.0 PROCEDURE

6.1 INITIATING READINESS REVIEW

- 6.1.1 The Supervisors, OCRWM, shall recommend initiation of a Readiness Review to the Cognizant Associate Director, OCRWM, when a design phase, process or other activity within the Associate Director's area of responsibility has progressed to the point where a Readiness Review may be appropriate.
- 6.1.2 Upon determination that a Readiness Review is required, the Cognizant Associate Director, OCRWM, shall define the scope of the review and appoint a RRB and ST. The ST shall prepare the Readiness-Review Plan (Attachment II), Readiness-Review Tree (Attachment III), and Action-Items List (Attachment IV).
- 6.1.3 The Readiness-Review Board shall review the Readiness-Review Plan, Readiness-Review Tree, and Action-Items List developed by the ST. Any change(s) in the Readiness-Review Plan, Readiness-Review Tree, or Action-Items List shall be documented by the RRB. The RRB shall advise the ST chairperson of any change(s) made.
- 6.1.4 The Cognizant Associate Director, OCRWM, shall approve, as appropriate, the Readiness-Review Plan, Readiness-Review Tree, and Action-Items List prior to start of Readiness-Review.

6.2 READINESS REVIEW

- 6.2.1 Subsequent to completion of 6.1.4 above, the ST shall use the approved Readiness-Review Plan, Readiness-Review Tree, and Action-Items List, to assure that all identified items to be evaluated during the Readiness Review have been addressed and "Closed", as appropriate.
- 6.2.2 Subsequent to completion of 6.2.1 above, any action item remaining "Open" on the Action-Items List shall be incorporated on an Open-Items List (Attachment V) for tracking and closure.
- 6.2.3 Subsequent to completion of 6.2.2 above, items discovered during Readiness Review that could impact the schedule or have other significant consequences regarding the design phase, process, or other activity undergoing review shall be documented, as appropriate, on Technical-Holds Sheets (Attachment VI) and incorporated on a Technical-Holds List (Attachment VII) for tracking and closure.



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6.2.4 Subsequent to completion of 6.2.3 above, the ST shall prepare a final report with recommendations regarding readiness to start or continue the design phase, process, or other activity undergoing Readiness Review and forward the report, Open-Items List, and Technical-Holds List to the RRB Chairperson.

6.3 ACTION SUBSEQUENT TO REVIEW

6.3.1 Subsequent to completion of 6.2.4 above, the RRB shall review and evaluate the final report of the ST to assure all identified items on the Action-Items List have been "Closed" or have been incorporated on an Open-Items List, as appropriate. In addition, the RRB shall assure that items discovered during Readiness Review that could impact the schedule or have other significant consequences regarding the design phase, process, or other activity undergoing review have been documented on Technical-Hold Sheets and incorporated on a Technical-Holds List, as appropriate.

6.3.2 The RRB chairperson shall issue a letter or memorandum to the Cognizant Associate Director, OCRWM, providing the ST's recommendation regarding readiness to start or continue the design phase, process, or other activity undergoing Readiness Review.

6.3.3 Subsequent to completion of 6.3.2 above, the Cognizant Associate Director, OCRWM, shall approve the recommendation to start or continue the design phase, process, or other activity undergoing Readiness Review and notify the Director, OCRWM, requesting authorization.

6.3.4 Subsequent to notification by the Cognizant Associate Director, OCRWM, the Director, OCRWM, shall authorize the start or continuation of the design phase, process, or other activity undergoing Readiness Review based on recommendations in the final report.

7.0 RECORDS

7.1 Documentation generated as a result of this procedure is maintained in accordance with requirements specified in QAAP 17.1, "QA Records Management". At a minimum, attachments II through VII are QA records.



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8.0 ATTACHMENTS

- 8.1 Attachment I - OCRWM Administrative Guide for Readiness Reviews**
- 8.2 Attachment II - OCRWM Readiness-Review Plan**
- 8.3 Attachment III - OCRWM Readiness-Review Tree**
- 8.4 Attachment IV - OCRWM Readiness-Review Action-Items List**
- 8.5 Attachment V - OCRWM Readiness-Review Open-Items List**
- 8.6 Attachment VI - OCRWM Readiness-Review Technical-Holds Sheet**
- 8.7 Attachment VII - OCRWM Readiness-Review Technical-Holds List**
- 8.8 Attachment VIII - QAAP Flowchart**



ATTACHMENT I
OCRWM ADMINISTRATIVE GUIDE FOR READINESS REVIEWS

I INTRODUCTION

This guide is written to assure compliance with the current requirements of the OCRWM QAR and QAPD that relate to PROGRAM Readiness Reviews. These requirements apply to the planning and accomplishment of the design phase, process, or other activity under suitably controlled conditions, including assurance that prerequisites for accomplishing the given design phase, process, or other activity have been satisfied.

The purpose of this document is to provide sufficient information to chairpersons of Readiness Review Boards and Start-up Teams to allow them to effectively advise Board and Team members, and make optimum contributions to Readiness Reviews.

II. READINESS-REVIEW PLAN

The Readiness-Review Plan shall be prepared by the Start-up Team prior to starting the Readiness-Review Tree. The Plan shall contain an independent, logical, and systematic approach to achieve the specific goal outlined by the Cognizant Associate Director, OCRWM. The Plan shall contain a list of all items (see Attachment II for examples) to be addressed during the Readiness Review.

The Plan should include the following points, as appropriate.

- Introduction and overview
- Scope and area(s) to be covered
- Objectives to be determined
- Reference procedures to be used
- Actual readiness-review actions and description of how the Readiness Review will be conducted
- Readiness-Review guidelines
- Readiness-Review assumptions
- Readiness-Review schedule, indicating significant milestones, including due dates of draft(s) and final report(s).

III. READINESS-REVIEW TREE

The Readiness-Review Tree (See Attachment III for example) shall be developed by the Start-up Team and approved by the Readiness-Review Board prior to starting a Readiness Review. Where possible, the Tree should be developed using previously approved Trees as guides to assure comprehension by others and to aid coordination of the Readiness Review.



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**ATTACHMENT I cont'd
OCRWM ADMINISTRATIVE GUIDE FOR READINESS REVIEWS**

The Tree should be a logical and systematic analysis of factors that are necessary and sufficient for the Readiness Review. The lowest elements on the Tree are starting points for further downward expansion resulting in a level of detail determined by the characteristics and complexity of the design phase, process, or other activity undergoing review.

IV. ACTION-ITEMS LIST

Subsequent to Readiness-Review Board review of the Readiness-Review Plan and Readiness-Review Tree, the Start-up Team shall develop a comprehensive Action-Items List (See Attachment IV). The Action-Items list shall also be submitted for Readiness-Review Board review. Items shown on the Action-Items List shall be used to track progress and prevent oversights during the Readiness Review.

V. OPEN-ITEMS LIST

During Readiness Review, action items not yet completed or otherwise deficient shall be incorporated on an Open-Items list (See Attachment V) by the Start-up Team. The Open-Items list shall:

- Reference "Open" or deficient items by Action-Items List number.
- Define action(s) required to close "Open" or deficient items
- Assign action responsibility to close "Open" or deficient items
- Estimate completion date(s) for "Open" or deficient items.

VI. TECHNICAL-HOLDS SHEET

Any item discovered during Readiness Review that could impact the schedule or have other significant consequences regarding the design phase, process, or other activity undergoing Readiness Review shall be documented on a Technical-Holds Sheet (See Attachment VI). These items are considered so vital to the activity undergoing review that they must be "Closed" prior to the start or continuation of the design phase, process, or other activity undergoing review or must be completed at a specified juncture during performance of the design phase, process, or other activity.

Conditional approval to start or continue the design phase, process, or other activity undergoing Readiness Review may be granted when an acceptable "work-around" method is approved for an item on a Technical-Holds Sheet. This method shall be documented on the Technical-Holds Sheet as a temporary corrective action.

VII. TECHNICAL-HOLDS LIST

This list compiles information contained on Technical-Holds Sheets relative to Review that could impact the schedule or have other significant consequences regarding the design phase, process, or other activity undergoing review (See Attachment VII).



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**ATTACHMENT II
OCRWM READINESS-REVIEW PLAN**

EXAMPLES OF POSSIBLE READINESS REVIEW ACTION ITEMS

1. Do organizational plans exist?
2. Do site management plans exist?
3. Do site activity plans (mobilization, characterization, investigations, etc) exist?
4. Are there plans that address staffing/personnel?
5. Are there plans to address questions from the public?
6. Has OCRWM approved the plans?
7. Has training been provided?
8. Has policy been established by OCRWM?
9. Are contracts in place?
10. Are scopes of work for subcontractors clear, concise, and up-to-date?
11. Have technical specifications been developed and approved?
12. Have Quality Assurance specifications been developed and approved?
13. Have the quality assurance programmatic requirements, e.g., 10 CFR 60, 10 CFR 50, and NQA-1, been defined?
14. Have the quality assurance programmatic requirements, e.g., 10 CFR 60, 10 CFR 50, and NQA-1, been defined for prime contractors?
15. Have quality levels, inspection points, hold points and QA reviews been established, reviewed and approved?
16. Have the quality assurance/quality control interfaces been defined and documented?
17. Are documents in place to assure that all applicable regulatory requirements have been addressed including local, state, or federal permits?
18. Has the proper level of authority been delegated to the field?



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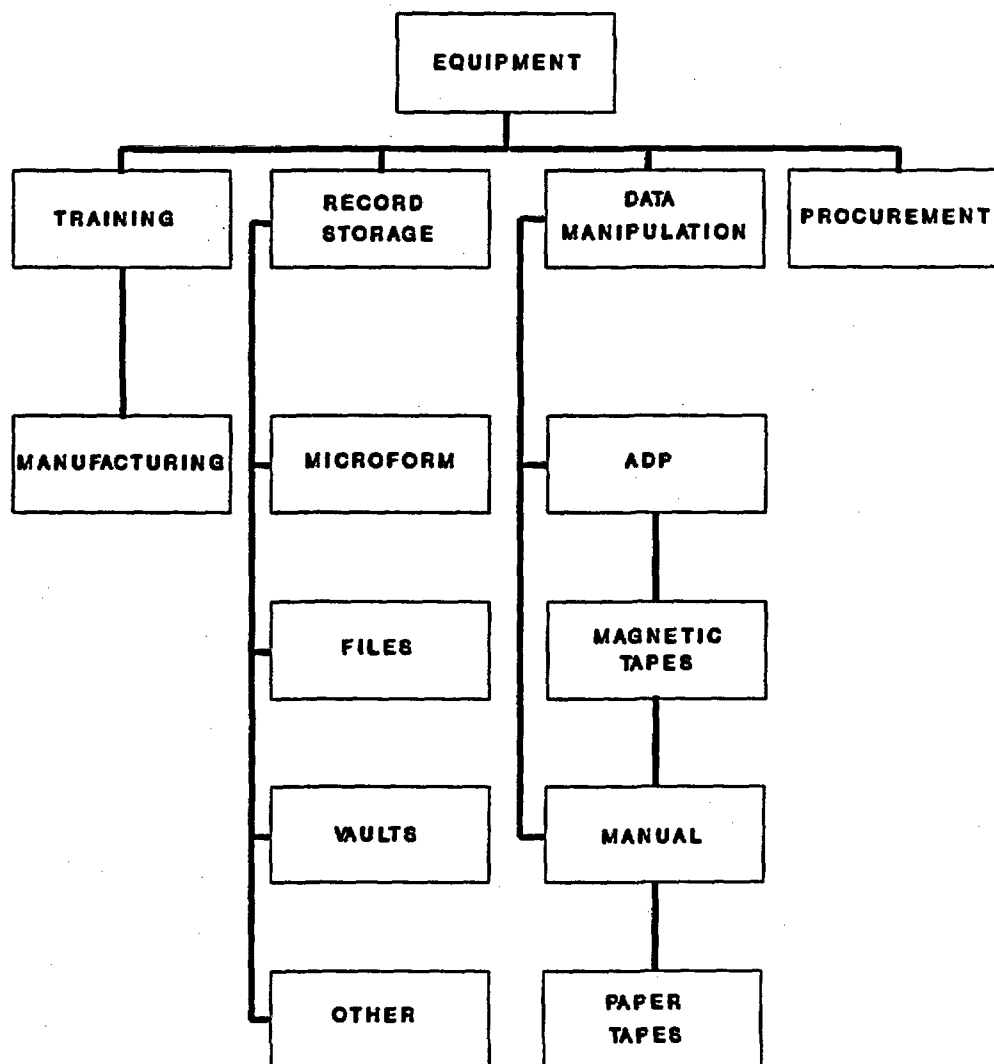
**ATTACHMENT II cont'd
OCRWM READINESS REVIEW PLAN**

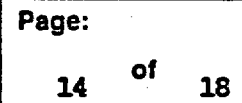
19. Have all physical interfaces been established?
20. Are logical interfaces between network activities established?
21. Do implementing procedures exist?
22. Do change control procedures exist for plans and procedures?
23. Have procedures been approved by OCRWM?
24. Has equipment been procured?
25. Have the facilities been acquired?
26. Are the facilities operational?
27. Are funds available to do the work?
28. Has handling of data from field activities been addressed?
29. Has handling of information/records been addressed?
30. Have safety and health measures been identified?
31. Have security requirements been addressed?
32. Have security measures related to computer access been addressed?



ATTACHMENT III (Typical)

OCRWM READINESS REVIEW TREE





ATTACHMENT V (Typical)

**OFFICE OF CIVILIAN
RADIOACTIVE WASTE MANAGEMENT
U.S. DEPARTMENT OF ENERGY
WASHINGTON, D.C.**

SHEET _____ OF _____
WBS NO. _____

READINESS REVIEW OPEN-ITEMS LIST

OPEN ITEM NO.	PREREQUISITE I.D.	PREREQUISITE ASSIGNEE	ITEM/DEFICIENCY	ACTIVITY REQUIRED	ESTIMATED COMPLETION DATE	ACTIVITY ASSIGNED

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ATTACHMENT VI (Typical)

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READINESS REVIEW TECHNICAL-HOLD SHEET			
READINESS REVIEW	ACTION ITEM	TECHNICAL HOLD NO.	
PREREQUISITE DESCRIPTION			
DESCRIPTION OF TECHNICAL HOLD			
DESCRIPTION OF CORRECTIVE ACTION (Explain corrective action, potential impact, responsible organization.)			
PREREQUISITE ASSIGNEE		NETWORK NO.	
_____ Name Date			
APPROVALS			
STARTUP TEAM		REVIEW BOARD	
NAME AND FUNCTION	DATE	NAME AND FUNCTION	DATE
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

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ATTACHMENT VII (Typical)

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U.S. DEPARTMENT OF ENERGY
WASHINGTON, D.C.**

SHEET _____ OF _____
WBS NO. _____

READINESS REVIEW TECHNICAL-HOLD LIST

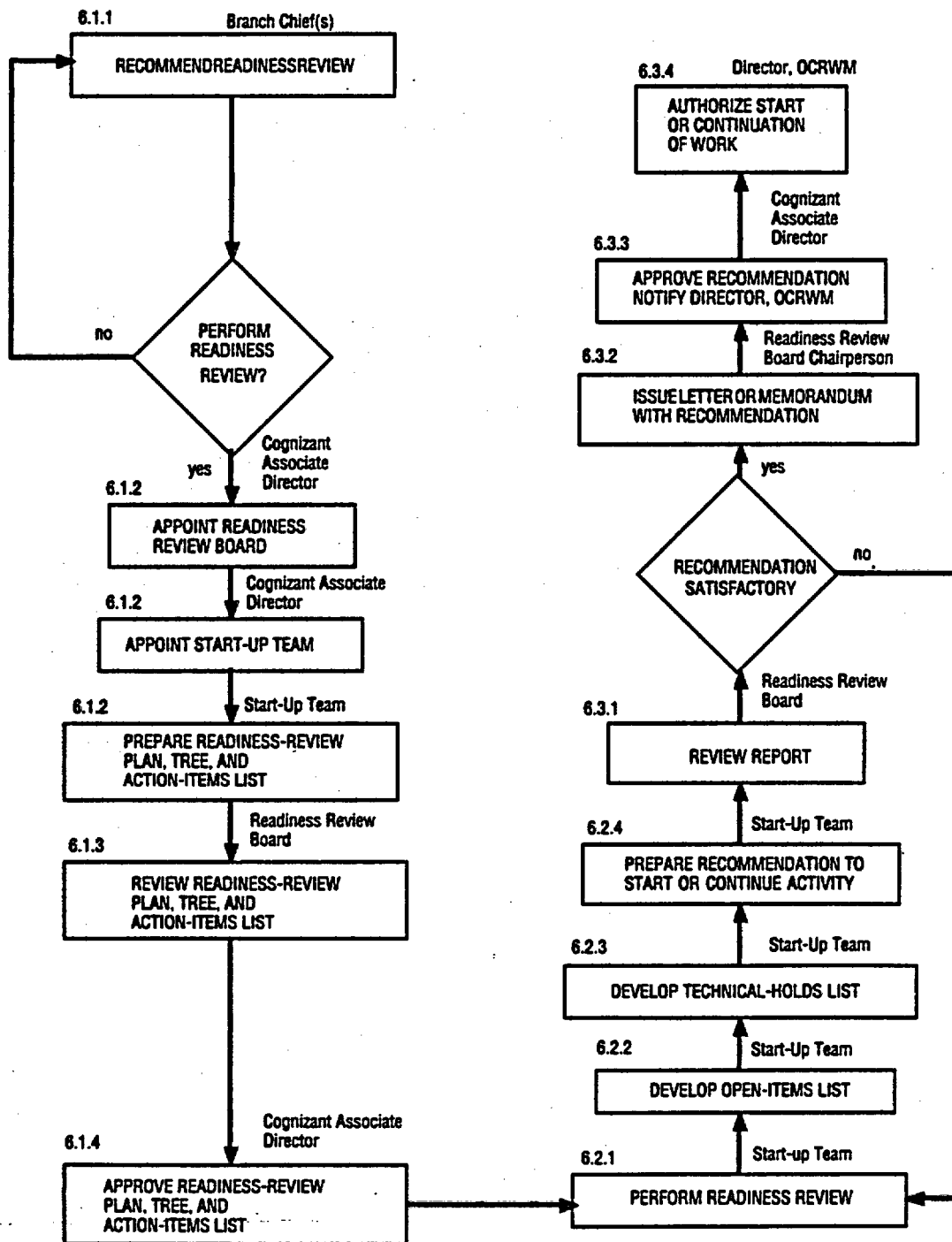
ACTION ITEM NO.	OPEN ITEM NO.	TECHNICAL HOLD NO.	ITEM DESCRIPTION	ACTIVITY REQUIRED	COMPLETION DATE	APPROVED ACTION CLOSED DATE

REV. 1/89



ATTACHMENT VIII

READINESS REVIEW



QUALITY ASSURANCE ADMINISTRATIVE PROCEDURE

2.6, REV. 1

The following number is for OCRWM records management purposes only and should not be used when ordering this publication.

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