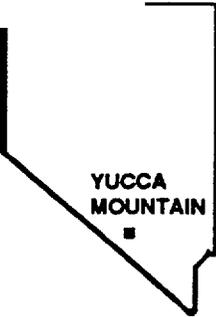


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# YUCCA MOUNTAIN PROJECT

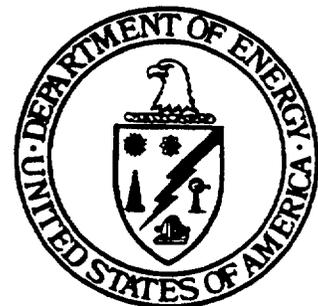
# INFORMATION MANAGEMENT SYSTEM PLAN

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**MARCH 1990**

UNITED STATES DEPARTMENT OF ENERGY  
YUCCA MOUNTAIN PROJECT OFFICE



YUCCA MOUNTAIN PROJECT  
INFORMATION MANAGEMENT SYSTEMS PLAN

March 1990

Prepared for

U.S. Department of Energy  
Yucca Mountain Project Office

The Yucca Mountain Project is managed by the Yucca Mountain Project Office of the U.S. Department of Energy (DOE). Yucca Mountain Project work is sponsored by the DOE Office of Civilian Radioactive Waste Management.

YUCCA MOUNTAIN PROJECT  
INFORMATION MANAGEMENT SYSTEMS PLAN

FOREWORD

This plan is effective 30 days from the approval date and shall remain in force for the execution of this Project, until superseded. This plan shall be reviewed annually for currency. Recommended changes to this plan shall be submitted to the Project Manager, Yucca Mountain Project Office.

Submitted by:

(for)   
\_\_\_\_\_  
Vincent F. Iorri, Chief  
Project Control Branch  
Yucca Mountain Project Office  
U.S. Department of Energy

5/8/90  
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Date

Approved by:

  
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Yucca Mountain Project Office  
U.S. Department of Energy

5/23/90  
\_\_\_\_\_  
Date

APPROVAL OF THIS DOCUMENT IS  
CONTINGENT UPON VERIFICATION UPPER  
TIER DOCUMENT REQUIREMENTS ARE  
INCORPORATED WHEN THEY ARE ISSUED

  
\_\_\_\_\_  
Donald G. Horton, Director  
Quality Assurance  
Yucca Mountain Project Office  
U.S. Department of Energy

5/9/90  
\_\_\_\_\_  
Date

## INFORMATION MANAGEMENT SYSTEMS PLAN

### EXECUTIVE SUMMARY

This document describes the Yucca Mountain Project (Project) Information Resources Management (IRM) approach and is the guiding document for managing implementation of the U.S. Department of Energy (DOE) Orders and Office of Civilian Radioactive Waste Management (OCRWM) policy and guidance for Information Resources (IR) matters. This plan outlines management policies, authorities, requirements, and functional responsibilities applicable to Yucca Mountain Project Office (Project Office) and Participant managers. This plan outlines the Information Resources Program (IRP) functions, and describes the Information Management System (IMS): a cohesive, coordinated, and integrated system approach to managing five closely related, codependent IR functional areas. This plan defines interface requirements which must occur to provide accurate and timely responses to requests for all source information, and to support project management needs and licensing. This plan defines the flow of data within the system, how it will be managed, handled, and released to validated users.

INFORMATION MANAGEMENT SYSTEMS PLAN

FOR

YUCCA MOUNTAIN PROJECT

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## 1.0 INTRODUCTION

This document is the Yucca Mountain Project, (Project), management plan for information resources. As a subtier document to the Project Management Plan (PMP), this plan governs all Project facilities, equipment, and personnel directly associated with the management, administration, and application of Project information. This plan establishes the policies and objectives for the management, planning, acquisition, usage, and retirement of Project information resources as an integrated Project-wide information management system.

The primary objective of this plan is to define and implement the IRM approach for the Yucca Mountain Project. Based on DOE Headquarters (HQ), OCRWM, and Project requirements, this management plan outlines the methods and conventions employed by the Project in managing information resources. The IRM approach, as defined in this Plan, implements an integrated and coordinated foundation of requirements, thereby establishing a bridge between DOE-HQ, DOE-OCRWM, the Project Office, and Project Participants. As such, the major sections of this plan describe the foundational components of the Project IRM approach. Figure 1-1 provides an illustration of the role of the IMSP and IRM at the Yucca Mountain Project.

This plan is organized into three primary topics; IRM, the IRP, and the IMS. The IRM section provides an expanded description of the overall approach to managing Project information resources, including the required interfaces with other Project plans. The IRP section provides an overview of the resource management requirements as adopted from the Project Management Plan and applicable DOE Orders. The IMS section provides an overview of the management system and outlines the requirements for separately published management plans, as annexes to this plan, for each IR functional area of the IMS.

As a management plan, this document is controlled in a manner consistent with recognized Project document control requirements. Updates to this document will occur as a result of changes to external requirements (e.g., DOE Orders and OCRWM requirements), or internal Project management changes. The IRM Manager has authority and responsibility for the implementation of approved modifications to this plan. Recommended changes to this plan will be submitted to the Project Manager, Yucca Mountain Project.

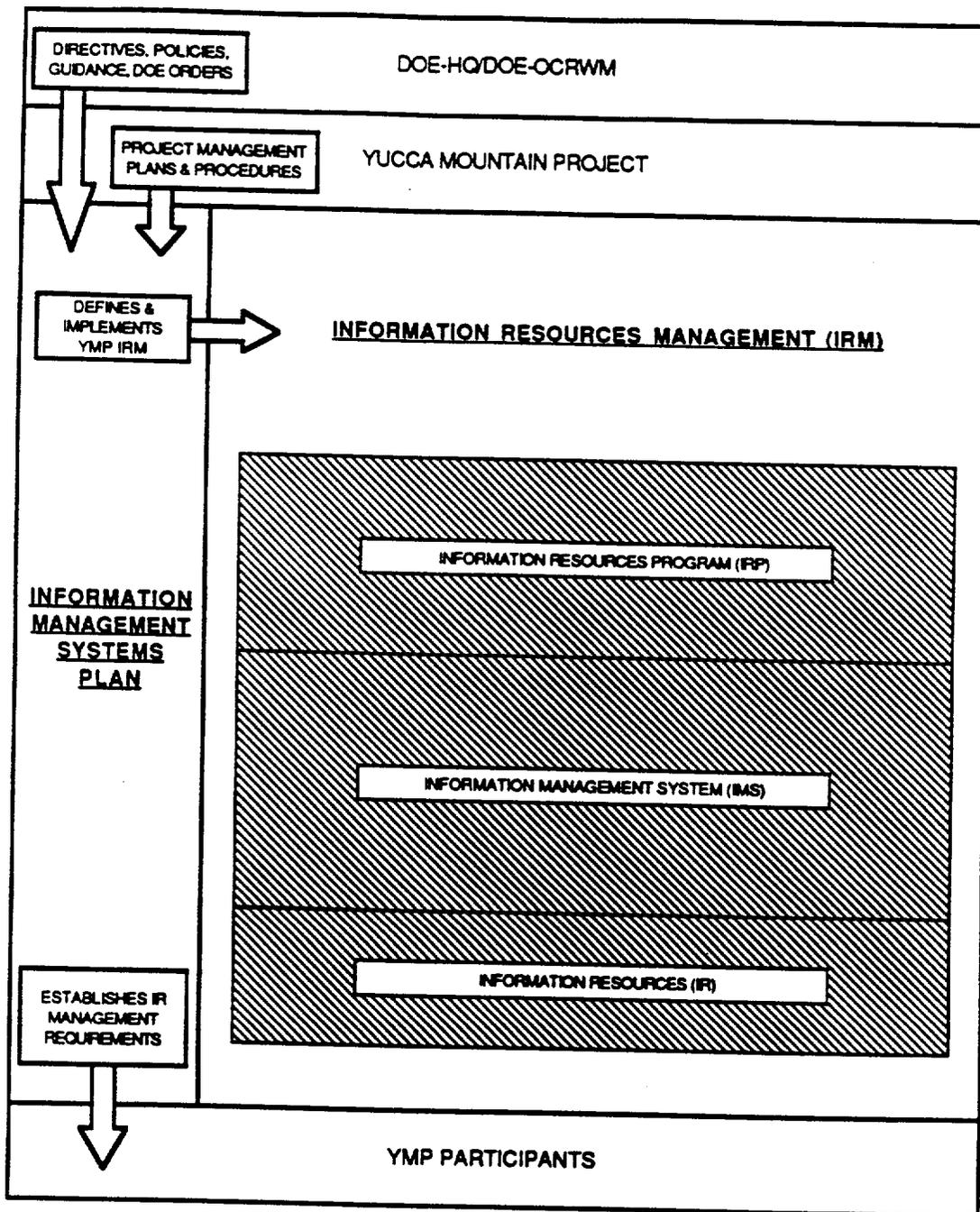


Figure 1-1. The Role of the IMSP and IRM at the Yucca Mountain Project.

## 2.0 PURPOSE, SCOPE, AND APPLICABILITY

### 2.1 PURPOSE

The Information Management Systems Plan (IMSP), pursuant to DOE/OCRWM policies, orders, and guidance, establishes requirements for implementation of an overall system to accomplish integration and coordination of all Project IR matters. The Project will manage IR in the most efficient, reliable, and cost effective manner within the framework of the Nuclear Waste Policy Act (NWPA) as amended, DOE Orders, OCRWM directives and guidance.

It is the purpose of this plan to ensure that Project IR are managed as a cohesive, coordinated, and integrated system. The IR planning and control functions will be designed and implemented in a manner that closely coordinates the acquisition of Project information resources in concert with Project goals and milestones. The IMS will provide centralized control to coordinate decentralized information resources to provide cost-effective Project information resources.

### 2.2 SCOPE AND APPLICABILITY

The requirements set forth in this management plan govern Project Office, major Project Participants and Supporting Organizations who manage IR purchased, leased, or otherwise acquired with Nuclear Waste funding and/or that are used to accomplish Project business unless otherwise exempted by the Project Office.

### 3.0 DEFINITIONS

The majority of terms used in this management plan are defined in DOE Orders 1330.1, 1360.1, including 1360.1 NV, 4700.1, 5300.1, and the Program Glossary. The following definitions are specific to this plan and are provided to enhance the understanding and aid in executing this plan.

#### 3.1 DELEGATION OF APPROVAL AUTHORITY (DAA)

A program initiated by the DOE Nevada Operations Office that allows delegation of approval authority for acquisitions greater than \$25,000. Requirements for the DAA are found in NV 1360.1A-59.

#### 3.2 PROJECT INFORMATION

All information, including electronic data, generated, used, reported, and published, by the Project. This includes, but is not limited to, official correspondence, licensing data, performance assessment data, technical data, information used as the basis for management decisions, and information used as the basis for attesting or certifying the quality of Project activities, functions, facilities, or materials.

#### 3.3 PROJECT INFORMATION RESOURCES

All computer hardware, software, and telecommunications equipment, including facilities and equipment used in direct support of, that assist in the production, administration, and management of Project Information. Also included are Project Office, Participant, and Subcontracting personnel directly involved in the support, including operation (with the exception of persons operating Personal Computers) and maintenance of computer hardware, software, and telecommunications equipment, and the staff required to provide records management and data management services to the Project.

#### 3.4 IR FUNCTIONAL AREAS

Five designated areas of functional responsibility that compose the Information Management System: Computer Resources, Software, Telecommunications, Data, and Records.

#### 3.5 IR/LONG-RANGE PLANNING (LRP)

Adoption of the DOE system of long-range planning to the limited scope of Project IR planning. IR/LRP does not supplant, but augments, the DOE LRP process as used by the Project, by providing the basis for input into the

Project LRP process. IR/LRP also provides the basis for the annual Departmental Information Technology Resources (ITR) effort.

### 3.6 MANAGEMENT REVIEWS

Periodic reviews and evaluations of Project Participants' IMS programs conducted by the Project Office.

## 4.0 RESPONSIBILITIES

Incumbents of the following Project Office and Participant positions are responsible for ensuring that the functions and requirements described in this plan are accomplished within their respective organizations. Figure 4-1 identifies the functional lines of authority for this plan.

### 4.1 DEPARTMENT OF ENERGY (DOE)/OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT (OCRWM)

DOE/OCRWM is responsible for the following activities:

1. Establishing IR policy and guidance.
2. Providing guidance in the areas of IR/LRP.

### 4.2 PROJECT MANAGER, YUCCA MOUNTAIN PROJECT

The Project Manager, Yucca Mountain Project, is responsible for the following:

1. Establishing Project IRM through approval of this plan.
2. Implementing and executing this plan through administrative duties.
3. Designating and appointing the IRM Manager.

### 4.3 CHIEF, PROJECT CONTROL BRANCH

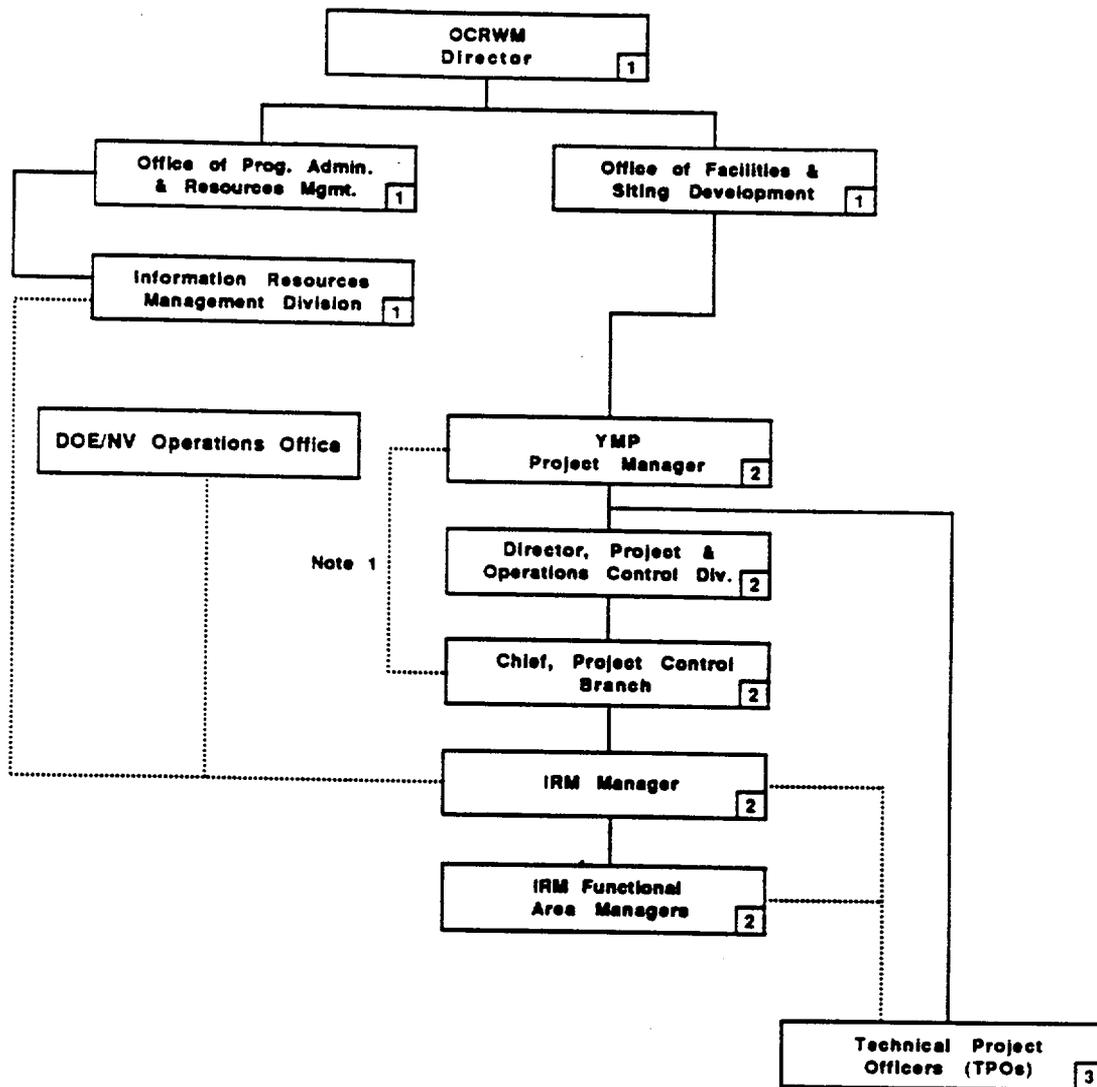
The Chief, Project Control Branch has the following responsibilities:

1. Exercising general management oversight of Project Information Resources activities.
2. Implementing and executing this plan through administrative duties.

### 4.4 IRM MANAGER

The IRM Manager is responsible for the following activities:

1. Exercising delegated authority from the Project Manager and is designated responsible for managing the Project IMS.
2. Administering the technical duties associated with the implementation and execution of this plan.



LEGEND	
<b>LINES OF AUTHORITY</b>	<b>ORGANIZATION</b>
FORMAL _____	1 DOE/OCRWM
COORDINATION ..... (dotted)	2 DOE/YMP (PROJECT OFFICE)
	3 PARTICIPANTS
<b>NOTES</b> 1. Temporary reporting line pending approval of request for reorganization	

Figure 4-1. IRM Functional Lines of Authority

3. Providing guidance and monitoring the IRP.
4. Conducting IRM Project management functions and activities in accordance with the requirements of this plan.
5. Defining, implementing, and executing the IMS in accordance with the requirements of this plan.
6. Ensuring the development and implementation of lowertier implementing procedures to establish the IMS as directed by this plan.
7. Designating and appointing the IRM Functional Area Managers.

#### 4.5 IRM FUNCTIONAL AREA MANAGERS

The IRM functional area managers have the following responsibilities:

1. Computer Resource Manager is responsible to the IRM for coordination of management, administration, and technical activities associated with Project computer resources, as described in this plan and the Computer Resources Management Plan (CRMP).
2. Software Manager is responsible to the IRM for coordination of management, administration, and technical activities associated with Project software, as described in this plan and the Software Management Plan (SMP).
3. Data Manager is responsible to the IRM for coordination of management, administration, and technical activities associated with Project information, as described in this plan and the Data Management Plan (DMP).
4. Records Manager is responsible to the IRM for coordination of management, administration, and technical activities associated with Project records, as described in this plan and the Records Management Plan (RECOMP).
5. Telecommunications Manager is responsible to the IRM for coordination of management, administration, and technical activities associated with Project telecommunications, as described in this plan and the Telecommunications Management Plan (TELMP).

#### 4.6 PARTICIPANT TECHNICAL PROJECT OFFICERS

Participant Technical Project Officers are responsible to the Project Manager for supporting Project IR policies and requirements. This support includes the development of organizational procedures, as required.

#### 4.7 DOE/NV, INFORMATION MANAGEMENT DIVISION (IMD)

The IMD, DOE/NV, is responsible for the following:

1. Providing guidance and direction to ensure that overall DOE/NV objectives are obtained.
2. Assuring proper acquisition and use of the IR/LRP by contractors and other agencies within the NV complex.
3. Overseeing and approving the expenditure of Nuclear Waste Funds for the purchase of Project IR.

## 5.0 INFORMATION RESOURCES MANAGEMENT (IRM)

The Project is an extremely diverse and very complex endeavor requiring the acquisition and use of many varied resources, including information. As a crucial resource, it is imperative that information produced and/or used by the Project be managed to facilitate Project goals and milestones. However, managing information effectively requires the deployment of physical resources to support the many Project field and office activities. Computer hardware, software, telecommunications, the implementation of records and data management functions, and the corresponding activities and staffing all contribute to Project IR. It is these IR that represent a significant investment of Project funds, therefore establishing the need for an overall approach to the management of Project IR. IRM represents a comprehensive approach for establishing an integrated and coordinated strategy for the management of Project IR. IRM encompasses every aspect of information management activities, including planning, budgeting, acquisition, use, and retirement of Project IR. IRM complies with DOE/OCRWM directives, policies, and guidance, DOE Orders, and Project plans and procedures.

The IRM approach, as described in this Plan, establishes an integrated and coordinated foundation for the management of Project Information Resources. The IRP, the IMS, and IR are the primary components of the IRM approach. Implementation of the requirements set forth in this plan define and implement the IRP, establish the architecture of the IMS, and provides a clear definition of IR. Figure 5-1 provides an illustration of the objectives of the IMSP.

Since this Plan establishes an approach that affects many aspects of the Project, and will require close coordination with other major Project functions, it is essential that interfaces with other Project management plans be defined. For simplicity, these interfaces are categorized as external (i.e., those interfaces necessary to impose requirements stipulated in upper tier management plans), and internal (i.e., those interfaces necessary to coordinate dependencies existing between the various Project management systems). Figure 5-2 provides an illustration of the interfaces between this management plan and other Project management plans.

### 5.1 EXTERNAL INTERFACES

Among the external interfaces, the QA Program Description (QARD) and PMP govern virtually all Project activities and stipulate requirements for conducting Project work, including IR activities. However, there are several specific requirements that are essential to this Plan. In the QARD, Section 19.0 stipulates specific requirements for the quality aspects of software and the computer resources (hardware) environment that are recognized by this Plan. These requirements are addressed in Section 7.0 of this plan. In the PMP, Section 11.0 establishes requirements for this Plan and its content, and also stipulates requirements for the Project management processes essential to the IRP. Additionally, the PMP also outlines technical, cost, schedule, and quality objectives pertinent to the management of Project IR. Section 6.0 and 7.0 of this plan are based upon the PMP requirements.

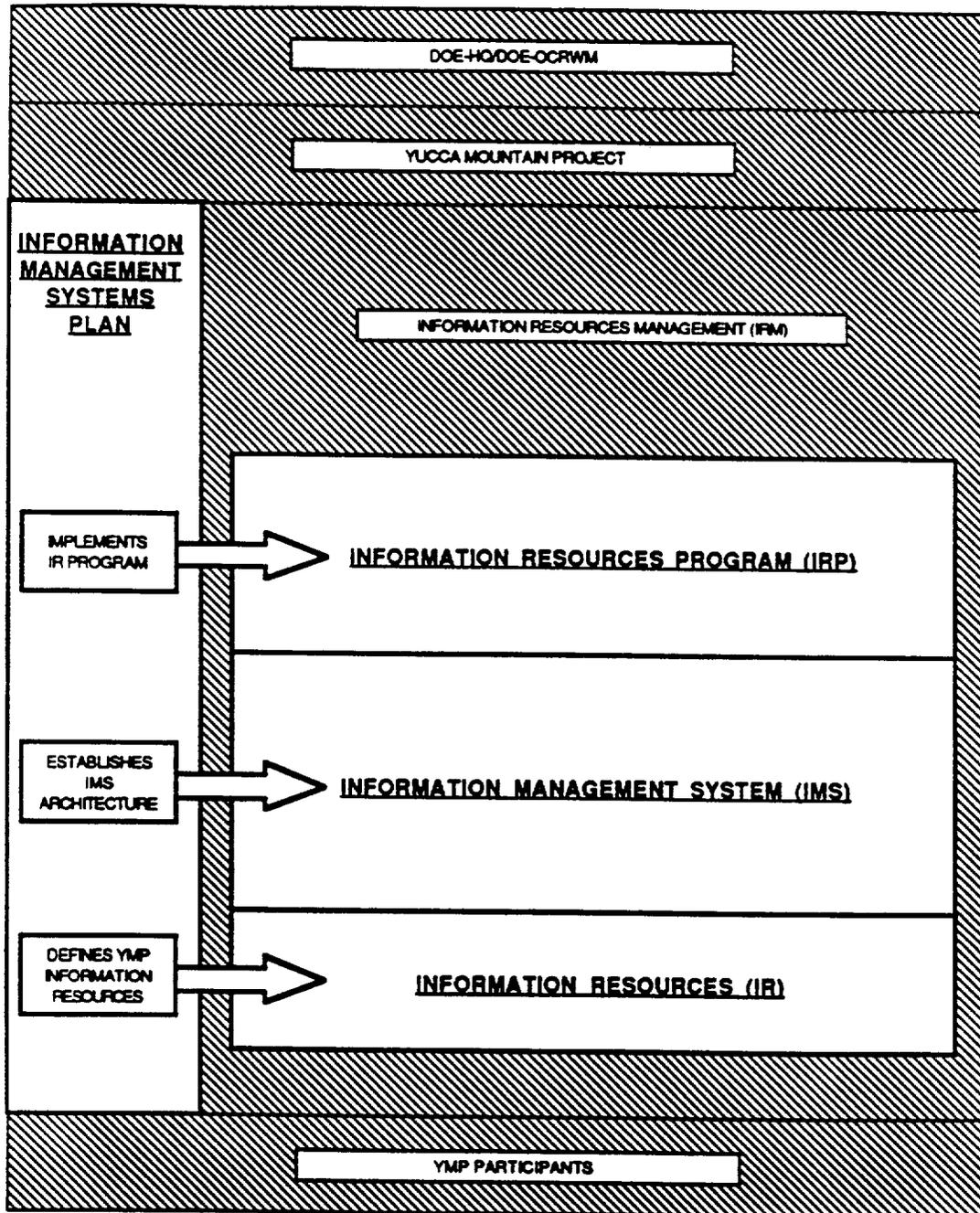


Figure 5-1. Objectives of the Information Management Systems Plan

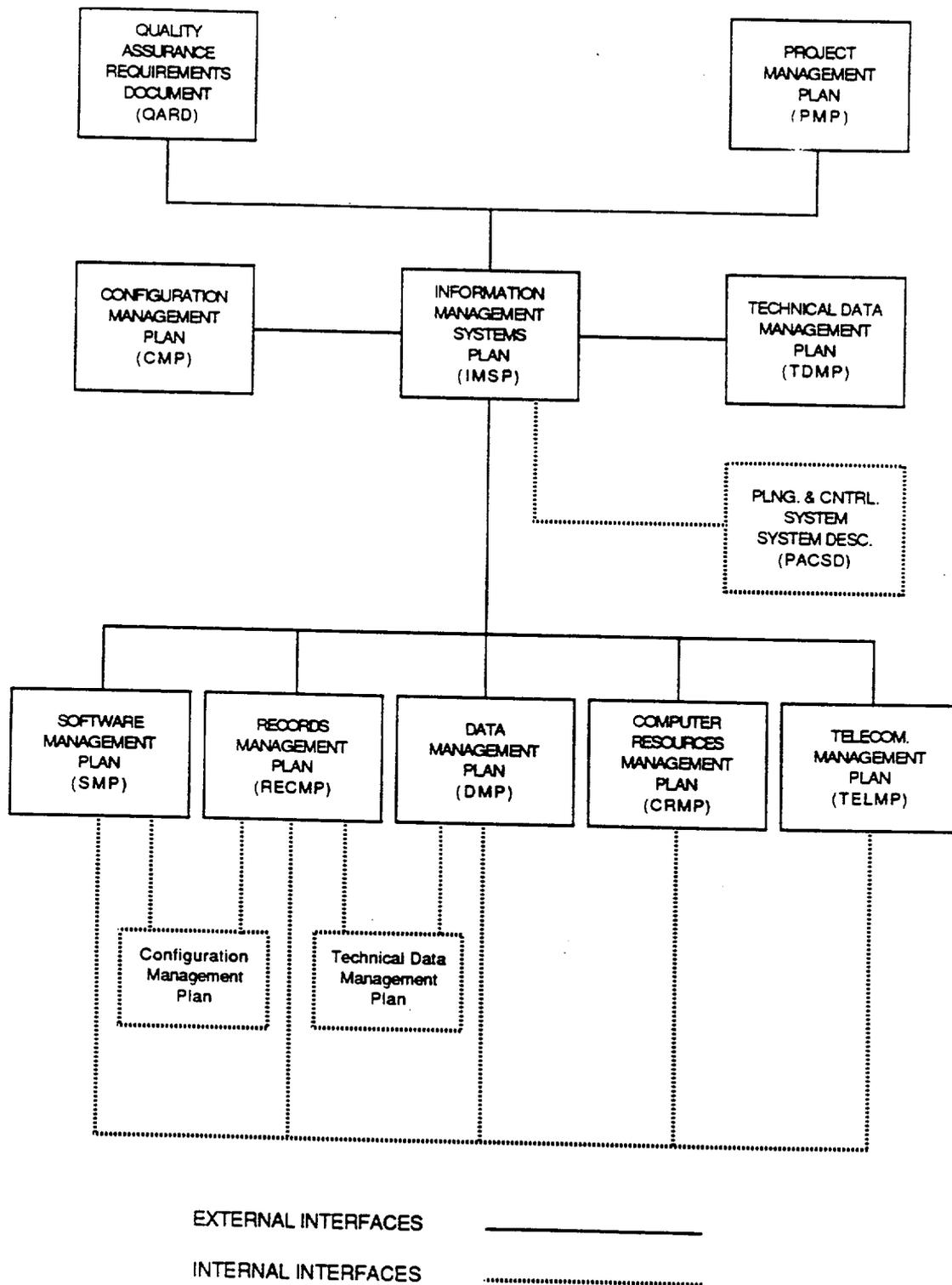


Figure 5-2. Interfaces between the IMSP and other Project management plans.

The remaining external interfaces are to the Configuration Management Plan (CMP) and the Technical Data Management Plan (TDMP). In the CMP, requirements exist for control of specific Project documents, and for control of software when identified as an item of the Project baseline. These requirements are addressed in Section 7.0 of this plan. In the TDMP, requirements exist for the use of records management facilities for technical data, interface responsibilities with the Licensing Support System (LSS), and acknowledgment of IRMs responsibility in providing IR in the management of technical data. These requirements are addressed in Section 7.0 of this plan.

## 5.2 INTERNAL INTERFACES

Since IMS establishes an integrated and coordinated system of managing Project IR, the management plans governing the IR functional areas require close and continuing coordination of interfaces. For this management plan, the coordination of interfaces is dependent on effective identification and consolidation of Project IR requirements. The coordination of IMS interfaces is accomplished by the architecture of the IMS, as described in Section 7.0, and the coordination functions of the IRP, as described in Section 6.0. The CMP, TDMP, and PACSD also require internal interfaces with this plan. In the CMP, requirements are stipulated for recognition of the authority of the Project Change Control Board (CCB) in relation to controlled documents. These requirements are addressed in Section 7.0 of this plan. In the TDMP, the flow of technical data within the Project must be interfaced with the data management aspects of this plan. These requirements are addressed in Section 7.0 of this plan. In the PACSD, requirements are established for the development, implementation, and maintenance of an integrated Project-level planning and control system (PACS). Therefore, responsibility for IR planning and funding is jointly shared by PACS and IRM. Since PACS provides summary level detail of Project activities, IRM must develop and maintain the detailed information necessary to support IR planning and funding requirements. Therefore, PACS and IRM must maintain a close and coordinated interface to ensure that Project goals and milestones are successfully met. These requirements are addressed in Section 6.0 of this plan.

## 6.0 INFORMATION RESOURCES PROGRAM (IRP)

The IRP establishes the Project Office management function responsible for providing strategy, guidance, and oversight to the definition, implementation, and execution of the IMS. As such, the IRM Manager provides the focal point for all Project IR related matters. The IRM Manager integrates and coordinates Project IR requirements by providing guidance and concurrence on all Project IR planning, budgeting, and performance measurement activities and products. The IRM Manager establishes a consolidated view of all Project IR requirements and activities. The IRM Manager also establishes execution control of all Project IMS activities by implementing methods for authorization of work and activity status reporting on Project IR activities.

The primary objective of the IRP is to establish an integrated and coordinated interface with the Project-wide IMS. This interface promotes an environment where Project IR requirements are planned, budgeted, and monitored from an overall single, consolidated perspective. This approach also facilitates the development of Project LRP, through the PACS, for Project IR requirements. A consolidated perspective provides a bridge between the IMS activities and DOE/OCRWM requirements and guidance, enabling the IRM Manager to efficiently manage Project IR. Figure 6-1 provides an overview of the coordinating interfaces between IRP, DOE-HQ/DOE-OCRWM, and the IMS. The overall management of Project Information Resources is accomplished through the implementation of an IRM Project Management System.

### 6.1 IRM PROJECT MANAGEMENT SYSTEM

The IRM Project Management System (PMS) is an adoption of DOE PMS requirements and the Project PMS requirements as stipulated in the PMP. The IRM PMS satisfies DOE PMS requirements, as well as provides for the coordination of IR planning, budgeting, and performance measurement. Figure 6-2 provides a conceptual view of the IRM PMS approach. The IRM PMS is established in accordance with the requirements set forth in DOE Order 4700.1 and the PMP, as applicable to IR. The IRM PMS is composed of three primary functions: IR planning, budgeting, and performance measurement. Additionally, the IRM PMS satisfies the acquisition and management of computing resources in accordance with DOE Orders 1360.1, 1330.1, and 5300.1, as applicable to IR.

### 6.2 IR PLANNING AND BUDGETING

IR planning is the formal process that ensures Project IR requirements are captured and communicated to the appropriate levels of authority at the Project Office, DOE-HQ, and DOE-OCRWM. IR planning execution ensures that acquisition and use of IR is conducted in the most efficient, effective, and economic manner, and that IR are available to support Project activities, when needed. Budgeting is the formal process for establishing IR costs, and obtaining funding approval to support the Project IR requirements. To this end, it is imperative that Project Office, major Project Participants, and Support Organizations actively participate in IR planning activities as

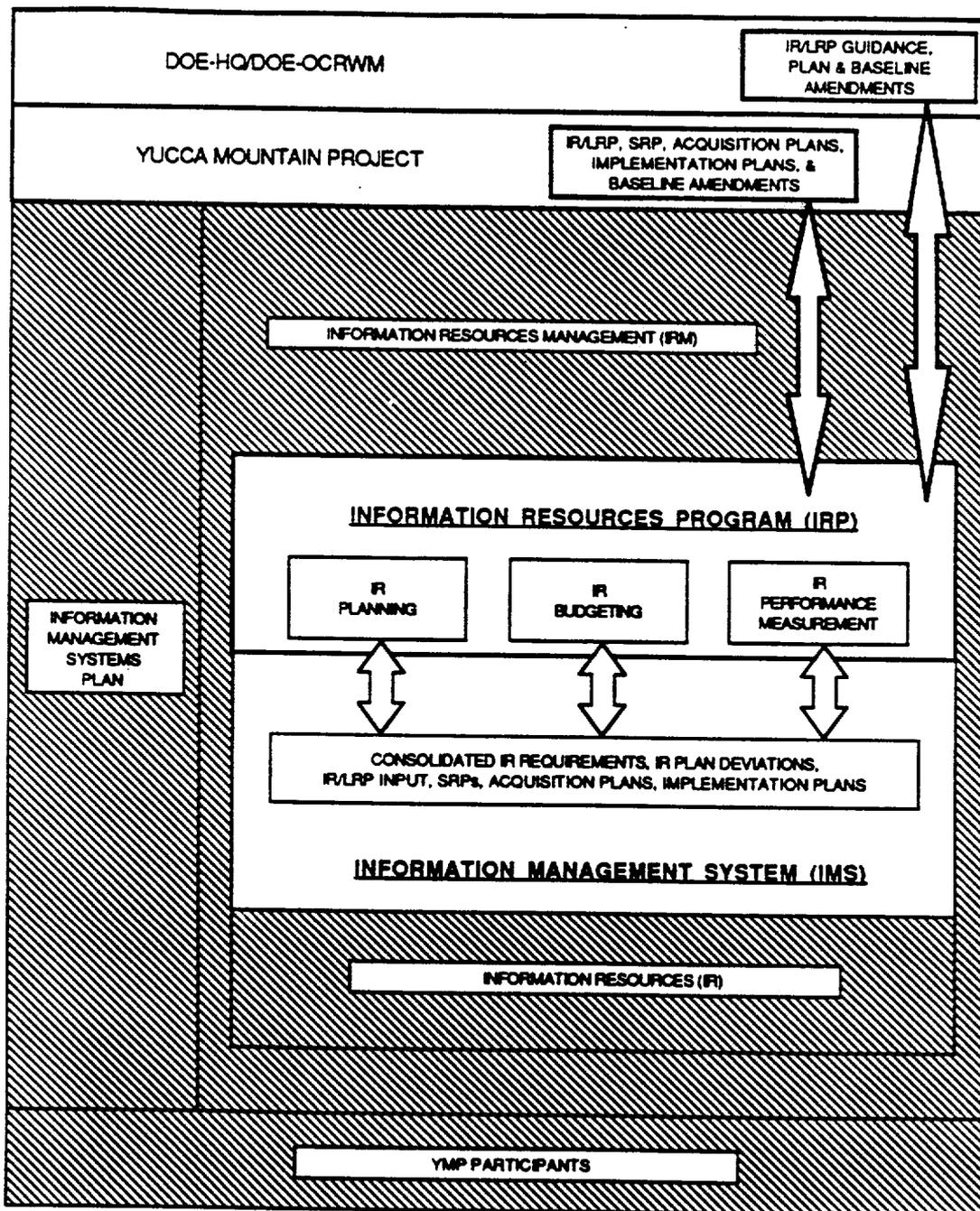


Figure 6-1. Overview of the Information Resources Program Coordinating Interfaces.

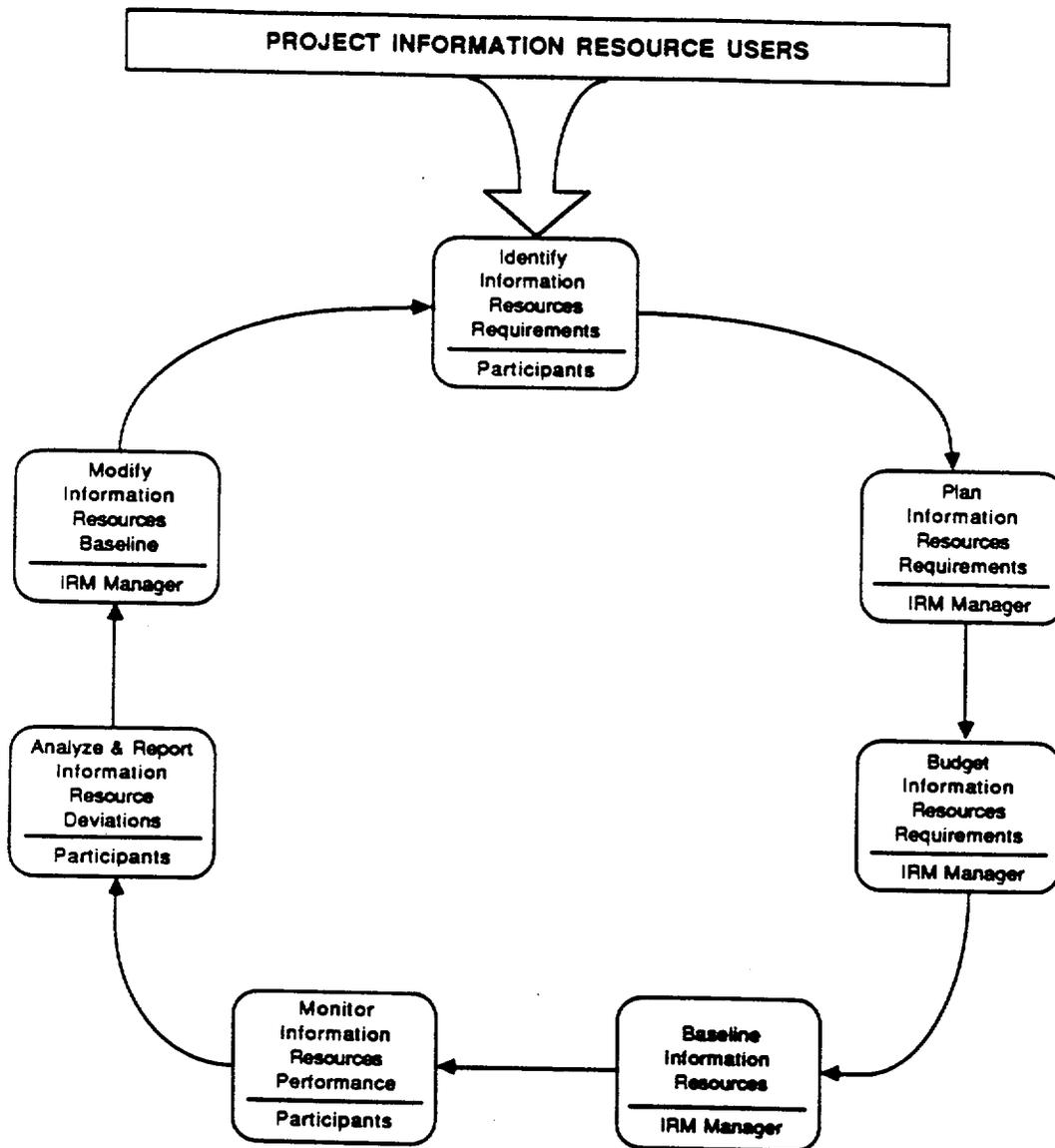


Figure 6-2. Conceptual View of the IRM PMS Approach.

stipulated in this plan. IR planning and budgeting execution will be conducted in accordance with the requirements set forth in DOE Order 4700.1 and the PMP.

IR planning and budgeting involves several steps, all supporting the development of an overall Project-level IRM strategy. The objective of IR planning and budgeting is to establish a single, centralized process for the annual collection of Project IR requirements. IR/LRP, Short-Range Plans (SRP), Acquisitions Plans, Implementation Plans, and the Work Authorization System (WAS) preparation and submittal are activities involved in the IR planning and budgeting process. Figure 6-3 provides an overview of the IR planning process. IR planning is an extension of the Project baseline and as such establishes an integrated IR requirements in support of the Project technical baseline. Figure 6-4 provides an overview of the IR budgeting process.

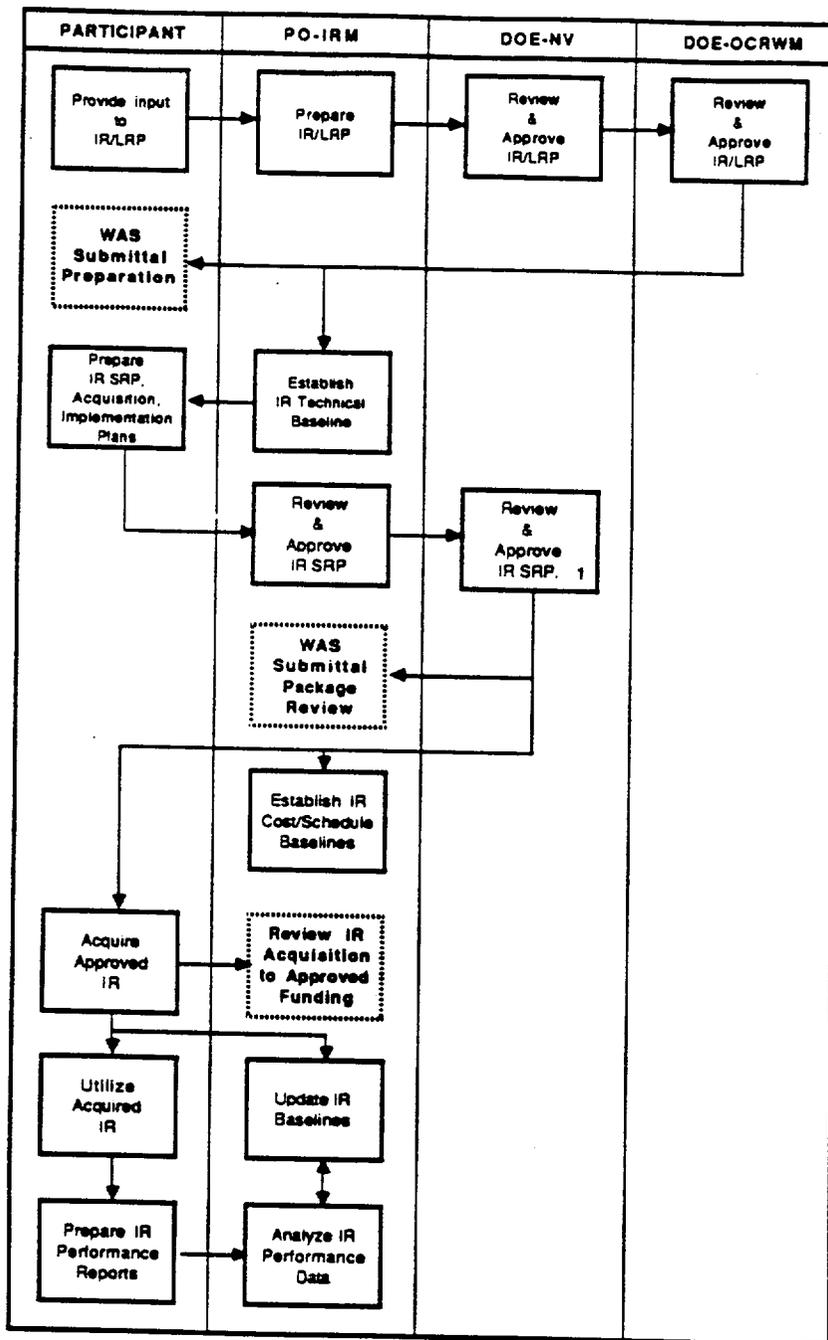
#### 6.2.1 IR LONG-RANGE PLANNING (IR/LRP)

IR/LRP is conducted annually by the IRM Manager, in accordance with DOE Orders 1360.1 for all Project IR planning and 5300.1 for telecommunications planning. Project, Participant, and subcontractor organizations provide IR requirements to the IRM Manager upon receipt of the annual IR/LRP call. The approved IR/LRP provides the basis for the annual WAS preparation and submittal for Project IR requirements. Consistency of the IR/LRP and the Project LRP is maintained by the IRM Manager through the Project LRP process. The IR/LRP will provide the basis for the Project LRP input in accordance with the requirements of the PACSD.

#### 6.2.2 IR SHORT-RANGE PLANNING

An IR SRP is prepared by each participant and submitted to the IRM Manager for review and approval annually. An IR SRP provides a detail of proposed acquisitions for the upcoming fiscal year. A statement of strategy is included in the IR SRP for proposed acquisitions in accordance with DOE Order 1360.1, including Nevada Operations Office implementation orders. The IRM Manager reviews an IR SRP for consistency with the IRM/LRP. Participants will be advised of items requiring further information prior to approval of the IR SRP. Once approved, the IRM Manager and Participant will use the IR SRP as a baseline for monitoring performance for the operating year.

A statement of strategy may be prepared that collectively or individually covers any or all of the Project Participants' individual functional requirements (e.g., personal computers, word processors, office automation, data acquisition, or process control) or other logical groupings. A proposed individual acquisition of automated data processing equipment (ADPE) of less than \$25,000 does not require an approved IR acquisition plan or clearance document, if it is within the scope of an approved statement of strategy, or unless otherwise directed by the IRM Manager.

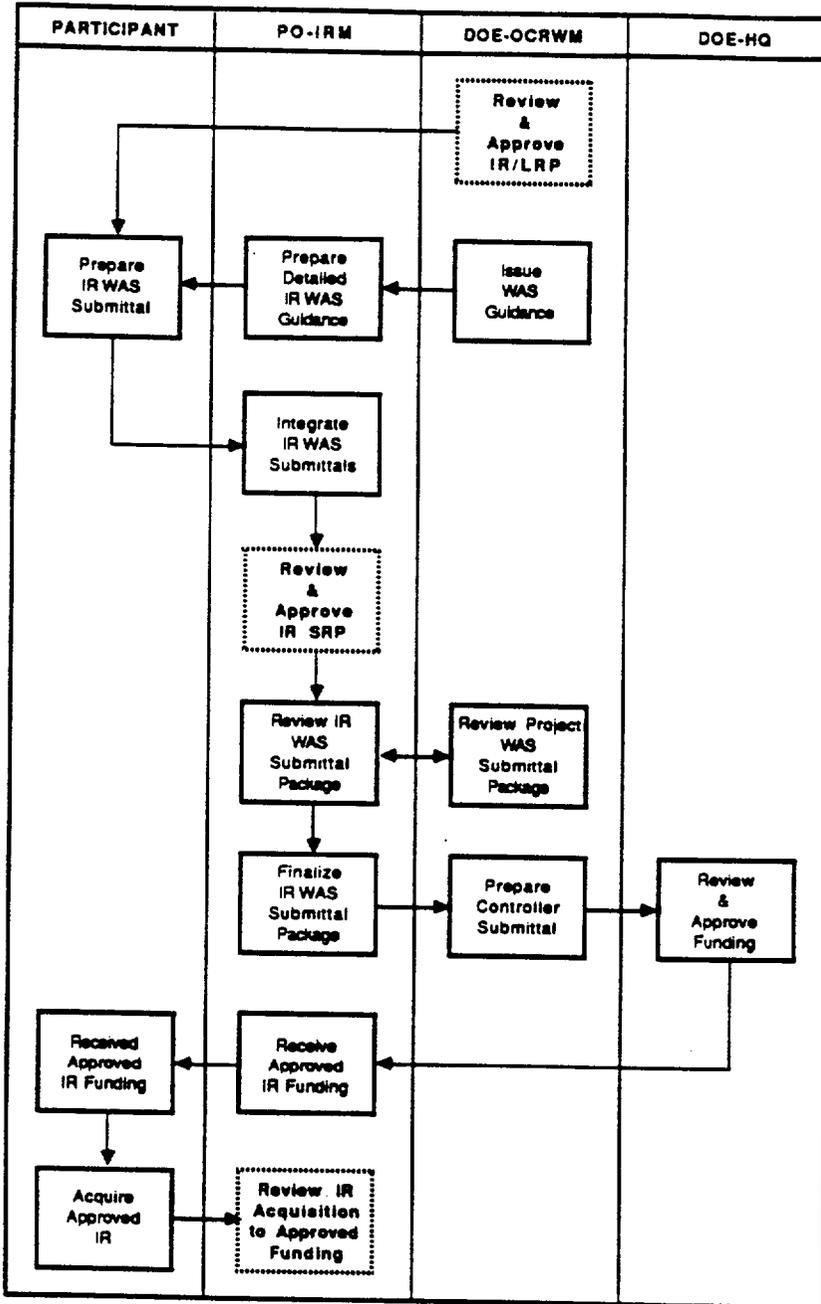


1 - For National Labs DOE/AL-SF, for USGS: DOI Procurement Review.



- Interface with Information Resources Budgeting Process.

Figure 6-3. Overview of the Information Resources Planning Process.



- Interface with Information Resources Planning Process.

Figure 6-4. Overview of the Information Resources Budgeting Process.

### 6.2.3 IR ACQUISITION PLANNING

IR acquisition plans are required for nonmajor items of ADPE in accordance with DOE Order NV 1360.1. For nonmajor items of ADPE, in lieu of IR acquisition plans, the alternative procedures outlined in DOE Order NV 1360.1, are applicable. Project Participants are exempt from preparing IR acquisition plans when an acquisition of less than \$25,000 is covered under an approved statement of strategy (approved as an element of the IR SRP). The IRM Manager has the authority to revoke this exemption if stated policies and approved strategies are not followed by the Project Participants. Clearance documents are not required for nonmajor items of ADPE unless specifically requested by the IRM Manager. IR acquisition plans are submitted, as an element of the IR SRP, for approval by the IRM Manager and the appropriate personnel as stipulated in the DAA. Approval of an IR acquisition plan must be received prior to release of a solicitation document. For Out-of-Cycle IR acquisitions, IR acquisition plans are prepared at the discretion of the IRM Manager.

### 6.2.4 IR IMPLEMENTATION PLANNING

IR Implementation Plans are required for major items of ADPE in accordance with DOE Order 1360.1. A thorough justification consistent with the most recent approved IR/LRP/SRP must be included. IR implementation plans are submitted for approval by the IRM Manager. Approval of IR implementation plans for acquisition of major items of ADPE may require additional review and approval prior to contract award. If the IRM Manager determines that further reviews are required, Participants are required to prepare a clearance document in accordance with DOE Order 1360.1. Approval of an IR implementation plan must be received prior to release of a solicitation document.

## 6.3 IR PERFORMANCE MEASUREMENT

IR performance measurement is a critical component of the integrated Project IRM approach. As an extension of IR planning activities, the IR performance measurement will ensure that IR plans are executed as approved. To manage Project IR and provide adequate service levels, it is essential that unanticipated events or deviations from plan be recognized and reported in a timely manner. Figure 6-5 provides an overview of the major components of the IR performance measurement system.

### 6.3.1 IR TECHNICAL BASELINE

The DOE system of LRP establishes a baseline for measuring technical performance for Project IR capacity, usage, and trending. The IR technical baseline provides a consolidated five-year baseline for Project IR activities. As such, the IR technical baseline provides the means for measuring technical performance on all Project IR activities. The IR technical

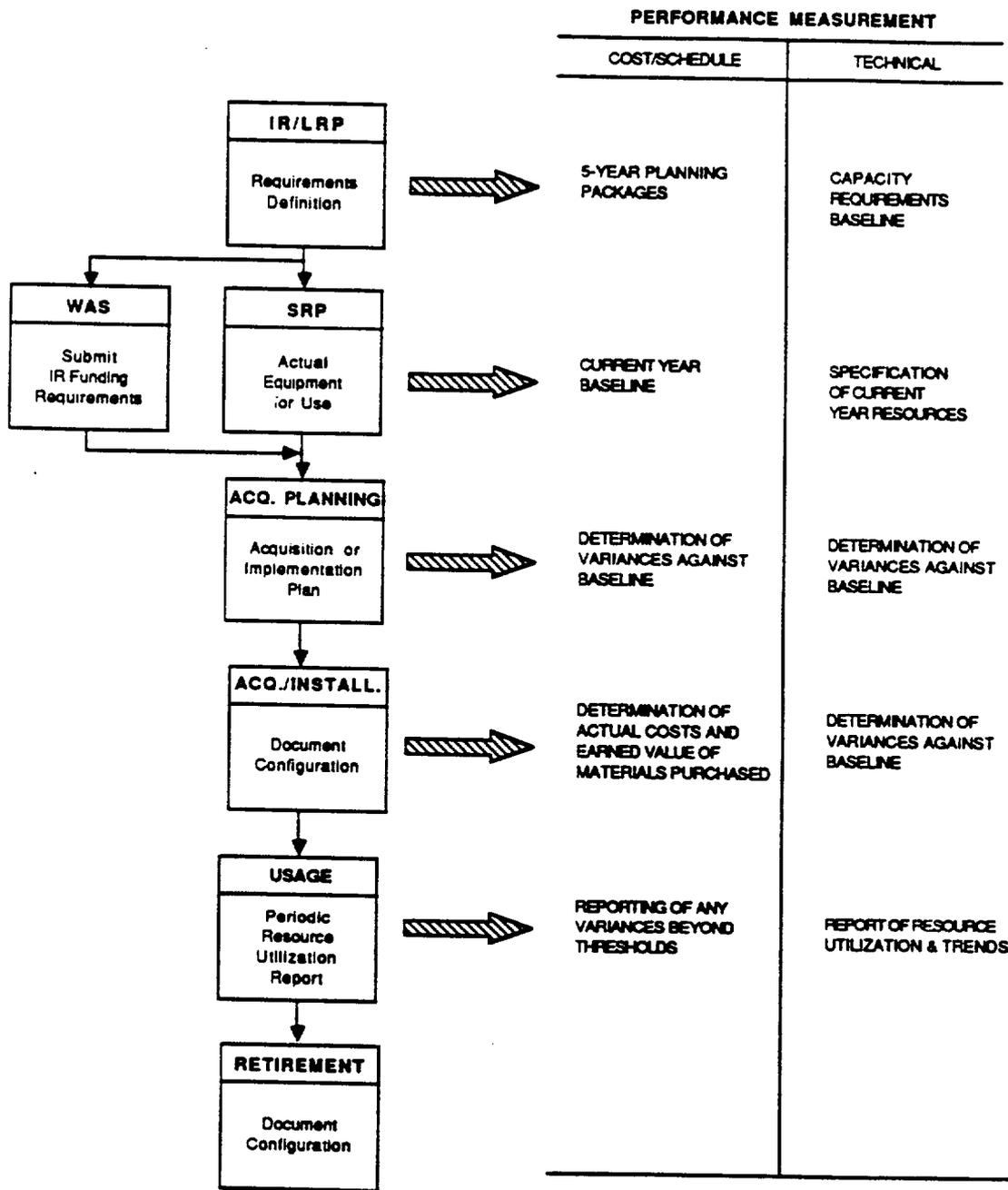


Figure 6-5. Overview of Information Resources Performance Measurement.

baseline is established based on Project milestones, missions, and goals, and is prepared in support of Project baselines. Currency of the IR technical baseline is maintained and controlled through the IR/LRP process.

#### 6.3.2 IR COST AND SCHEDULE BASELINE

The DOE system of Short-Range Planning establishes a baseline for measuring cost and schedule performance for Project IR. During IR planning the performance baseline is established. The IR cost and schedule baseline will provide a baseline for the current year Project IR activities. The IR cost and schedule baseline is the basis for periodic reporting of progress. The IR cost and schedule baseline is established based on Project milestones, missions, and goals, and is prepared in support of Project baselines. Currency of the IR cost and schedule baselines are maintained and controlled through the IR/LRP and IR SRP processes.

#### 6.3.3 MANAGEMENT REPORTING

Periodic technical performance data, summary actual cost data, and narrative descriptions of performance issues is reviewed by the IRM Manager to assess the Project's ability to support its missions and to determine future computing requirements. Performance reporting is reviewed to establish trends, determine management focus on problem areas, and as justification for adjusting IR technical, cost, and schedule baselines. IR management reporting is conducted in accordance with the PMP.

#### 6.3.4 MANAGEMENT REVIEWS

Periodically, the IRM Manager will conduct management reviews in accordance with DOE Order 1330.1 and 1360.1. As such, Project Participants will provide access to facilities and records to allow the IRM Manager the ability to conduct the management reviews. A written report of the conditions found during the management reviews is prepared and distributed to concerned parties.

#### 6.3.5 COMPUTER EQUIPMENT AND SOFTWARE INVENTORIES

It is the responsibility of the IRM Manager to establish and maintain current inventories of ADPE and computer software used on the Project. The inventory is established, maintained, and conducted in accordance with the requirements of DOE Orders 1360.6 and 1330.1.

## 7.0 INFORMATION MANAGEMENT SYSTEM

The IMS is five closely related, codependent IR functional areas crucial to the management of Project information: computer resources (hardware), software, telecommunications, data, and records. Each IR functional area is of significant importance to the management of Project IR. As such, each IR functional area has the potential to demand significant Project resources in providing services. Therefore, the IMS needs to plan, control, administer, and execute each IR functional area independently. However, the IMS also provides the means for integration of all Project IR requirements and the monitoring of Project IR performance. Figure 7-1 provides an overview of the IMS coordinating interfaces. The IMS establishes a decentralized structure of Project IR in concert with the need to coordinate and integrate Project Information Resource requirements.

### 7.1 COMPUTER RESOURCES MANAGEMENT

Computer Resources Management (CRM) involves the management of micro-, mini-, and mainframe-computer hardware and their environment, and includes requirements identification, acquisition, maintenance, and use of this equipment and associated software. CRM includes computer protection, administrative controls, capacity planning, contingency planning, system security, and risk analysis of system sensitivity and criticality per DOE Order 1360.2.

CRM is subject to the full requirements of this plan. A separate management plan establishes the specific requirements for CRM to comply with the requirements of this plan. Elements of the CRM Plan address the following:

1. Application of the IRM Project management requirements to CRM as set forth in this plan.
2. Essential elements of the IR technical, cost, and schedule baselines as they relate to CRM.
3. Description of the application of life-cycle management to CRM activities, including application of the appropriate standards in accordance with DOE Order 1360.3.
4. Description of the documentation requirements of CRM.
5. Description of configuration management requirements, including formal Project requirements as described in the CMP, and requirements specific to CRM as directed by the IRM Manager.
6. Description of the internal and external interfaces with other IR functional areas and management plans.
7. Responsibilities of the Computer Resources Manager in meeting the requirements of this plan and the CRMP.

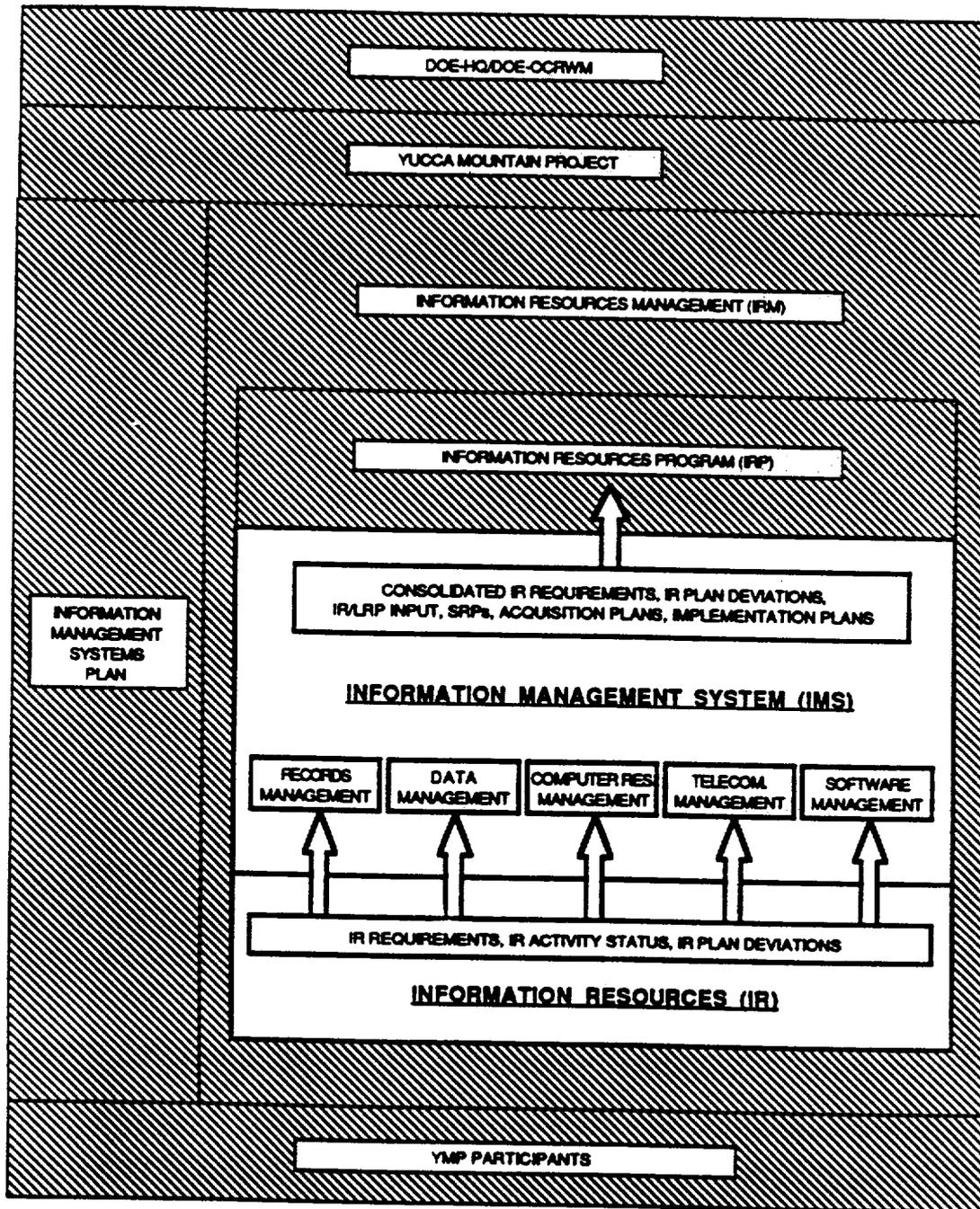


Figure 7-1. Overview of the Information Management System Coordinating Interfaces.

8. Application of the QARD Section 19.0 requirements to CRM as applicable.

## 7.2 DATA MANAGEMENT

Data Management (DM) involves the management of automated and manual data base systems for processing, locating, storing, cataloging, and transporting Project information. DM also includes oversight for releasing Project information to validated users. DM encompasses all Project information, including records, reports, forms, and data elements.

DM addresses resource requirements planning, definition of methods and standards, data base administration. A separate management plan establishes the specific requirements for DM to comply with the requirements of this plan. Elements of the DM Plan address the following:

1. Application of the IRM Project management requirements to DM as set forth in this plan.
2. Essential elements of the IR technical, cost, and schedule baselines as they relate to DM.
3. Description of the requirements for identifying, capturing, storing, retrieving, and distributing Project information.
4. Description of the internal and external interfaces with other IR functional areas and management plans.
5. Responsibilities of the Data Manager in meeting the requirements of this plan, and the DMP.
6. Provide references to the TDMP and RCMP as appropriate.

## 7.3 TELECOMMUNICATIONS MANAGEMENT

Telecommunications Management (TM) involves the management of Project telecommunications systems to include management oversight of requirements, configuration, acquisition, implementation, and operation of voice and data communications systems needed to support the Project in accordance with DOE Order 5300.1.

TM is subject to the full requirements of this plan. A separate management plan establishes the specific requirements for TM to comply with the requirements of this plan. Elements of the TMP address the following:

1. Application of the IRM Project management requirements to TM as set forth in this plan.
2. Essential elements of the technical, cost, and schedule baselines as they relate to TM in accordance with DOE Order 5300.1.

3. Description of the application of life-cycle management to Project TM activities in accordance with DOE Order 5300.1, including application of the appropriate standards in accordance with DOE Order 1360.3.
4. Description of the documentation requirements of Project telecommunications activities in accordance with DOE Order 5300.1.
5. Description of configuration management requirements, including formal Project requirements as described in the CMP, requirements established in DOE Order 5300.1, and requirements specific to TM as directed by the IRM Manager.
6. Description of the internal and external interfaces with other IR functional areas and management plans.
7. Responsibilities of the Telecommunications Manager in meeting the requirements of this plan and the TM Plan.

#### 7.4 RECORDS MANAGEMENT

Records Management (RM) involves the identification, capture, storage, safekeeping, retrieval, and distribution of Project records.

A separate management plan establishes the specific requirements for RM to comply with the requirements of this plan. Elements of the RECOMP address the following:

1. Application of the IRM Project management requirements to RM as set forth in this plan.
2. Essential elements of the IR technical, cost, and schedule baselines as they relate to RM.
3. Description of the requirements for identifying, capturing, storing, retrieving, and distributing Project records.
4. Description of the internal and external interfaces with other IR functional areas and management plans.
5. Responsibilities of the Records Manager in meeting the requirements of this plan, and the RECOMP.
6. Application of the requirements set forth in DOE/RW-0194.
7. Application of the requirements set forth in the QARD as applicable.

## 7.5 SOFTWARE MANAGEMENT

Software Management (SM) involves the development, procurement, maintenance, and use of software products that are used in support of the Project. SM includes requirements identification, analysis, and approval processes, and other software life-cycle management processes.

SM is subject to the full requirements of this plan. A separate management plan establishes the specific requirements to comply with the requirements of this plan. Elements of the SMP will address the following:

1. Application of the IRM Project management requirements to SM as set forth in this plan.
2. Essential elements of the IR technical, cost, and schedule baselines as they relate to SM.
3. Description of the application of life-cycle management to Project SM activities in accordance with DOE Order 1330.1, including application of the appropriate standards in accordance with DOE Order 1360.3.
4. Description of the documentation requirements of Project SM activities in accordance with DOE Order 1330.1.
5. Description of configuration management requirements, including formal Project requirements as described in the CMP, requirements established in DOE Order 1330.1, and requirements specific to SM as directed by the IRM Manager.
6. Description of the internal and external interfaces with other IR functional areas and management plans.
7. Application of the requirements of software quality assurance as directed in Section 19.0 of the OCRWM QARD.
8. Application of the requirements of DOE Order 1360.4 and DOE Order 1360.7.
9. Responsibilities of the Software Manager in meeting the requirements of this plan, and the SMP.

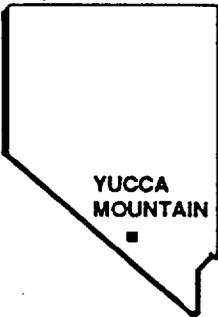
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# YUCCA MOUNTAIN PROJECT

# RECORDS MANAGEMENT PLAN

REVISION 1

**UNCONTROLLED**

**APRIL 1990**

UNITED STATES DEPARTMENT OF ENERGY  
YUCCA MOUNTAIN PROJECT OFFICE



YUCCA MOUNTAIN PROJECT  
RECORDS MANAGEMENT PLAN  
REVISION 1

April 1990

Prepared for

U.S. Department of Energy  
Yucca Mountain Project Office

The Yucca Mountain Project is managed by the Yucca Mountain Project Office of the U.S. Department of Energy (DOE). Yucca Mountain Project work is sponsored by the DOE Office of Civilian Radioactive Waste Management.

YUCCA MOUNTAIN PROJECT

RECORDS MANAGEMENT PLAN

Submitted by:

(for)   
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Yucca Mountain Project Office  
U.S. Department of Energy

5/7/90  
Date

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\_\_\_\_\_  
Carl P. Gertz, Manager,  
Yucca Mountain Project Office  
U.S. Department of Energy  
APPROVAL OF THIS DOCUMENT IS CONTINGENT  
UPON VERIFICATION UPPER TIER DOCUMENTS'  
REQUIREMENTS ARE INCORPORATED WHEN  
THEY ARE ISSUED.

5/23/90  
Date

  
\_\_\_\_\_  
Donald G. Horton, Director  
Quality Assurance  
Yucca Mountain Project Office  
U.S. Department of Energy

5/7/90  
Date

## YUCCA MOUNTAIN PROJECT

### RECORDS MANAGEMENT PLAN

#### EXECUTIVE SUMMARY

As the Yucca Mountain Project (Project) management plan for records management and document control functions, this plan establishes the foundation for implementation of Project records management and document control. This plan outlines applicable policies, functional responsibilities, requirements, and standards necessary to implement records management. The requirements of this management plan are applicable to the generation, capture, processing, storage, protection, and retrieval of Project records.

This Plan provides working definitions essential to the implementation of records management and describes the functional lines of authority affecting the records management and document control functions. As part of the Information Management System, this plan describes interfaces with other Project plans, including the Information Management Systems Plan, the Technical Data Management Plan, and the Configuration Management Plan.

The requirements of this plan are organized into three primary sections: (1) the flow of records and controlled documents, (2) descriptions of the interfaces with other Project plans, and (3) appendices that outline specific requirements for the records management and document control functions.

This plan is effective 30 days from the approval date and shall remain in force for the execution of this Project until superseded. This plan shall be reviewed annually for currency. Recommended changes to this plan shall be submitted to the Project Manager, Yucca Mountain Project Office.

RECORDS MANAGEMENT PLAN  
FOR  
YUCCA MOUNTAIN PROJECT

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## 1.0 INTRODUCTION

The Yucca Mountain Project (Project) Records Management Plan (RECOMP) implements U.S. Department of Energy/Office of Civilian Radioactive Waste Management (DOE/OCRWM) policies, orders, and guidance. The RECOMP establishes Project policies, requirements, and functional responsibilities necessary for managing Project document control and records management activities. Included within this plan are the following appendices: Appendix A, Identification, Preparation, Submittal, and Correction of Records; Appendix B, Receipt and Processing of Records; Appendix C, Storage, Preservation, and Safekeeping; Appendix D, Disposition; Appendix E, Retrieval; and Appendix F, Training. This plan is a separately published Annex of the Project Information Management Systems Plan (IMSP).

Hereinafter, the term "record(s)" shall be used to delineate Project record(s).

The following are the primary requirements documents for this plan:

- OCRWM Records Management Policies and Requirements Document, DOE/RW-0194, and its primary cited references
- Quality Assurance Requirements Document (QARD)
- Yucca Mountain Project Management Plan (PMP), YMP/88-2
- Yucca Mountain Information Management System Plan (IMSP)

## 2.0 POLICY, SCOPE, AND APPLICABILITY

### 2.1 POLICY

The objective of the RECOMP is to establish and maintain records management and document control functions efficiently. The primary purposes of these functions are to support licensing and to meet other Project requirements.

The records management and document control functions are part of the integrated Project Information Resources (IR) system. Hardware, software, data management, and telecommunication resources and systems required to support records management functions are to be planned, budgeted, and controlled in accordance with the IMSP under management oversight of the Manager, Information Resources Management (IRM).

Because most data become records, there must be a close and continuing coordination between this plan, the Data Management Plan, and the Technical Data Management Plan (TDMP). The TDMP regulates the flow of data from basic analyses through license application and defines accountability and tracking requirements, including their relationship to the records management system. The Data Management Annex to the IMSP establishes requirements for cataloging, storing, protecting, releasing, and transporting Project information to validated users. The Data Management Plan applies to all Project information.

Personnel who originate, process, safeguard, or store records must be knowledgeable and trained to perform their records responsibilities. Appendix F of this plan outlines training requirements applicable to personnel involved in the records process of this Project.

Project Participants will develop procedures to implement policies, requirements, and standards identified in this plan in accordance with appropriate Quality Assurance (QA) requirements.

Records must be retained on a permanent basis, unless their disposal is otherwise defined in accordance with Appendix D.

### 2.2 SCOPE AND APPLICABILITY

This plan is applicable to all records and to all Project Participants and subcontractors who generate, capture, process, store, and retrieve records or manage controlled documents associated with the Project.

### 3.0 WORKING DEFINITIONS

All information generated in the performance of Project business should fall into one or the other of the categories in this Section.

#### 3.1 RECORDS

Records appear in many forms (e.g., hardcopy, pictorial, drawings, or magnetic media). These records furnish documentary evidence (or support other documentary evidence) and provide confidence that Project structures, systems, or components will perform acceptably when placed in service. Information that documents management processes and decisions and that could affect confidence is considered records and must be retained.

#### 3.2 DOCUMENTS

Documents are any written or pictorial information describing, defining, specifying, reporting, or certifying activities, requirements, procedures, or results. These documents may or may not be records depending on whether they meet the definition of records in Section 3.1 of this plan.

#### 3.3 OTHER INFORMATION

Information of a transitory nature that furnishes no evidence of quality (or activities affecting quality) and has no potential for helping resolve future licensing, environmental, or public safety questions is not a record and need not be retained for records purposes. Appendix A contains guidance to the types of documents and information in this category.

## 4.0 RESPONSIBILITIES

Incumbents of the following Project Office and Project Participant positions are responsible for ensuring that records management and document control functions are accomplished within their respective organizations. Figure 4-1 identifies functional lines of authority for these functions.

### 4.1 PROJECT OFFICE

#### 4.1.1 PROJECT MANAGER

The Project Manager is responsible for this plan and for its implementation. The Yucca Mountain Site Manager is responsible for the field implementation of this plan at the Nevada Test Site (NTS).

#### 4.1.2 CHIEF, PROJECT CONTROL BRANCH (PCB)

The Chief, PCB, is responsible for providing administrative oversight of IR personnel and for coordinating IR activities, to include resource requirements, within the broad scope of Project schedules and related Project activities.

#### 4.1.3 MANAGER, PROJECT INFORMATION RESOURCES MANAGEMENT (IRM)

The Manager, IRM, exercises delegated IR authorities for the Project Manager and is responsible to the Chief, PCB, for management oversight of IR system functions, requirements, and resources.

#### 4.1.4 PROJECT RECORDS MANAGER

The Project Records Manager is responsible to the Manager, IRM, for oversight of Project records management and document control functions, requirements, and resources.

### 4.2 PROJECT PARTICIPANT TECHNICAL PROJECT OFFICERS (TPOs)

Project Participant TPOs are responsible for the records management and document control functions for their respective organizations as follows:

1. Ensuring that their organizations implement the policies and requirements of this plan and applicable QA requirements.

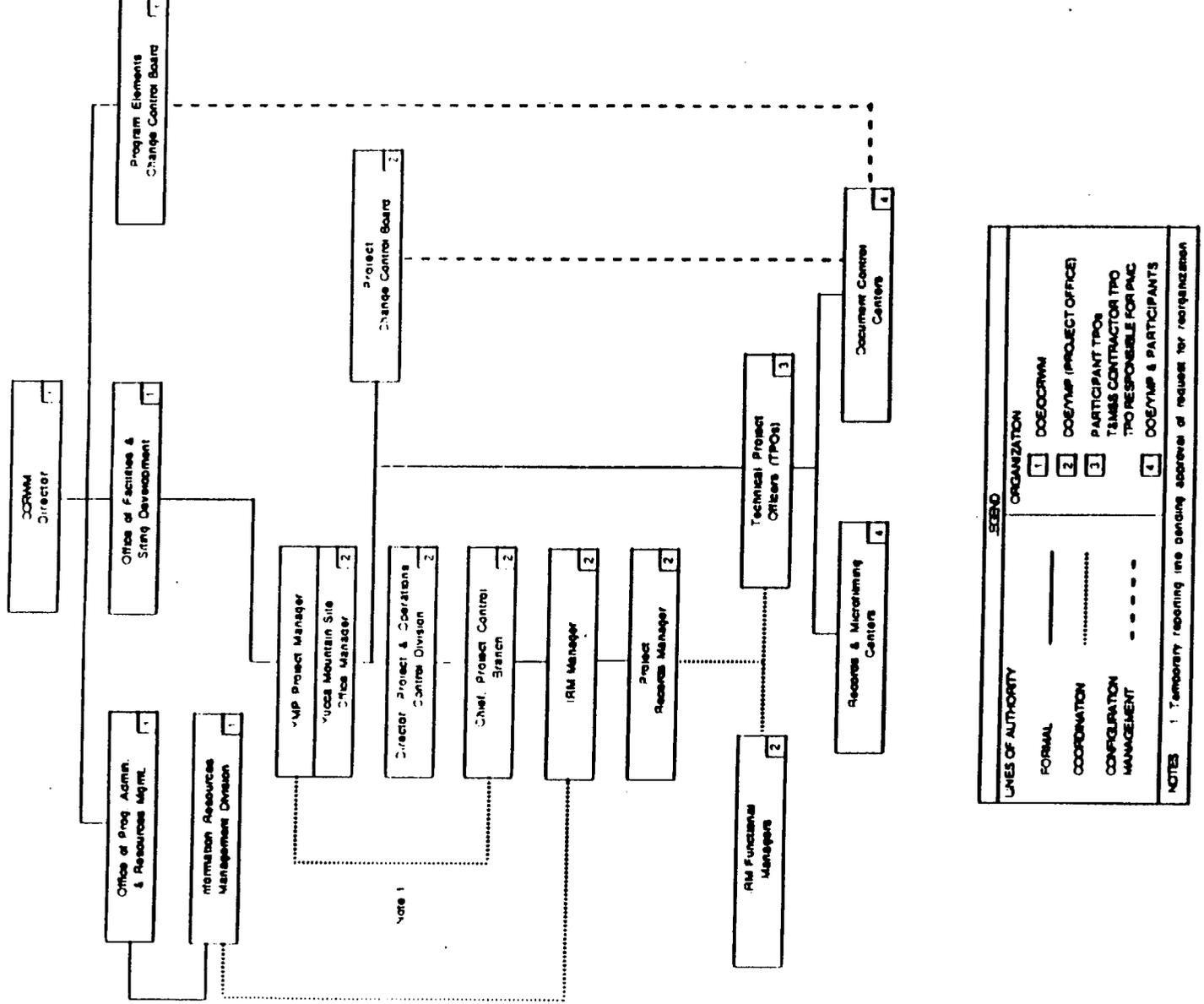


Figure 4-1. Diagram depicting project functional lines of authority for records management functions.

2. Establishing procedures that meet the requirements of this Plan and other referenced plans and ensuring their implementation.
3. Ensuring that a Local Records Center (LRC) and a Document Control Center (DCC) are established and adequately staffed and that assigned people are trained to implement requirements and meet standards identified.
4. Ensuring that records generated at the Yucca Mountain Site (NTS) are submitted to the Yucca Mountain Site Office (YMSO) LRC.
5. Identifying the records management and document control resource requirements (full-time equivalents, equipment, and dollars) to the Manager, IRM via the Long-Range Planning and Work Authorization System processes.
6. Establishing a procedure to ensure that all working files are accounted for and transferred before an employee terminates Project work.

#### 4.3 TECHNICAL AND MANAGEMENT SUPPORT SERVICES (T&MSS) CONTRACTOR TPO

In addition to the responsibilities identified in Subsection 4.2, the T&MSS Contractor TPO, through his/her subordinate organization manager(s), is responsible for day-to-day operations and planning for the Project Central Records Facility (CRF), the T&MSS DCC, the T&MSS LRC, the YMSO LRC, the YMSO DCC, and for the following:

1. Operating the Project Records Management System.
2. Planning, establishing, and staffing the YMSO LRC to collect, protect, and transport records originated by site Project Participants.
3. Planning, establishing, and staffing the YMSO DCC.
4. Maintaining the Project Records Information System (RIS).
5. Planning, scheduling, and coordinating actions to eliminate records backlog.
6. Providing training support to Project Participant LRC personnel when required.

#### 4.4 TPO RESPONSIBLE FOR THE PROJECT MICROFILMING CENTER (PMC)

In addition to the responsibilities identified in Subsection 4.2, the TPO responsible for the PMC, through his/her subordinate organization manager(s), is responsible for day-to-day operations and planning related to Project microfilming activities.

## 5.0 OVERVIEW OF RECORDS MANAGEMENT AND DOCUMENT CONTROL PROCESSES

### 5.1 RECORDS MANAGEMENT PROCESSES

Figure 5-1 is an overview of the Project Records System and the processes involved at the various functional levels. This figure depicts the perspective of the flow from origin to storage.

### 5.2 CONTROLLED DOCUMENTS

Figure 5-2 is an overview of basic processes used to control and distribute Project controlled documents.

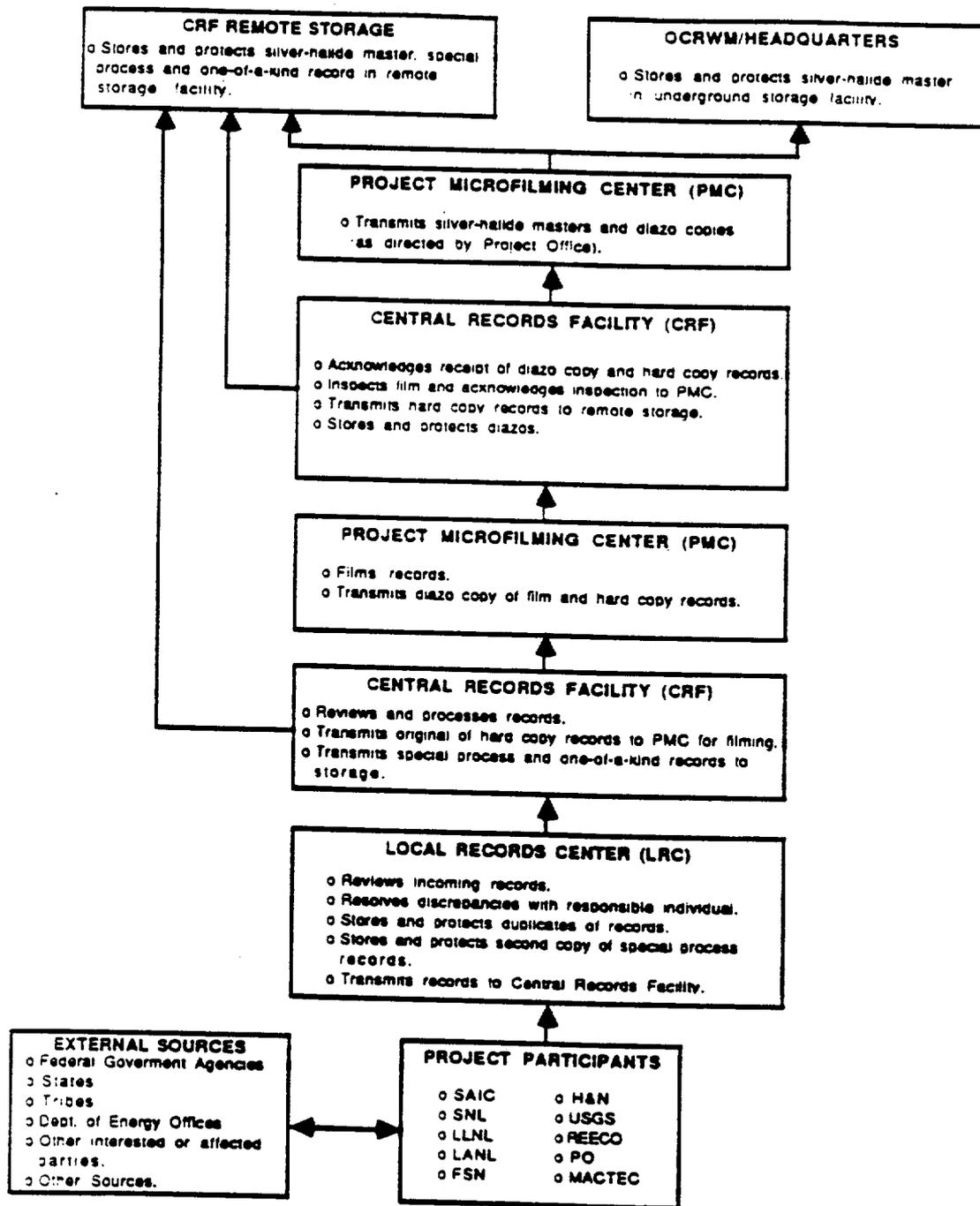


Figure 5-1. Diagram depicting the flow of records into the records system.

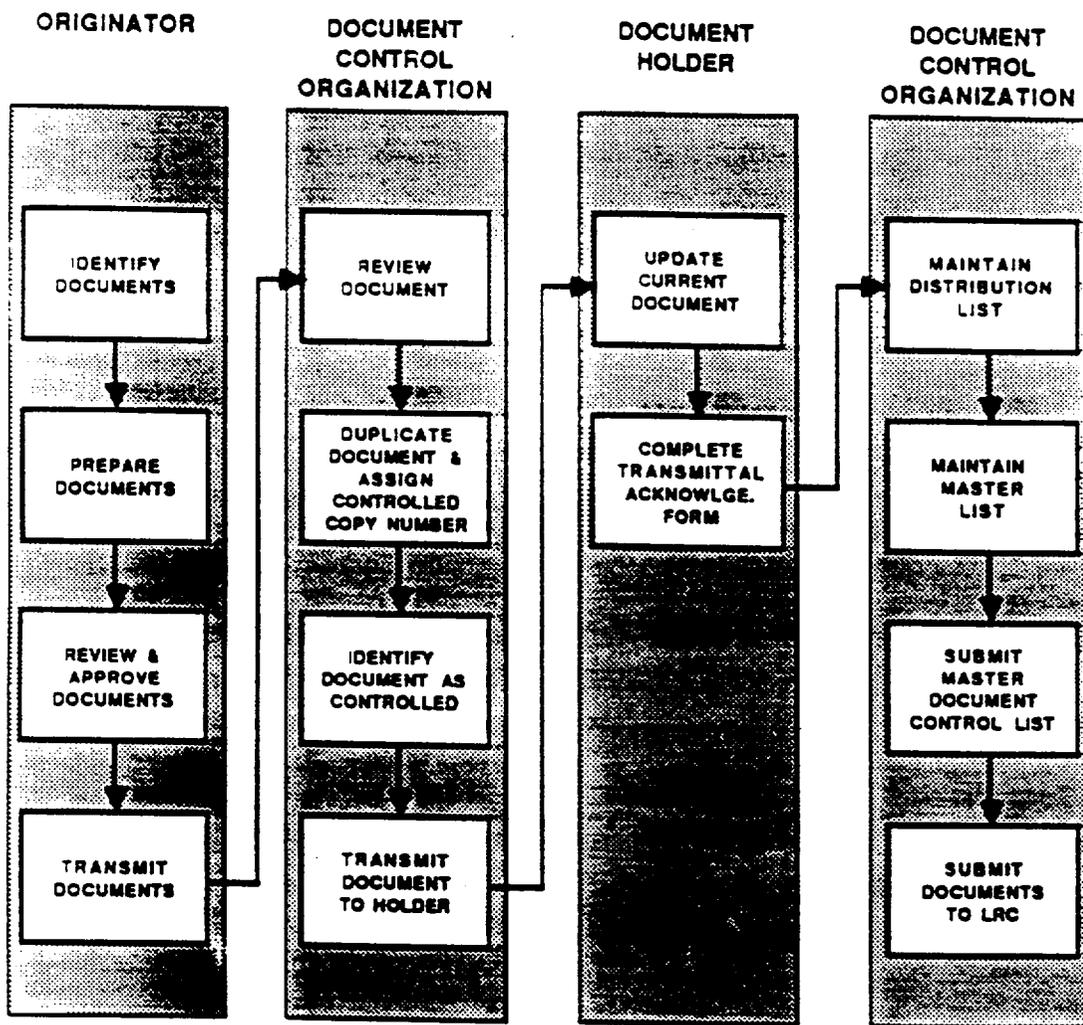


Figure 5-2. Diagram depicting the flow of controlled documents.

## 6.0 PLAN INTERFACES

The RECOMP interfaces closely with the Data Management Plan, the Configuration Management Plan, and the TDMP. Planning, budgeting, and reporting for records management and document control are done in accordance with the IMSP. Records management also has interfaces with the Computer Resource Management Plan, the Software Management Plan, Software Quality Assurance Plan, and the Telecommunications Plan.

### 6.1 TECHNICAL DATA MANAGEMENT PLAN (TDMP) INTERFACE

The TDMP addresses the definition of technical data requirements and the collection, compilation, evaluation, selection, manipulation, and interpretation of data. The TDMP also defines the processes and requirements for technical data tracking and the submission of data to the Project Technical Data Base and the Project Reference Information Base. In addition, the TDMP also specifies when records of technical data will be submitted to the LRCs for safekeeping. Also, the technical data management system uses the records management system as a mechanism to track technical data.

### 6.2 CONFIGURATION MANAGEMENT PLAN (CMP) INTERFACE

The CMP defines the Project policies, requirements, and guidance for the implementation of configuration management and for the development, review, and approval of certain Project documents. Specifically, the CMP stipulates requirements for the handling of Project documents considered to be Project Technical Baseline or identified as Project Change Control Board (CCB) controlled documents. As such, Section 3.7 of the CMP provides the generic requirements for document control. This plan will implement those document control requirements set forth in Section 3.7 of the CMP. Additionally, this plan recognizes that the CMP and other sources of controlled documents stipulate specific processing requirements in addition to the generic document control requirements of the CMP. Therefore, close and continual coordination in the development of document control and the related implementing procedures must occur to accommodate these specific requirements as they become known.

### 6.3 INFORMATION MANAGEMENT SYSTEM PLAN (IMSP) INTERFACE

The IMSP is composed of five closely related and codependent plans: computer resources, software, telecommunications, data management, and records management. As one of the functional areas, records management will require interfaces with the other components of the IMSP. The IMSP interface requirements will be characterized as either operational in nature or as resource planning aspects of IRM. For this plan, operational interfaces are predominantly limited to coordination with data management. The IRM resource

planning aspect involves overall coordination of planning, budgeting, and reporting of information resources required to provide records management services to the Project.

Records management will manage computer hardware, software, telecommunications, and data management resources in accordance with the IMSP, the Computer Resources Management Plan, the Software Management Plan, the Telecommunications Management Plan, and the Data Management Plan.

#### 6.4 SYSTEMS ENGINEERING MANAGEMENT PLAN (SEMP) INTERFACE

The SEMP describes how the Project will implement systems engineering to manage, integrate, interface, and document its technical activities and to develop and manage the technical element of the Project Baseline. As such, this plan recognizes that the SEMP will impose specific review and approval requirements upon controlled documents under its jurisdiction.

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APPENDIX A

IDENTIFICATION, PREPARATION, SUBMITTAL,  
AND CORRECTION OF RECORDS

## APPENDIX A

### IDENTIFICATION, PREPARATION, SUBMITTAL, AND CORRECTION OF RECORDS

#### A.1 PURPOSE

Appendix A delineates the requirements for identifying, preparing, correcting, and submitting records to the records system.

#### A.2 IDENTIFICATION OF RECORDS

Records shall be identified in accordance with the following requirements:

1. All design specifications, procurement documents, task plans, study plans, test procedures, implementing procedures, instructions, or other documents shall specify the QA records and record packages to be generated, supplied, or maintained as a result of that process, and the Project Participant personnel who generate those records shall be responsible for submitting them to the appropriate LRC for processing.
2. All records as defined in this plan shall be submitted for processing.
3. Proprietary or classified records shall be stored in accordance with DOE Order 5635.1A and shall not be submitted to the records management system. A surrogate record that identifies the materials and the requirements for accessing them shall be submitted for processing.

The following materials shall not be captured in the RIS and may be disposed of without special authority, except when the procedure governing the activity specifically requires the submission of this material. Such material includes, but is not limited to, the following:

1. Correspondence that is circulated or transmitted for information purposes only and other materials on which no documented action is taken or required. Such materials should be identified as "Information Copy" (or designated information copy through a buckslip/routing slip).
2. Correspondence and other materials documenting fringe activities, such as employee welfare activities or charitable fund drives. Other materials of short-term value that, after action has been completed, have neither programmatic nor informational value, such as requests for publications and communications on hotel reservations.

3. Tickler, follow-up, suspense, or reading file copies of records; duplicate copies of all records maintained in the same file; and extra copies of printed or processed material, official copies of which have been retained for record purposes.
4. Superseded manuals or other directives maintained outside the issuing office.
5. Routing slips.
6. Electronic mail.
7. Working papers, such as personal notes, reminders, or handwritten drafts.
8. Transmittal sheets, which do not require action, unless used to transmit materials for action.
9. Blank forms.
10. Initial stenographic notes after the transcription is available.
11. Processed or published material received from other activities or offices, which requires no action and is not needed for documentary purposes (the originating office or activity is required to maintain record copies).
12. Catalogs, trade journals, and other publications or papers that are received from government agencies, commercial firms, or private institutions, which require no action and are not part of a case (activity or Project task) upon which action is taken.
13. Reproduction materials, such as stencils and offset masters.
14. Physical exhibits, artifacts, and material lacking documentary value.
15. Telecopies (facsimiles). If telecopies (facsimiles) of signed documents are sent, the original of the signed document(s), including draft documents, must be forwarded immediately through the mail system.
16. Preaward information and documents (e.g., information on a procurement prior to contract award, Source Evaluation Board materials, proposal information), except as required as a QA record.
17. Personnel records, except as required as QA records (e.g., qualification and training records).
18. Business sensitive (financial or commercial) information.

19. Information that has been classified pursuant to an Executive Order or statute, which is so marked. Hard copies of such material, when used in the conduct of Project business, shall be stored and handled in accordance with DOE Order 5635.1A.
20. Personal correspondence (unless submitted by the individual for processing).
21. Preliminary drafts when so marked (see Section A.3.6).
22. Circulation/direct distribution mail, subscriptions, periodicals, press releases, and news clippings.
23. International draft correspondence, documents, brochures, and literature. Final reports and official documents are not excluded.
24. Documents dealing with the procurement of office supplies and services, such as paper, pens, desks, chairs, and reproduction services.
25. Travel vouchers, travel authorizations, purchase orders, training requests, personnel actions, and similar administrative material, where a record copy is retained by another department (e.g., the personnel department) or organizational entity.
26. Contractor-generated progress reports and telephone logs, except when included as part of a required records package.
27. Documents prepared by another DOE organization and submitted to the Project for routine concurrence or coordination, whose subject matter does not relate specifically or exclusively to the Project.

The LRC and CRF, in conjunction with the responsible individual when appropriate, shall follow these guidelines when questionable records are encountered. The Project Office Records Manager is available to resolve differences involving interpretation of guidance contained in this plan.

### A.3 RECORDS PREPARATION REQUIREMENTS

Records must meet the requirements identified in the subsections of Section A.3. Records that do not meet those requirements must be corrected or documented in accordance with Section A.4 prior to processing by the LRC.

#### A.3.1 TRAINING AND QUALIFICATION RECORDS

Records that document training that involves QA activities must meet the requirements outlined within this Plan. Such records shall be stored in accordance with the requirements outlined in Appendix C of this Plan.

### A.3.2 RECORDS PURCHASED OR RECEIVED FROM OUTSIDE ENTITIES

Records or record packages purchased or received from outside entities shall have the QA designation and the WBS number added by the Project Participant. Those records that are designated as "QA:N/A" do not have to meet the other requirements of this Plan except that the best copy available must be provided to the LRC. Those records that are designated as QA must meet the requirements of this Plan.

### A.3.3 RECORDS RECEIVED FROM SUPPLIERS AND VENDORS

Records, or information subsequently designated as records, received from suppliers and vendors shall be submitted to the LRC within record packages prepared in accordance with Section A.3.6 of this Plan.

### A.3.4 PRELIMINARY DRAFT DOCUMENTS

Documents under development or preparation, being circulated for initial reviews, which may require iterations and revisions during the process of finalization, may be identified as "Preliminary Drafts." Such documents are not considered records and need not be transmitted to the LRC for processing. When preliminary drafts are used, they are to be handled as follows:

1. Mark "PRELIMINARY DRAFT" on the front page of the document.
2. After marking, they may be transmitted freely within the DOE and among the DOE Participants.
3. They must be circulated using routing, transmittal slips, or other informal means. Official memorandum or letterhead stationery must not be used to transmit preliminary drafts.
4. Marginal comments by a reviewer of preliminary drafts may be used.
5. Preliminary draft documents must not be maintained beyond the completion of a subsequent iteration.

Examples of preliminary drafts include (1) early working copies of plans, procedures, and reports; (2) "think process" or "issue papers" circulated between or among organizations; (3) draft memoranda completed by staff without signature authority; and (4) electronic mail.

### A.3.5 DRAFT DOCUMENTS

A document (other than a final document) that proposes or reflects a DOE/OCRWM position, policy, plan, or intended purpose and that is transmitted by a supervisory official of the originating organization for formal concurrence within DOE, or formally transmitted outside DOE for review and/or

comment, or, in the case of Program participants, provided to OCRWM as a scheduled deliverable is a draft document. These documents must be clearly marked as "draft" documents. Draft documents are to be handled as follows:

1. Draft documents transmitted within the DOE for formal concurrence must be collected and retained by the Project.
2. DOE comments received on concurrence drafts of documents must be retained with the concurrence draft and the final documents.
3. Draft documents formally transmitted outside DOE for review and/or comment, as well as the comments received in response to such transmittals, must be retained with the final document.
4. Comments on drafts of Program documents, such as the Site Characterization Plan, are to be formally submitted, in accordance with appropriate procedures, on Document Review Sheets (DRSs).
5. The review and comment format is to be used by the OCRWM/HQ and the Project Office when a Participant's draft document submitted for review and approval is rejected.

Draft documents must be processed into the records system. If draft documents circulated for concurrence or signature do not become finalized (for whatever reason), they must be submitted along with comments for processing.

For Participants other than the DOE, the version submitted to the DOE as a deliverable for review and comment shall be considered the draft. Previous versions and comments may be discarded at the discretion of the Participant. Drafts, comments, and resolutions for both DOE and other Participant procedures do not need to be retained.

#### A.3.6 PROJECT PARTICIPANT GENERATED RECORDS

Individual records and record packages shall be prepared in accordance with the following requirements:

1. QA records and record packages must be properly authenticated.
2. Record packages must include a table of contents that inventories the package, lists the individual records (or groups of records) that constitute the package, indicates the page counts for those records (or groups of records), and has been signed and dated to indicate that the record package has been prepared in accordance with the requirements outlined within this Plan.
3. Record packages must include a package identifier in the upper right-hand corner of the first page of the table of contents. This identifier shall be written as "\_\_\_\_.W.B.S" where "\_\_\_\_" is the three-digit alpha code used to identify the type of record package

(i.e., QRP for Quality Related Packages; ARP for Administrative Record Packages; RTP for Record Turnover Packages [nonquality-related materials]; or PRP for Personal Record Packages).

4. All records must be assigned a WBS number corresponding to the activity that generated the record. The appropriate WBS number shall be placed in the upper right-hand corner of the first page of individual records and as part of the identifier for record packages.
5. Records and record packages must be designated as QA or non-QA (QA:N/A) based upon the designation of the activity to which they relate. The appropriate designation must be placed in the upper right-hand corner of the first page of individual records and on the first page of the table of contents of record packages. (Record package segments do not require a separate designation.)
6. Records and record packages must be legible. A clear and distinct image, with a sharp contrast between the character/pictorial information recorded and the recording medium (paper), is required.
7. Records and record packages must be complete. All attachments or enclosures must be included. No portions of a page may be missing. No recorded information may be obliterated.
8. Data on records and drawings must be recorded in black ink against a light background. Pencil entries are not an acceptable means of recording information on a record. Black-line drawings are preferred to blue-print sepia copies.  
  
NOTE: Information recorded on certain data records may be accepted in other than black ink. Such uses shall be handled on a case-by-case basis and approved in advance.
9. All blocks on records, including signature, are to be filled in or "NA" (not applicable) entered.  
  
NOTE: Records that state on their face that only applicable items are to be completed, need not have "NA" entered in all items nor do enclosures that are intentionally partially completed (i.e., Standard Deficiency Reports (SDRs), DRSS, Nonconformance Reports (NCRs), Inspection Reports, draft documents for review, and documents being transmitted for signature).
10. Typewritten text must use clean, multistrike ribbons.
11. Stamps or other marks must not intersect or obliterate the text of records.

12. Records must not have any information scratched out or obliterated, or have other extraneous information handwritten on the record with the exception of corrections made in accordance with Section A.5.1 of this Appendix.

NOTE: If new information has been added to a record previously submitted to the LRC, it constitutes a new and separate record and must be processed as such.

13. If the original hardcopy is not available for processing, the copy submitted for processing shall emulate the original to the degree possible and shall not be more than two generations from the original. The copy image must be aligned properly (optically skewed images are not acceptable), the angle of the record must be truly reproduced on the photocopy, and square corners are to appear at right angles.
14. Photo reductions of data are not acceptable unless the image is very clear and easily legible. Letters and other characters must be spaced so that the background areas between them are approximately equal. Words are to be clearly separated by space equal to the height of the lettering. Space between letters must be at least 0.06 inches.
15. Colored paper shall not be used as a recording medium.
16. Only the white first page (original) of a "no carbon required" (NCR) form or other paper requiring pressure from writing implement, typewriter, or printer to produce a legible impression) shall be acceptable. Copies of NCR-type paper shall not be acceptable.

NOTE: The only exception to this requirement is oversize records that are of a color that can be filmed on a 35-mm planetary camera for aperture card production. These exceptions require special handling and require approval by the CRF manager prior to submittal for microfilming.

17. Data recorded on drawings shall be completed in accordance with the latest issuance of ANSI Y 14.2. As a minimum, data or drawings must comply fully with current Project standards for preparation and control of engineering and architectural drawings.
18. All Project reports (reports do not include journal articles, bulletins, or professional papers) must have an accession number assigned prior to publication. The accession number shall be placed on the inside of the back cover or within the acknowledgment section of the report. All final reports must list and identify, by accession number, cited reference material in the report. All cited reference material must be contained in the records system and must be cross-referenced to the report.

NOTE: Journal articles, bulletins, or professional papers generated as a result of Project activities must be submitted to the

LRC for processing, but need not receive an accession number prior to publication.

19. All machine-readable data records may be generated as, or converted to, magnetic tapes. Two copies of these records must be transmitted to the CRF.

a. The following requirements apply to magnetic tapes. The media must be

(1) Captured on new, clean, or recertified one-half inch 7- or 9-track tape reels that have been rewound under controlled tension.

NOTE: Media must be tested and certified no more than 6 months before using them to record information designated for permanent retention.

(2) Written in ASCII or EBCDIC, with all extraneous control characters removed from the data (except record length indicators for variable length records or marks designating a datum word, field, block, or file), blocked no higher than 30,000 bytes per block, at 800, 1600, or 6250 bpi.

(3) Labeled externally to include the following:

(a) The name of the organizational unit responsible for the data.

(b) File title(s).

(c) Dates of creation and coverage.

(d) The recording density.

(e) Type of internal labels.

(f) If applicable, data set name(s), volume serial number, number of tracks, character code/software dependency, record length, block size, and reel sequence number (if the file is part of a multireel set).

(4) Verified as error-free.

b. Machine-readable files, which have been designated for preservation and maintained on a direct access storage device, must comply with the requirements of Items 19a(1) and 19a(2) of this Section.

c. Temporary records shall not be submitted on the same magnetic tape as permanent records.

NOTE: Floppy disks are not an acceptable storage media for records.

20. Microfiche is not acceptable media for records.

#### A.4 SUBMITTAL OF RECORDS TO THE LRC

Records and record packages shall be submitted to the LRC in accordance with the following requirements:

1. Drawings, maps, or other "oversize" records (i.e., records with the minimum dimension greater than 14 inches) must not be folded. Such oversize records shall be rolled for transmittal.
2. If blue-line or sepia drawings are the only copies available, they must not be folded but rather rolled for storage or transmittal. They shall be stored on stick files or in flat (plan) files.
3. Machine readable records shall be transferred to the LRC as soon as they become inactive or whenever the responsible individual cannot provide proper care and handling of magnetic tapes to guarantee the preservation of the information they contain. Documentation adequate for servicing and interpreting machine readable records that have been designated for preservation shall be transferred along with the machine-readable file. This documentation shall include, but not be limited to, the following:
  - a. Narrative description of the file(s).
  - b. Physical file characteristics.
  - c. Recording mode information, including the coding structure (code books).

NOTE: Where it has been necessary to strip data of extraneous control characters, the code book specifications defining the data elements and their values must match the new format of the data.
  - d. Recording system information.
  - e. A record layout that should break down the file by fields. Each field shall have a name, size, starting position, and a description of the form of the data (alphabetic, zoned decimal, packed decimal, or numeric).
4. One-of-a-kind records (records that cannot be duplicated or microfilmed or would lose their meaning when microfilmed, such as radiographs, multicolored maps, and map overlays) shall be submitted to the LRC when no longer in use. If the record should be part of a record package, but is still in use, a complete description and the storage location of the record shall be provided to the LRC.

5. The original and a duplicate of special process records (records that cannot be filmed but can be generated in duplicate, such as magnetic tapes and negatives) shall be submitted to the LRC.
6. Records shall be sent unbound or loose-leaf when possible.
7. Completed, individual records shall be forwarded to the LRC no later than 10 working days after the date of completion or receipt.
8. Records that will become part of a record package may be submitted to the LRC as segments anytime during the creation of the record package.
9. Record packages shall be transmitted to the LRC within 10 working days after the closeout of the record package.
10. Technical data shall be submitted to the LRC in accordance with the Data Management Plan, the TDMP, and applicable Project procedures.

#### A.5 CORRECTIONS TO RECORDS

##### A.5.1 CORRECTION OF RECORDS PRIOR TO SUBMITTAL TO THE LRC

Errors on records are to be corrected by scribing a single line through the incorrect information using black ink and entering the correct information in close proximity. The correction must reflect the date, initials, or signature of the person within the originating organization who is authorized to make corrections.

##### A.5.2 CORRECTION OF RECORDS REJECTED BY THE LRC PRIOR TO PROCESSING

Records rejected by the LRC prior to processing, either by informal contact from the LRC or by receiving formal rejection documentation from the LRC, shall be corrected in accordance with the following requirements:

1. Both QA records and non-QA records that can be corrected in accordance with Section A.5.1, or those that can be regenerated as an acceptable copy, must be corrected (or regenerated). The corrected copy, or "new" original, must be returned to the LRC, along with the rejection documentation received (if applicable), within 10 working days of receipt.
2. Both QA and non-QA records that cannot be corrected or regenerated must be returned to the LRC within 10 days of receipt, along with documentation stating the reason(s) why the record cannot be corrected or regenerated. Discrepancy documentation received from the LRC (if applicable) must accompany this material.

### A.5.3 CORRECTION OF PREVIOUSLY PROCESSED RECORDS

The LRC shall be immediately notified of any errors in previously processed records or record packages. The corrected, modified, or supplemental records shall be submitted to the LRC. The original records shall remain in the system, and the new data shall reference the previous record or record package. If the new record or record package supersedes the previous record or record package, it shall be indicated in the index for the new record or record package except in the case of documents that receive revision numbers. Revision numbers shall indicate supersession in the data base when appropriate.

APPENDIX B

RECEIPT AND PROCESSING OF RECORDS

## APPENDIX B

### RECEIPT AND PROCESSING OF RECORDS

#### B.1 PURPOSE

Appendix B delineates the requirements for reviewing, processing, and microfilming records.

#### B.2 LRC RECORD COLLECTION AND RECEIPT CONTROL

The following record collection and receipt control requirements apply to the LRCs.

##### B.2.1 LRC RECORD REVIEW AND ACCEPTANCE

The LRCs shall perform review and acceptance of records in accordance with the following requirements:

1. Records generated by Project Participant personnel must be verified and meet the following standards.
  - a. Records, including those submitted as segments, must be prepared in accordance with Appendix A, Item A.3.6, and meet microfilm processing standards addressed in Appendix A, Section A.3.6, Items 6-9, 11, 12, 15, and 16.

NOTE: Records that do not meet microfilming standards must be processed in accordance with Appendix A, Section A.5, prior to forwarding to the CRF.
  - b. Records requiring signature have been signed.
  - c. Records listed in the table of contents of a record package are contained within the record package.
2. Records that may be transmitted in varying degrees of completeness as part of the transmittal record (i.e., SDRs, DRSSs, NCRs, Inspection Reports, draft documents sent for review, and documents being transmitted for signature) shall be processed.
3. Technical data records received must be processed in accordance with the Data Management Plan, the TDMP, applicable procedures, or other Project Office guidance.

### B.2.2. PROBLEM RESOLUTION

Changes, to include content corrections to records, are the responsibility of the originator or other responsible person. Corrections required must be made in accordance with Appendix A, Section A.5.1, of this plan.

NOTE: Records personnel may make administrative corrections to records, for example, by placing the WBS number in the correct location.

The LRC should use the following guidelines to resolve problems:

1. If a record is identified as being unacceptable based on the review procedure outlined in Section B.2.1 of this Appendix, the LRC should contact the responsible individual to resolve the discrepancy. If the record(s) must be returned to the record source for correction, the LRC shall document the discrepancy and shall forward the record and a copy of the discrepancy documentation to the responsible individual. The LRC shall retain a copy of the records and the discrepancy documentation. The LRC shall contact the responsible individual periodically to monitor the record status. If the discrepancy cannot be resolved within 30 working days, the LRC shall request assistance from the TPO.
2. When an acceptable copy of the record is returned, the LRC must prepare the record for transmission to the CRF. The documentation relating to the initial discrepancy may be discarded.
3. If an acceptable copy of a QA or non-QA record is not available, the LRC shall process the record, the documentation of the deficiency, and the responsible individual's documentation stating why the record cannot be corrected or regenerated (see Appendix, Section 1.5.2). (The documentation for QA records shall be designated "QA;" the documentation for non-QA records shall be designated "QA: N/A.") If the problem with the record is legibility, the LRC shall stamp all applicable pages of the record "Best Available Copy" prior to transmission to the CRF.

### B.2.3 RECORD TRANSMITTAL TO THE CRF

The LRC shall transmit records to the CRF in accordance with the following requirements:

1. Copy all duplicative records, and store and protect the duplicates and the second copy of special process records in accordance with Appendix C of this plan until notified by the CRF that the records have been processed. Upon notification, transmit the second copy to the CRF.
2. Transmit only those records generated or initially received by the Project Participant, except in the case of the YMSO LRC.

3. Transmit machine-readable files if it is determined that the LRC cannot provide proper care and handling of such files. Identify those files that are still in use.
4. Prepare a transmittal form listing the records being transmitted to the CRF. Include a record description that indicates a title or other descriptive data, the number of pages, record date, whether the record(s) is an individual record or a record package, and any special instructions/remarks.
5. Attach a special instruction sheet to the original of oversized, special process records, and one-of-a-kind records.
6. Insert a copy of a special instruction sheet within the package to identify those oversized, special process, and one-of-a-kind records that are being transmitted under separate cover.
7. Package the records and transmittal form, and transmit them to the CRF within 30 working days of receipt.

NOTE: Special dispensation from the 30 working-day requirement shall be obtained in writing from the Project Office.

### B.3 RECORD REVIEW AND PROCESSING

#### B.3.1 CENTRAL RECORDS FACILITY (CRF)

The CRF shall review and process records in accordance with the following requirements:

1. Records received from LRCs are to be verified for content and quality. Records meeting standards identified in Appendix A, Section A.3.6, Items 6-9, 11, 12, 15, and 16 will be processed. Substandard records will be identified by the CRF staff and reviewed by the responsible supervisor prior to returning them to the originating LRC. Records rejected must be accompanied by an explanation signed by the approving supervisor.
2. Discrepancies, including the replacement, restoration, or substitution of lost or damaged records, must be resolved with the LRC. If the restoration or replacement of such records is not practical, that fact must be documented in accordance with approved quality procedures. If there are no discrepancies, or when discrepancies have been resolved, a signed copy of the transmittal form, verifying receipt, must be returned to the LRC.
3. Legible records not meeting the standards of Appendix A, Section A.3.6, Items 6-9, 11, 12, 15, and 16 must have been stamped "Best Available Copy."
4. A separate accession number must be assigned to each record, record package, and record package segment. With the exception of

published reports, the accession number will be placed vertically in the upper right-hand corner of the first page of the record.

5. Index appropriate record information into the RIS data base. Record packages shall reference materials within them. Published reports shall reference cited materials. Superseding, supplemental, and correcting records shall reference the record it supersedes, supplements, or corrects except when supersession is indicated by revision number.
6. Technical data records must be processed in accordance with the Data Management Plan, the TDMP, applicable procedures, or other Project Office guidance.
7. Machine-readable files must be transmitted to acceptable storage as soon as possible after receipt.
8. Records shall be transmitted to the Project Microfilming Center (PMC).

#### B.3.2 PROJECT MICROFILMING CENTER (PMC)

The PMC must review the records transmitted from the CRF for accountability purposes, resolve problems (if any), and microfilm the records in accordance with 36 CFR Part 1230 and the following requirements:

1. Film Type and Specifications
  - a. Film used for the microfilming of normal size records shall be of thin-based (2.5-mils thickness), dimensionally stable, strong polyester base 16-mm roll film.
  - b. Length of each 16-mm roll of microfilm shall be 215 feet of usable film.
  - c. Film stock (16-mm) used to make microfilm of permanent records for the purpose of disposal of the original document shall conform to the following:
    - (1) Federal Standard No. 125D and be on safety-base permanent record film as specified in ANSI PH1.25-1984.
    - (2) ANSI PH1.28-1984.
    - (3) Tested in accordance with ANSI PH1.29-1985 and ANSI PH1.31-1973.
    - (4) Procedures for testing covered in Federal Standard No. 170B, which cites ANSI standards.
  - d. Engineering drawings and all other oversized documents must be microfilmed on 35-mm microfilm and mounted in aperture cards. The aperture card header must be identified with the aperture

card number and drawing number (if applicable). The film type and format shall meet the requirements of 36 CFR Part 1230.14.

## 2. Microfilming

- a. Maintenance and operation of microfilm equipment must be performed in accordance with the equipment manufacturer's recommendation.
- b. Documents must be prepared for filming by sorting, taping holes, flattening, and removing fasteners, such as paper clips, staples, bindings, or any other physical attachments, prior to microfilming.
- c. Targets that convey the following information must be used during the microfilming process: start and end of roll; certificate of authenticity, start, and end; resolution; density; special instructions; and corrections.
- d. As a minimum, the microfilming process will produce two silver masters and one diazo working copy. Other diazo working copies will be produced at the direction of the Project Office.
- e. Oversized documents that exceed 11-1/2 inches on more than one edge and that, if reduced to 8-1/2 x 11 inches, would not be legible, shall be filmed on 35-mm microfilm and placed into aperture cards.

## 3. Processing and Testing

- a. Microfilm must be processed so that the residual thiosulfate ion concentration will not exceed 0.007 grams per meter in a clear area. Tests conducted must meet this requirement by performing the methylene blue test specified in ANSI/ASC PH4.8-1985.
- b. The method of determining minimum resolution on microfilms of source documents must conform to the Quality Index Method for determining resolution and anticipated losses when duplicating as described in the ANSI/NMA MS23-1983. The following additional resolution requirements are required for permanent records:
  - (1) A quality index level of five is required at the third generation level.
  - (2) Resolution tests must be performed using the NBS 1010a Microcopy Resolution Test Chart or equivalent, and the patterns will be read following the instructions provided with the chart.
  - (3) The character used to determine the height used in the Quality Index formula shall be the smallest character used to display record information.

- c. The background photographic densities on microfilms must be appropriate to the type of documents being filmed. Recommended background densities are as follows:

<u>CLASSIFI- CATION</u>	<u>DESCRIPTION OF DOCUMENTS</u>	<u>BACKGROUND DENSITY</u>
Group 1	High-quality printed books, periodicals, and dense typing	1.1 - 1.3
Group 2	Fine-line originals, letters typed with a worn ribbon, pencil writing with a soft lead, and documents with small printing	1.0 - 1.1
Group 3	Pencil drawing; faded printing; graph paper with pale, fine colored lines; and very small printing, such as footnotes	.90 - 1.0
Group 4	Very weak pencil manuscripts and drawings and poorly printed, faint documents	.80 - .90
Group	COM	1.2 - 1.5

NOTE: The procedure for density measurement is described in ANSI/NMA MS23-1983.

- d. The following formats are mandatory standards for microforms produced by or for OCRWM:
- (1) The formats described in ANSI/AIIM Standard MS14.1988 shall be used for microfilming source documents on 16-mm roll film. A reduction ratio of 24:1 shall be used whenever document size permits.
  - (2) The formats described in ANSI/AIIM Standard MS14.1988 shall be used for microfilming source documents on 35-mm film for aperture card applications, format 2 prescribed in MIL-STD 399A.
  - (3) Format 3 prescribed in MIL-STD 399A shall be used for aperture cards.

#### 4. Quality Control

After the microfilming, processing, and testing activities are completed, the following quality control inspections must be performed:

- a. A frame-by-frame comparison between the microfilm image and the source documents filmed to ensure that all documents/pages are accounted for.
- b. Faults identified, such as missed pages, blurred or cut off data, missed 2-sided media, and incompleteness, must be corrected. Should refilming of documents or pages be necessary, correction and/or refilming targets must be used as appropriate.

5. Review

Review of the master silver (archival copy) shall be conducted in accordance with the requirements of 36 CFR Part 1230.22. The first review, as required by 36 CFR Part 1230.22, shall be conducted starting January 1990.

Upon completion of microfilming, the PMC shall enter the microfilm roll/frame location for the filmed records into the RIS.

#### B.4 TRANSMITTAL/REVIEW OF MICROFILM

The PMC shall complete the transmittal forms originally received with the records from the CRF and shall transmit a diazo copy of the microfilm, the hard copy of the records, and the completed transmittal forms to the CRF.

The CRF shall acknowledge receipt of the diazo copy of the microfilm and hard-copy records by returning a signed copy of the transmittal forms to the PMC. In addition, the CRF shall selectively inspect the microfilm to verify that the appropriate records have been microfilmed and shall acknowledge such inspection to the PMC. The CRF shall retain the diazo copy of the microfilm and the hard copy records and shall protect and store them in accordance with Appendix C of this Plan.

Upon receiving acknowledgment of CRF inspection of the filmed records, the PMC shall transmit silver-halide microfilm masters and diazo copies of all microfilm as directed by the Project Office. At a minimum, the CRF and OCRWM/HQ shall each receive a silver-halide microfilm master.

APPENDIX C

STORAGE, PRESERVATION, AND SAFEKEEPING

## APPENDIX C

### STORAGE, PRESERVATION, AND SAFEKEEPING

#### C.1 PURPOSE

Appendix C delineates the requirements for storage, preservation, and safekeeping of hard-copy, one-of-a-kind, special process records, and silver-halide microfilm masters.

#### C.2 STORAGE

##### C.2.1 PROJECT PARTICIPANT PERSONNEL

Prior to records being transmitted to the LRC for handling, they must be protected by storage in one-hour fire-rated containers. Provisions must also be made for one-of-a-kind and special process records (such as radiographs, photographs, negatives, microfilm, and magnetic media) to prevent damage from excessive light, stacking, electromagnetic fields, temperature, and humidity.

##### C.2.2 LOCAL RECORDS CENTERS (LRC)

The LRCs must ensure that records are stored in accordance with the following requirements:

1. Hard-copy and special process records in possession of the LRC must be dual-stored in a controlled access facility meeting QARD standards. Project Participants unable to meet these standards must obtain approval for an exception to standards from the Project Office.
2. Stored hard-copy records must be placed in binders, folders, or envelopes for storage in steel file cabinets or on shelving in containers.
3. Special process records shall be stored in appropriate containers.
4. One-of-a-kind records being stored within the LRC must be maintained in a controlled access two-hour fire-rated safe until such time as they can be processed and transmitted to the CRF.
5. Upon transmittal of original hard-copy and special process records to the CRF, duplicates of those records are to be retained and stored by the LRC as outlined in Item 2 until the LRC is notified by the CRF that the records have been processed. Upon notification, the second copy of the special process records shall be transmitted to the CRF, and the duplicate hard-copy records may be disposed of.

### C.2.3 CENTRAL RECORDS FACILITY (CRF)

The CRF must store records in accordance with the following requirements:

1. Prior to microfilming, hard-copy and special process records shall be stored in a controlled-access facility.
2. After microfilming, hard-copy records shall be stored in sequential microfilm number order in a remote storage facility and shall be maintained until directed otherwise by the Project Office or DOE/HQ.
3. A silver-halide microfilm master and special process records that cannot be microfilmed shall be stored in accordance with 36 CFR Part 1230.20 in a remote storage facility that meets the requirements of the QARD (for dual storage).
4. A silver-halide microfilm master and a copy of special process records that cannot be microfilmed shall be transmitted to the Deputy Director, IRM/OCRWM, for storage in an HQ-approved, underground microfilm storage facility.
5. One-of-a-kind records shall be stored in either (1) an access-controlled two-hour fire-rated safe or (2) in a single or alternate-single remote storage facility in accordance with the QARD.

### C.2.4 PROJECT MICROFILMING CENTER (PMC)

While in the possession of the PMC, the two silver-halide microfilm masters shall be stored in a controlled-access, two-hour, fire-rated safe.

## C.3 PRESERVATION

### C.3.1 LOCAL RECORDS CENTERS (LRC)

The LRCs must preserve hard-copy, special process, and one-of-a-kind records in accordance with the requirements outlined within this Plan and the QARD. In addition, reasonable precautions shall be taken with regards to packaging special process and one-of-a-kind records for shipment to the CRF.

### C.3.2 CENTRAL RECORDS FACILITY (CRF)

The CRF shall preserve hard-copy, special process, and one-of-a-kind records in accordance with the requirements outlined in Section C.3.1 of this Appendix. In addition, the CRF shall ensure the preservation of magnetic media stored in the remote storage facility by performing the following:

1. Perform an annual statistical sampling of 3 percent of all reels of tape to identify any loss of data and to discover its causes. If errors are detected, attempt to eliminate them and their causes. Replace tapes with 10 or more errors and, when possible, restore lost data.
2. Ensure that information is not lost because of changing technology or deteriorating magnetic media. As needed, identify requirement to update hardware and software systems for maintaining program efficiencies. Identify requirements to the Project Office IRM.
3. Maintain adequate and up-to-date technical documentation with the file. Minimum documentation is defined as
  - a. Narrative description of the file(s).
  - b. Physical file characteristics.
  - c. Recording mode information, including the coding structure code books.

NOTE: Where it has been necessary to strip data of extraneous control characters, the code book specifications defining the data elements and their values must match the new format of the data.

- d. Recording system information.
- e. A record layout that should break down the file by fields. Each field will have a name, size, starting position, and a description of the form of the data (alphabetic, zone decimal, packed decimal, or numeric).

### C.4 SAFEKEEPING

Unauthorized personnel will be prohibited unescorted access to LRC, CRF, and dual-storage records areas. Unrestricted access to storage facilities must be controlled by access lists. Project Participants must maintain up-to-date access lists. The Chief, PCB (or designee), shall determine the person(s) authorized to obtain access to the hard-copy files and to the silver-halide microfilm masters in the Project Office remote storage area. At a minimum, access shall be authorized to the Director, IRM/OCRWM; the Chief, PCB; the Manager, IRM; the Project Records Manager; and the T&MSS Contractor Records Manager.

#### C.5 LOST OR DAMAGED RECORDS

Replacement, restoration, or substitution of records must be accomplished following determination that either a record has been lost or damaged to a degree that it is no longer complete or legible. If restoration or replacement of such records is not practical, this fact shall be documented in accordance with applicable QA requirements.

APPENDIX D .

DISPOSITION

## APPENDIX D

### DISPOSITION

#### D.1 PURPOSE

Appendix D delineates requirements for disposal and retention of records.

#### D.2 HARD-COPY RECORDS

The CRF shall be responsible for maintaining hard copies of records. Such records shall not be disposed of until direction and guidance for disposal is obtained by the DOE/OCRWM.

#### D.3 RECORD RETENTION

Unless otherwise designated by a Project Records Inventory and Disposition Schedule, records shall be classified as lifetime records and shall be microfilmed to meet the requirements for permanent storage. The silver-halide microfilm master stored by the IRM/OCRWM is the official program record.

APPENDIX E

RETRIEVAL

## APPENDIX E

### RETRIEVAL

#### E.1 PURPOSE

Appendix E delineates the requirements for retrieval of Project records.

#### E.2 RETRIEVAL OF RECORDS

Records shall be retrieved through the LRCs or the CRF using microfilm produced hard-copy or hard-copy stored in the CRF or LRCs. Access to special process or one-of-a-kind records shall be provided through the Project Office. Retrieval of records for non-Project Participant personnel shall be performed in accordance with the Data Management Plan.

APPENDIX F

TRAINING

## APPENDIX F

### TRAINING

#### F.1 PURPOSE

Appendix F delineates requirements for training of personnel assigned to positions involving origination, supervision, handling, processing, indexing, protection, storage, or retrieval of records. Training shall be conducted in accordance with the QARD and the Project Management Plan.

#### F.2 REQUIREMENTS

Additional requirements for the training of Project Participant personnel in records management requirements are as follows:

1. Record Coordinators and managers are to develop methods that enable them to quickly spot and evaluate adverse trends that may suggest the need for additional training or that there is weaknesses in training provided.
2. Records Coordinators and managers are to establish performance standards for their employees that will meet requirements and standards of this plan and applicable QA requirements. Supervisors will train to the detail necessary for standard attainment.
3. Records management data-base training will be provided by the T&MSS contractor when requested. Records management training should be requested through the Project Training Office.

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# YUCCA MOUNTAIN PROJECT

# TECHNICAL DATA MANAGEMENT PLAN

REVISION 1

**UNCONTROLLED**

**MARCH 1990**

UNITED STATES DEPARTMENT OF ENERGY  
YUCCA MOUNTAIN PROJECT OFFICE



YUCCA MOUNTAIN PROJECT  
TECHNICAL DATA MANAGEMENT PLAN

MARCH 1990

Prepared by

U.S. Department of Energy  
Yucca Mountain Project Office

The Yucca Mountain Project is managed by the Yucca Mountain Project Office of the U.S. Department of Energy. Yucca Mountain Project work is sponsored by the DOE Office of Civilian Radioactive Waste Management.

FOREWORD

The purpose of the Yucca Mountain Project Technical Data Management Plan is to define technical data management requirements to be met by all Project Participants and to establish a system for directing the results of site characterization, engineering design studies, and environmental activities into the controlled data sources used for higher-level analyses and designs. Policies, guidance, and requirements are provided for identification, collection, selection, control, and transfer of technical data both within and external to the Project.

This plan is effective upon approval by the undersigned and shall remain in full force and effect for the execution of this project. This plan shall be revised as required and shall be reviewed no less frequently than annually by the Project Office to ensure that it is current. Recommended changes shall be submitted to the Project Manager, who shall be responsible for the coordination and resolution of proposed changes and the implementation of approved changes.

Approved by:

  
\_\_\_\_\_  
Carl P. Gettz, Project Manager  
Yucca Mountain Project Office  
U.S. Department of Energy

7/17/90  
\_\_\_\_\_  
Date

APPROVAL OF THIS DOCUMENT IS CONTINGENT  
UPON VERIFICATION UPPER TIER DOCUMENT  
REQUIREMENTS ARE INCORPORATED WHEN  
THEY ARE ISSUED.

  
\_\_\_\_\_  
Donald G. Horton, Director  
Quality Assurance  
Yucca Mountain Project Office  
U.S. Department of Energy

4/20/90  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Maxwell B. Blanchard, Director  
Regulatory and Site Evaluation Division  
Yucca Mountain Project Office  
U.S. Department of Energy

April 19, 1990  
\_\_\_\_\_  
Date

The project Technical Data Management Plan has been developed to provide a systematic approach to the identification, control, dissemination, and use of the numerical values, descriptive information, and spatial relationships required for the evaluation of Yucca Mountain as a Mixed Geologic Disposal System (technical data). Under this plan, scientific and technical information is maintained at three levels: within the participant organization under participant control, in a project-wide Technical Data Base, and at a summary level in the Project Reference Information Base. Transfers of information among these locations is monitored through an automated tracking system that records all transactions involving technical data.

Regulatory requirements that impact this plan are identified in Section 1.3 and are more fully described in the Appendix. Interactions among this plan and others in the project document hierarchy are described in Section 1.4, and the Technical Data Management organization is outlined in Section 2. Finally, Sections 3 through 6 describe the objectives of the various components of the Technical Data Management System and set out the requirements that must be addressed in accomplishing these objectives.

EXECUTIVE SUMMARY

YUCCA MOUNTAIN PROJECT  
 TECHNICAL DATA MANAGEMENT PLAN

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# TECHNICAL DATA MANAGEMENT PLAN

## 1.0 INTRODUCTION

Acquisition and development of technical data are activities that provide the information base from which the Yucca Mountain site will be characterized and may eventually be licensed as a high-level waste repository. Consequently, it is vital that technical data be controlled and managed to ensure that these data are available for subsequent Yucca Mountain Project (Project) use. In this context, technical data refers to data and supporting information expressed as Project-defined parameters that are provided as input to or that result as outputs from Project technical activities. A Project technical data management system has been established as the overlying structure in which to implement data management controls. This Technical Data Management Plan (TDMP) has been developed to describe these controls. Other Project plans should be consulted when addressing other requirements that are beyond the TDMP scope.

## 1.1 PURPOSE AND SCOPE

This plan defines technical data management requirements to be met by all Project Participants and establishes a system for directing the results of site characterization engineering design studies and environmental activities into the controlled data sources used for higher-level analyses and designs. Policies, guidance, and requirements are provided for identification, collection, selection, control, and transfer of technical data both within and external to the Project.

## 1.2 OBJECTIVES AND STRATEGY

The technical data management system must operate in a regulated, licensing environment. As a result, the technical data management system has been developed with the goal of supporting Project technical activities in a manner that is consistent with eventual licensing requirements. To accomplish this goal, objectives are defined that are directed toward ensuring that technical data are collected, maintained, and controlled from a licensing perspective. The resulting strategy is predicated on defining the functions that must be performed to attain the stated objectives and then to map those functions to specific processes that must be implemented. The specific objectives, functions, and system processes that result from this approach are described below.

### 1.2.1 OBJECTIVES

The technical data management system has been developed to attain the following objectives:

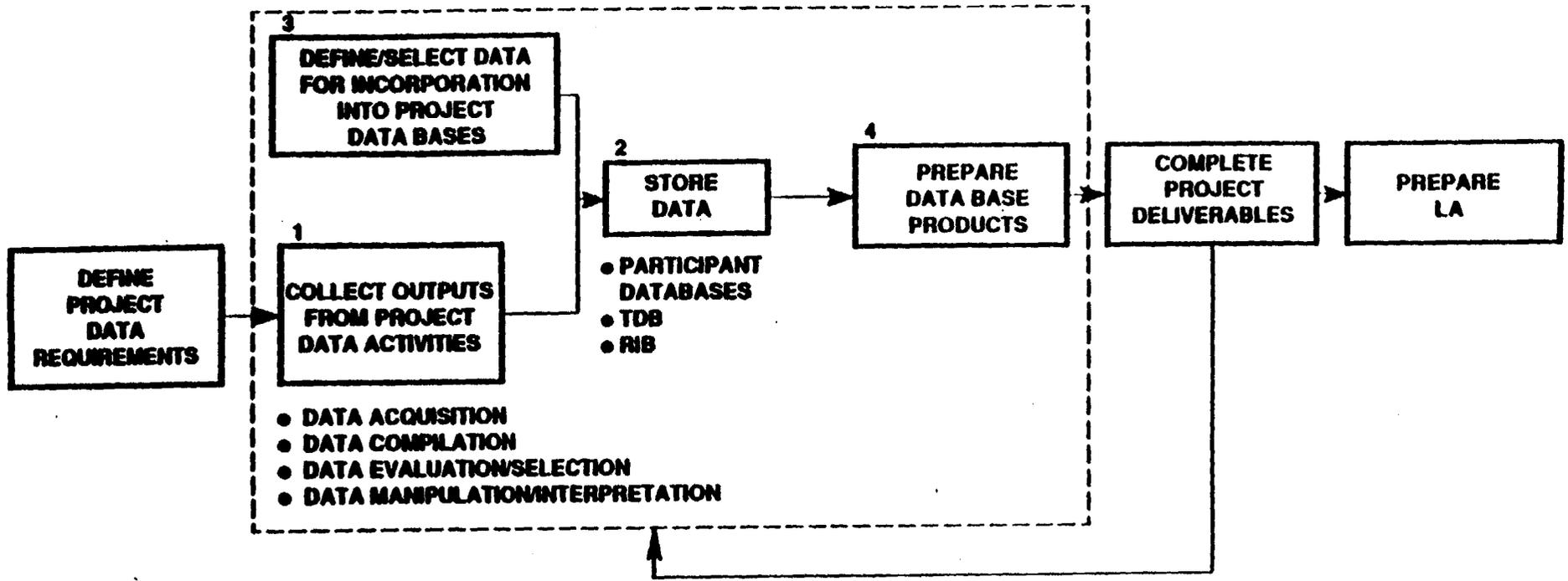
1. Support resolution of Project technical concerns.
2. Coordinate the flow and processing of technical data.
3. Ensure timely availability of technical data both internal and external to the Project.
4. Ensure documentation of technical data used in or that provide input to the licensing process.
5. Ensure controlled storage and use of technical data within the Project.

### 1.2.2 TECHNICAL DATA MANAGEMENT FUNCTIONS

The technical data management system provides four basic functions that address the above objectives. These functions are as follows:

1. Define or select data for incorporation into Project data bases as required for scientific and engineering evaluations.
2. Collect the outputs of Project technical data gathering and development activities, including acquisition of new data, compilation of existing data, evaluation and selection of data based on application needs, and manipulation and interpretation of acquired data.
3. Direct storage of technical data in specified controlled data bases.
4. Provide technical data from a controlled source for Project use.

Figure 1-1 is a diagram showing the above functions as they relate to other Project functions. Note that the dotted line represents the technical data management system functional boundary. Project data requirements are defined through Project planning documents; the activities specified in those planning documents acquire technical data. Outputs from these activities are captured in the technical data management system through the data collection function (Function 1). Technical data are stored and controlled at the Participant level in Participant data storage facilities and at the Project level in the Technical Data Base (TDB) or the Reference Information Base (RIB) (Function 2). Data stored and controlled at the Participant level (note that records of these data will be stored in the Records Information System (RIS); see the Records Management Plan) are evaluated for submission to the TDB or RIB (Function 3). This evaluation takes into account Project priorities to ensure that data applicable to current Project activities are



**TDB-TECHNICAL DATA BASE**  
**RIB-REFERENCE INFORMATION BASE**  
**LA-LICENSE APPLICATION**

**\* DOTTED LINE REPRESENTS THOSE FUNCTIONS THAT ARE WITHIN THE SCOPE OF THE TECHNICAL DATA MANAGEMENT SYSTEM**

Figure 1-1. Technical data management functions.

applicable to provided at the Project level; it is often carried out under the aegis of Technical Data Working Groups (TDWGs) (see Section 2.2). Technical data from these data bases are made available to Project activities as either standard reports or tailored products (Function 4).

Technical data products are used as input to Project deliverables, which may eventually support a Yucca Mountain License Application. The outputs from these Project deliverables may result in new technical data that also becomes part of the technical data management system.

### 1.2.3 OVERVIEW OF SYSTEM PROCESSES

The functions described above (Section 1.2.2) are implemented through technical data management system processes and applicable IMS processes that are applied at both the Participant and Project level. These system processes are as follows:

1. Tracking the acquisition and development of site characterization, environmental, design, and performance assessment parameters.
2. Ensuring Participant-level controlled custody of technical data throughout technical data acquisition and development.
3. Identifying suites of technical data for incorporation into an evolving, controlled Project TDB.
4. Identifying, selecting, and describing appropriate data values and information for inclusion in the Project RIB.

Each process element involves, to varying degrees, one or more of the data management functions described in Section 1.2.2. Processes appropriate to other planning documents that are related to these functions (e.g., investigation and analysis controls, input acceptability, and data-base administration) are described in those plans.

The data development tracking process (Section 1.2.3 (1)) is directed toward demonstrating traceability of technical data from its interpreted form to its reduced and raw data origins, as well as providing a centralized resource for determining current availability of technical data. This process is discussed further in Chapter 3. The Participant technical data control process (Section 1.2.3(2)) sets forth Participant requirements to ensure data quality and to ensure that an unbroken chain of traceability through data identification and documentation is provided. This process is discussed further in Chapter 4. The controlled TDB process (Section 1.2.3 (3)) places controls on submitting data to and using data from the TDB. This process is discussed further in Chapter 5. The RIB process (Section 1.2.3 (4)) places Project-level controls on developing, submitting, and using the information in the RIB. This process is discussed further in Chapter 6.

### 1.3 REGULATORY AND REQUIREMENTS

Requirements for the technical data management system have their origins in various regulatory documents; these sources are identified below. A more detailed discussion summarizing specific requirements as delineated in these documents is provided in Appendix A.

1. Nuclear Waste Policy Act (NWPA), Sec. 114 and Sec 117, requires access to technical data by outside parties.
2. 10 CFR 60.72-requires maintenance of construction records, including geologic maps and sections.
3. 10 CFR 2.1003-requires submission of technical data to the Licensing Support System.
4. Morgan-Davis Agreement-requires that data be made available to the Nuclear Regulatory Commission (NRC).
5. Site-Specific Agreement-requires that a data catalog be produced and that data be made available to the NRC.

### 1.4 PROJECT MANAGEMENT INTERACTIONS

The technical data management system has several key interactions with other Project management systems on the Yucca Mountain Project. Although these systems are not a part of technical data management and the scope of this plan, responsibilities must be defined for these interactions. This section of the TDMP establishes responsibilities for interactions with (1) data qualification, (2) use of technical data as design input, (3) identification of performance assessment modeling parameters, (4) quality assurance, (5) configuration management, (6) interface control, (7) milestones and schedules, (8) licensing support system, and (9) information management.

#### 1.4.1 DATA QUALIFICATION

The technical data management system does not require data to be qualified prior to its inclusion in the system; however, the system must distinguish whether data has been collected under an approved quality assurance program addressing quality-related information for each information item. Users of the technical data are responsible for determining if the data are of sufficient quality for their intended use. QA controls on selection and justification of input ensure that this determination is conducted and documented adequately.

Technical data collected before an approved quality assurance program meeting the requirements of 10 CFR 60, Subpart G, was in effect must be qualified by a qualification process approved by the Project Office prior to

the data's use to support quality analyses and reports associated with License Application (see SEMP).

#### 1.4.2 USE OF TECHNICAL DATA AS DESIGN AND PERFORMANCE ASSESSMENT INPUT

The TDB and RIB provide a controlled source of technical data to be used as design and performance assessment input by the Project. The RIB is the source of final design information (see SEMP). These Project-level systems require that Participants submitting technical data must satisfy all quality assurance requirements related to that data, including the archiving of all relevant supporting information, prior to inclusion of the data in TDB or RIB. At the Participant-level, data may be exchanged between Principal Investigators in accordance with Participant controls or interface agreements (see section 1.3.6). In either case, the users of technical data have ultimate responsibility for determining the suitability of data for their intended use.

#### 1.4.3. IDENTIFICATION OF PERFORMANCE ASSESSMENT MODELING PARAMETERS

Much of the technical data collected by the Project is needed in performance assessment as input to models predicting the behavior of systems or system components in isolating or containing radioactive waste. The technical data management system must provide values for identified parameters within a schedule consistent with the needs of performance assessment modelers.

The Performance Assessment Management Plan should provide for the identification of performance assessment modeling parameters. Through interactions with the Technical Data Advisory Group (TDAG), a schedule must be developed for identifying parameter needs, specifying a date when the data are needed, and identifying availability of data from the test program.

#### 1.4.4. QUALITY ASSURANCE

The technical data management system must ensure that the quality assurance requirements of data identification and control are satisfied. Adequate documentation must exist to ensure traceability of data to original data records. The Project TDB and RIB are designed to meet these quality assurance requirements.

The Project TDB provides a controlled Project data base for the storage and access of technical data collected on the Project. The Project RIB provides a controlled document for the storage and access of interpretations of technical data and information. Project Participants must ensure that the technical data submitted to these data sources are valid, that relevant supporting documentation exists as Project records, and that quality assurance information is verified.

Other quality assurance requirements associated with the control of scientific investigations, design, and testing are the responsibility of the Project Participants. Project Participants must have controls within their organization to ensure satisfaction of these quality assurance requirements.

#### 1.4.5 CONFIGURATION MANAGEMENT

Configuration management interacts with the technical data management system through the Project RIB. The Project RIB, and subsequent changes, must be approved by the Project Change Control Board prior to its use. The Configuration Management Plan establishes the configuration management requirements to be applied to the RIB.

#### 1.4.6 INTERFACE CONTROL

The TDMP identifies interfaces that must be controlled within the Technical Data Management System. Procedures developed to implement the TDMP will define how these interfaces are controlled. Specific interface controls are addressed in the Configuration Management Plan.

#### 1.4.7 MILESTONES AND SCHEDULES

The technical data management system must interact with the Project system for identifying milestones and schedules to ensure technical data are available for Project use consistent with Project objectives. The schedule should include the initial submission of Record Package Segments for an activity to the Records Information System (RIS) as specified in the Records Management Plan, data sets to the Project TDB, and RIB Information Items to the RIB.

#### 1.4.8 LICENSING SUPPORT SYSTEM

The technical data management system interacts with the Licensing Support System (LSS) through the records management system. The records management system maintains records of raw, reduced, and interpreted data (Data Record Package Segments); TDB submittals; RIB submittals; and all supporting information. These records are made available to the LSS through the RIS.

#### 1.4.9 INFORMATION MANAGEMENT AND RECORDS MANAGEMENT

The technical data management system establishes requirements that direct technical data resulting from site characterization activities into

controlled data sources used for higher-level analyses and designs. The Information Management System establishes requirements for the physical systems and software to implement technical data requirements, including software management, data management, and telecommunications management, resource planning, and data-base system design. The technical data management system interacts with records management through records documenting the acquisition, development, use, and storage of technical data. This documentation ensures that an adequate and traceable record of technical data exists in the Project. Project Participants are responsible for the preparation of records of raw, reduced, and interpreted data; data sets submitted to the TDB; RIB submittals; and all associated supporting information. These records are submitted to and maintained by the records management system in accordance with the Records Management Plan through applicable procedures.

## 2.0 ORGANIZATION AND RESPONSIBILITIES

This section of the TDMP describes the relationship that the TDMP has with other key documents in the Project Documentation Hierarchy and the organizational responsibilities within the technical data management system.

### 2.1 PROJECT DOCUMENTATION HIERARCHY

The Yucca Mountain Project has established a hierarchy of management documents, which provide descriptions of policy and management objectives to guide Project activities. Beneath the top-level Project Plan are several documents, including the Quality Assurance Plan (QAP), Systems Engineering Management Plan (SEMP), Configuration Management Plan (CMP), and Information Management Systems Plan (IMSP), which describe implementation details for specific management topics. For consistency in Project direction, the scope of subject matter covered in each of these documents has been clearly delineated and integrated with the other planning documents to ensure an integrated management approach.

Requirements expressed in the IMSP and QAP have a significant impact on the approach to technical data management for the Project. Technical data, which will be used to support the satisfaction of Project technical objectives, must be managed in a way that ensures maintenance of an adequate and traceable record of the acquisition, manipulation, release, and use of technical data. Appropriate quality assurance controls are needed to accomplish this objective.

The definition of data identification controls to satisfy quality assurance criteria is the primary interface between this TDMP and the QAP. These criteria provide guidance on the identification and control of data.

The Project information management system, as described in the IMSP, has significant interactions with technical data management. Records of the acquisition, processing, use, and storage of technical data are defined to ensure that (1) submittals to the records system occur in an ongoing, timely manner, (2) records are complete, and (3) the process is conducted with minimum administrative impact on Project technical staff.

The Information Management System will support the following: (1) provide for the locating, storing, cataloging (indexing), protecting, transporting and release of all data, (2) provide the automated systems required to store, manipulate, track or retrieve, all Project data, (3) provide for the telecommunications needed to transport all data, (4) plans for and assists in procuring all information resources.

Significant, but less tightly coupled, relationships exist between the TDMP and other major planning documents such as the SEMP and CMP. These documents establish controls on the flow and use of technical data within Project activities; relationships with these other plans are limited to

ensuring that consistency is maintained with the requirements and descriptions contained in these plans.

Management of technical data, particularly at the Project level, is coordinated with the objectives expressed in the Information Management System Plan, which include establishing Project policy for meeting the Licensing Support System requirements relevant to technical data and information. These interactions may involve both the establishment of direct computer linkages with Project data bases and the definition of records to be submitted to the Project records management system.

The TDMP describes an overall top-level system for data management that may be implemented for specific areas of Project development through other Project plans. The policy, requirements, and guidance expressed in the TDMP for the management of technical data are referenced by, and incorporated into, other planning documents, such as the Technical Support Document Management Plan (TSDMP), Performance Assessment Implementation Plan, Test and Evaluation Plan, Design Plan, Repository Plan, and Waste Package Plan.

## 2.2 DATA MANAGEMENT ORGANIZATION

Technical data management organizational responsibilities on the Yucca Mountain Project are identified below.

### 2.2.1 PROJECT MANAGER, YUCCA MOUNTAIN PROJECT OFFICE

The Project Manager is responsible for authorizing any direct interactions between parties outside the Yucca Mountain Project and the staff of the Technical Data Base, specifying any limitations or conditions applicable to that interaction. In cases where the Project Office is involved in the submission of materials to the Technical Data Base Administrator as candidate information for the Technical Data Base, the Project Manager serves as Technical Project Officer (TPO), with the responsibilities identified for Participant TPOs, as described in Section 2.2.4.

### 2.2.2. DIVISION DIRECTORS, YUCCA MOUNTAIN PROJECT OFFICE

The Division Directors are responsible for the prioritization of technical data collection and submission to the technical data management system. Each Division Director shall appoint a member of the Technical Data Advisory Group. The Director, RSED, appoints the Technical Data Manager (TDM).

### 2.2.3 TECHNICAL DATA MANAGER

The TDM is responsible for managing all Project technical data and information for the Project. The TDM serves as chairperson for the TDAG, and in this capacity establishes Technical Data Working Groups (TDWGs) as needed to address specific issues relevant to the TDB and RIB.

### 2.2.4 TECHNICAL PROJECT OFFICERS

The TPOs are responsible for the management of technical data within their organizations. The TPO ensures that the provisions of this plan and its implementing procedures are carried out. The TPOs appoint a representative to the TDAG and approve the members of a TDWG within their respective organizations.

### 2.2.5 TECHNICAL DATA ADVISORY GROUP

The TDAG is responsible for coordinating the implementation of Project data management policy. This group provides an advisory forum for the discussion and resolution of data management concerns and advises and assists the Technical Data Manager, Data Base Administrator, and Participant TPOs on matters concerning the Technical Data Base.

### 2.2.6 TECHNICAL DATA ADVISORY GROUP REPRESENTATIVE

Participant representatives to the TDAG are appointed by each TPO. They serve as the principal contact within their organizations for technical data matters, providing assistance in initiating interactions between Participant staff and the administrators of the Project TDB and RIB.

The TDAG representative represents Participant positions on technical data management policy development and implementation. Upon request of the TDM, the representative will coordinate the activities of Technical Data Working groups within their respective organizations.

### 3.0 PROJECT AUTOMATED TECHNICAL DATA TRACKING SYSTEM

#### 3.1 AUTOMATED TECHNICAL DATA TRACKING SYSTEM OBJECTIVES

The Project Automated Technical Data Tracking System is an information management system designed to maintain references to raw, reduced, and interpreted data produced by Project Investigators. Information contained in this system will be made available electronically and as published reports (e.g., Project Data Catalog).

This system will assist the Project in identifying and demonstrating traceability to the origins of data used in Project reports and publications and provide status information on the development of technical data. The Project will use this system as a method for identifying and expediting transfer of data among Principal Investigators, designers, and modelers for performance assessment calculations, design, construction, and licensing support. In addition, this system will assist the Project in evaluating possible impacts on Project positions caused by analysis of new data or new interpretations of existing data.

Investigators provide the primary source of information to this tracking system as the data is acquired, reduced, and interpreted. Since data submissions must include references that it previously submitted as data, the resulting data hierarchy assists the Project in demonstrating traceability of the technical data.

#### 3.2 AUTOMATED DATA TRACKING SYSTEM REQUIREMENTS

The Project Automated Technical Data Tracking (ATDT) System must provide the ability to track information for technical data collected and developed by the Project.

The system must be capable of identifying changes to data entered into the system through later submittals that result from updates or changes in the data. The system should permit queries of the tracking system that determine the exact location of the technical data referenced, including index information maintained by the RIS.

This information must be submitted on a coordinated, periodic basis. Project procedures establish reporting requirements and time constraints for submittals to the tracking system. A Project ATDT System Manager is appointed by the Director, RSED. The System Manager is responsible for coordinating and ensuring the input of information to the ATDT, ensuring documentation describing the requirements of the ATDT are submitted to the IMS and approving the Project Data Catalog for distribution.

### 3.3 PROJECT DATA CATALOG

The Site-Specific Agreement requires that a Project Data Catalog must be provided to the NRC on a quarterly basis. The Project Data Catalog is a standard report, based on the information contained in the Project Automated Technical Data Tracking system. It must contain the following information as required in the Site-Specific Agreement:

1. Description of technical data.
2. Time, place, and method of acquisition.
3. Location where data may be examined.

The Project Data Catalog can be used for identifying the availability of data and for preparing requests for access to data.

### 3.4 EXTERNAL INFORMATION REQUESTS

In accordance with the Nuclear Waste Policy Act (as amended), the Yucca Mountain Project must provide external organizations/agencies access to technical data in a timely manner (see Appendix A).

The Project Data Catalog, Project Automated Technical Data Tracking System, and RIB are sources to be used by external organizations/agencies in identifying available technical data generated by the Project. The Project Data Catalog, issued on a quarterly basis, should be used to identify the location and types of data collected during the previous quarter. The Project Automated Technical Data Tracking System is an interim online catalog that can be used to identify the status of all data acquired and developed by the Project and the hierarchy of that data from its raw form, through reduction, to its interpreted form. The RIB will identify and provide reference information.

The TDM must coordinate with the Project Data Manager to provide criteria for preparation of data packages and review of the final package prior to its release.

## 4.0 PARTICIPANT TECHNICAL DATA MANAGEMENT

### 4.1 OBJECTIVES

Technical data management begins at the Participant-level when data values are acquired and recorded as a result of a data-gathering activity. The recording of technical data may be accomplished through manual means, such as an entry into a field notebook or through automated systems. These initially recorded data are usually considered raw data and may consist of magnetic recordings of analog or digital measurements that have not been converted to data values in physically significant units. Participant technical data management responsibilities continue into data reduction and interpretation activities, where previously acquired data are evaluated and analyzed to develop values needed for design, performance assessment, and site characterization activities.

Records of raw, reduced, and interpreted data must be captured, stored, and processed into the technical data management system. In addition, the records system must capture all supporting information associated with the raw, reduced, and interpreted data. This supporting information may include experiment procedure records, sample custody records, technical procedure records, calibration records, analyses of results, and various reports. The Records Management Plan delineates requirements for the submittal of technical data records and supporting information to the Project's records system.

The Participant's technical data management system may include Participant-level technical data bases, Participant-level data archives, and resident files, depending upon the needs of the Participant. These systems are developed by the Participants to provide for the protection, maintenance, and accessibility of technical data while data are in various stages of development, prior to their submittal to the Project TDB and/or RIB. These systems must be developed and controlled in accordance with IMSP requirements to ensure the integrity of the technical data stored in them.

### 4.2 PARTICIPANTS' REQUIREMENTS AND RESPONSIBILITIES

Each Project participant Technical Project Officer (TPO) is responsible for managing technical data within the Participant organization and ensuring technical data acquired by the Participant are integrated into the Project-level technical data management system. This responsibility includes all QA requirements for the identification and control of technical data, use of technical data, data verification and validation, and data acceptance. In addition, each TPO is responsible for fulfilling requests made by the Project Office for technical data residing at the Participant organization. Finally, each organization is responsible for ensuring traceability of technical data from its highest interpreted form, through reduction, to its original raw form.

Project Participants are responsible for the management of technical data within their organizations and for supporting the management of technical data at the Project level. Participants are responsible for collecting and documenting data in accordance with approved technical procedures. In addition, Participants are responsible for ensuring access and availability of technical data to other organizations within the Project. Access and availability are accomplished through periodic submittals of technical data to the Project Technical Data Base and RIB in accordance with applicable procedures. To ensure coordinated submittals to the Project TDB and RIB, Participants are responsible for the development of a schedule of submittals to be made to the Project TDB and RIB in accordance with Section 4.3. Finally, Participants are responsible for submitting required records of technical data and supporting information to the Project's records system.

Participant TDAG members play an important role in the management of technical data by the Participants. TDAG members serve as a focal point within their organizations and should assist in defining data needs, data availability, and transferring data to other Participants and to the Project TDB and RIB (see Sections 5 and 6).

#### 4.3 DATA IDENTIFICATION SYSTEM

To ensure access of technical data to all Project Participants for use in various design and performance assessment analyses, data must be submitted to the Project TDB and RIB. These submittals must be coordinated and integrated to ensure data are available in a time frame acceptable to potential users. The TDAG may assist in integrating the data providers' and users' scheduling requirements. The schedules must be integrated with the Project scheduling system and should include both existing data and future data to be collected.

Project Participants are responsible for developing a schedule of submittals to TDB and RIB for data to be collected, prior to the initiation of the activity generating the data. Published data must be evaluated by Participants and prioritized by the Project for submittal to the TDB and the RIB. Project Participants should review the Project schedule in the areas of Performance Assessment and design, identify data needs, and develop a schedule for submittal of published data to the TDB and RIB. All new publications submitted to the Project Office for policy review must include an appendix identifying data to be submitted to the Project TDB and/or RIB, or include documentation verifying that the data included in the report were previously submitted to the TDB or RIB. Project Participants must evaluate any remaining nonpublished data residing in resident files or data archives and develop a schedule for submittal of this data to the TDB and/or RIB based upon Project priorities.

#### 4.4 INTER-PARTICIPANT TRANSFER

As Project Participants are conducting various analyses associated with site characterization, design, or performance assessment, there may be a need to have access to technical data not currently available through the Project TDB or RIB. Use of these data should be limited to preliminary scoping efforts where the types of data needed are not required to be extracted from the Project TDB or RIB. Participants may transfer technical data to other Project Participants by creating a record of the transferred data. Any constraints or limitations associated with the data must be reported. The transfer of technical data between Participants must be reported in the ATDT. If the Project Participant requesting this transferred data needs technical data to support analyses other than preliminary scoping efforts, the Participant should initiate a change to the Project TDB and/or RIB in accordance with applicable procedures.

The Project Automated Data Tracking System may assist Project Participants in identifying the availability of technical data. It is the responsibility of the user of the technical data to determine if the data needed for various analyses should be extracted from the Project TDB and/or RIB, or obtained from another Participant.

#### 4.5 PROJECT INTERACTIONS

The Participant technical data management systems interface with the Project technical data management system through interactions with the Project Automated Data Tracking System, Project TDB, and Project RIB. Section 3.0 describes the Project Data Tracking System interactions, including the reporting of raw, reduced, and interpreted data submittals to the records system; submittal of technical data to the Project TDB and RIB; and the transfer of technical data between Participants. Section 5.0 and 6.0 describe Participant interactions with the Project TDB and RIB, including Participant responsibilities for the identification, submittal, and use of technical data from each system.

Other key Project interactions with the Participant technical data management system include the Project Records System and the Project Information Management System, as described in the Information Management System Plan. The Project Records Management Plan and Project Information Management System Plan each establish additional requirements that the Participants' technical data management system must meet.

## 5.0 PROJECT TECHNICAL DATA BASE (TDB)

### 5.1 OBJECTIVES

The variety of scientific information generated by Project activities is such that all data types cannot practicably be accommodated in a single data base. While engineering properties and some site information are easily included in a relational data base, spatial data (the location and extent of deposits and topographic maps) are more properly maintained in a Geographic Information System (GIS). The Project TDB, then, is not one all-encompassing data base, but rather, an "umbrella" structure under which designated Participant-level data bases are maintained and controlled.

The various components of the TDB are the repositories for the regional and site-specific technical data required in intermediate and license application analyses and models. The TDB and RIB are the only approved sources of data for use on the Project in higher-level calculations, designs, and modeling scenarios. These are the parameters and data sets called out as necessary for the ultimate resolution of issues related to site suitability, performance, and design. When data stored in the TDB are reduced or interpreted values, a "pointer" will refer to the location of original "raw" data values. In all cases, the information contained in the TDB will be referenceable to the original data collection activity. While the Reference Information Base (see Section 6) may contain only a representative data value or accepted range of values, the TDB will contain the full data set from which the representative value was derived. The data contained in the TDB are most appropriate for use in calculations where a complete range of values must be analyzed, such as in performance modeling and sensitivity analyses. Data from the TDB are made available upon request to all Project Participants.

One component of the TDB is the Site and Engineering Properties Data Base (SEPDB). This relational data base is administered by Sandia National Laboratories and resides at that facility. The SEPDB provides controlled storage for data sets related to geotechnical and hydrologic investigations. Other components of the TDB will include a GIS, a waste package data base, and a thermodynamic/geochemical data base, among others. Data submissions to and requests from the SEPDB and to other components of the TDB will be recorded in the project Automated Technical Data Tracking System. The reporting of these transactions will allow an evaluation of the impacts to other activities caused by subsequent changes to the data. Schedules for submission of data sets to the TDB should be established at the start of an activity. The component of the TDB to which the data is to be submitted will be based on criteria approved by the TDM provided in an appendix to this plan (to be done).

### 5.2 TDB REQUIREMENTS AND RESPONSIBILITIES

The TDB components must provide controlled storage of scientific data in formats that can be readily transferred for use in subsequent analyses. The development of the actual data structures and methods of control must be in accordance with the Information Management Systems Plan (IMSP). The formats

described here refer to the way information is expressed (e.g., periods of measure and contour intervals). Those formats must be agreeably defined and documented by both the data provider and the data user. The TDB must conform to these definitions. It is imperative, therefore, that investigators who collect and analyze site information work in close cooperation with investigators who will use that information and with the TDB component data base administrator. Data submissions must be scheduled so that the data sets can be entered into the TDB prior to the scheduled start of activities needing those data sets. Data stored in the TDB must be made available to requesters in a timely manner.

### 5.3 SUBMISSION TO THE TECHNICAL DATA BASE

Data sets that will be used in the development of models or parameters, as described in Section 5.1, must be submitted to the TDB. The submission will be tracked in the Project Automated Technical Data Tracking System. Milestones for submission of data to the TDB must be identified in a Project control system.

The originator of the data set must contact the TDB administrator prior to any data submission and work with the administrator to define the formats and scope of the data sets.

### 5.4 TECHNICAL DATA WORK GROUP ACTIVITIES

TDWGs will most commonly be convened to evaluate data collected during earlier phases of the program but not placed in a TDB. The TDM may establish working groups as appropriate to discuss other concerns related to this plan. The TDM may assign the responsibility for organizing the working group to an appropriate TDAG representative. In all cases, the group shall work under a charter prepared by the TDM (or designee). This charter will serve as the initiating document.

### 5.5 TDB PRODUCTS

Formal TDB products are referenceable and identified through the Project Automated Technical Data Tracking System.

## 6.0 REFERENCE INFORMATION BASE

### 6.1 OBJECTIVES

The Yucca Mountain Project has established the Reference Information Base (RIB) as a compilation and descriptive summary of fully interpreted Project technical data. This information represents a Project consensus on the current state of knowledge for a wide range of technical data parameters and is the primary Project source of approved technical reference information.

The level of information presented in the RIB typically represents a more highly-distilled interpretation synthesized from available sources, in contrast to the intermediate, working level data available from the Technical Data Base. The information is used within the Project to support the various analyses necessary for site characterization, environmental evaluation, design, and performance assessment.

Because of the large quantity of existing data and the number of continuing data acquisition, interpretation, and refinement activities, the RIB will be continually revised and updated at license application, the RIB content should stabilize and serve as a technical basis, or source of technical information, for the license application process. The RIB must (1) provide a single source summary of the current Project site description, (2) document Project consensus that proposed changes are valid, appropriate, and traceable, and (3) enhance communication across data provider/data user interfaces.

An entry in the RIB must provide descriptive information that concisely communicates the sources of information, the relevant details of any subsequent manipulation or interpretation of data, the intended uses and limitations of the information, and quality assurance information. The RIB must be a Project-controlled document. The submission of information to the RIB will be recorded in the ATDT.

Throughout the developmental period preceding the license application, the RIB will serve several functions for the Project. First, the RIB will provide a convenient reference source of information for use by Project staff in selecting input for a particular application or for identifying (by providing pointers to) appropriate sources of more detailed technical data. Second, the RIB will provide a means of communicating progress in the interpretation and analysis of Project data for use in other Project activities. Third, the use of a common basis set of data for related activities, as defined by the RIB, is intended to provide consistency of Project conclusions and positions. Although the selection and justification of input is a user responsibility, comparative evaluations of input with the Project-approved RIB information should be made and documented. The freedom to utilize alternative data sources is important; however, if the sources conflict with the RIB, a change to the RIB shall be prepared. Finally, the RIB will be released to external parties with Project Manager approval, as a current summary of the state of Project technical information. Because of the perceived significance and high visibility of the RIB, it is essential

that the RIB contents cover a broad topical spectrum, provide complete descriptive summaries, identify technically valid and traceable information, and adequately reflect current Project knowledge.

## 6.2 REQUIREMENTS AND RESPONSIBILITIES

RIB development must be coordinated by a RIB administrator under the direction of the TDM, and in accordance with applicable procedures, which are consistent with the requirements of this plan. Development of changes to the RIB and preparation of supporting documentation records must be fully documented and traceable to the sources of information used. To function effectively, RIB development relies on the support of Project staff for proposing changes to the RIB, for assisting in the development and review of proposed changes, and for using the RIB appropriately. TDWGs may be convened to assist in these actions. Participant technical staff are relied on to provide technical expertise and judgment and for ensuring the satisfaction of QA requirements related to technical data development.

## 6.3 RIB CHANGE INITIATION

Changes to the RIB may be initiated by any Project Participant through applicable procedures.

The appropriateness of information for the RIB is guided by the parameters outlined in the Test and Evaluation Planning Basis, specific topics important to licensing support per 10 CFR 2, and other Project data needs.

## 6.4 RIB CHANGE DEVELOPMENT/PREPARATION

The RIB administrator coordinates the evaluation and development of RIB changes. The RIB administrator must obtain the information, document the information origins, and compile the information into the proper format. Information presented in the RIB is obtained from Participants, who are responsible for verifying the satisfaction of all relevant Project requirements. Participant TDAG representatives may assist in identifying the individual responsible for the development of a change to the RIB. In addition, the TDAG representative is responsible for coordinating the development of a change RIB item within the representative's organization. The broad scope of the RIB requires that the responsibility for the technical adequacy and accuracy of individual RIB information items remain with the individuals who have the technical expertise and who are responsible for specific technical areas within the Project.

If the RIB administrator is unable to identify the requested information, the Participant who is responsible for the topic area or the appropriate Work Breakdown Structure Element must provide the information.

Depending on resource availability and Project priorities, Participants are required to conduct any needed analysis or interpretation according to the applicable requirements and to provide the results and necessary documentation to the RIB.

#### 6.5 REVIEW OF PROPOSED RIB CHANGES

A draft RIB change must be reviewed to establish the adequacy of the descriptive information and presentation format and the representativeness of the information as summarizing the current Project understanding and position. The RIB administrator coordinates this review in accordance with internal procedures. Reviews for technical content or for satisfaction of Project quality assurance requirements may be required by internal Participant procedures for the release of information.

#### 6.6 RIB CHANGE APPROVAL AND DISTRIBUTION

Changes to the RIB must be approved by the Project Change Control Board (CCB) in accordance with Project procedure. After disposition by the CCB, the RIB administrator takes any actions as directed by the CCB.

Approved changes to the RIB are released on a schedule determined by the CCB. Holders of controlled RIB notebooks are responsible for updating the contents upon receipt of an update page set.

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REGULATORY REQUIREMENTS PERTAINING TO TECHNICAL DATA MANAGEMENT

APPENDIX A

## APPENDIX A

### REGULATORY REQUIREMENTS PERTAINING TO TECHNICAL DATA MANAGEMENT

#### INTRODUCTION

The successful management of technical data is predicated on implementing a comprehensive program that complies with pertinent requirements. Technical data requirements are derived from various sources that govern different aspects of Yucca Mountain Project activities. In the regulatory arena, technical data requirements have been promulgated through the following sources:

1. Laws.
2. Regulations.
3. Agency Agreements.

Specific requirements established by these sources are presented below. These requirements have been determined to be applicable to technical data management, using the general criterion that all requirements that are directly or indirectly related to technical data management be included. A description of each requirement is provided along with any discussions that are necessary to clarify the extent of applicability to technical data management.

#### LAWS

Nuclear Waste Policy Act, as amended, requires that

1. The Secretary of Energy shall make available to the public a discussion of data obtained in site characterization activities that are related to the safety of the site (Sec. 114 (a) (1) (C)).
2. The DOE shall provide to the State timely and complete information regarding determinations or plans made with respect to the site characterization, siting, development, design, licensing, construction, operation, regulation, or decommissioning of the repository (Sec. 117, (a) (1)).
3. Upon a written request for information by the Governor or Legislature of the State, the DOE (Secretary of Energy) shall provide a written response within 30 days of request receipt. The response shall consist of the information requested or the reason(s) the requested information cannot be provided. Failure to respond will result in suspension of activities. (Sec. 117, (a) (2))
4. DOE shall enter into a binding written agreement with the State setting forth provisions for information (Sec. 117 (a)) and Consultation and Cooperation (Sec. 117 (b); (Sec. 117 (c))

## REGULATIONS

### 10 CFR 60

DOE shall maintain records of construction of the geologic repository operations area in a manner that ensures their usability for future generations (60.72 (a)). These records shall include at least the following (60.72 (b)):

- a. Surveys of the underground facility excavations, shafts, and boreholes referenced to readily identifiable surface features or monuments.
- b. A description of the materials encountered.
- c. Geologic maps and geologic cross sections.
- d. Locations and amount of seepage.
- e. Details of equipment, methods, progress, and sequence of work.
- f. Construction problems.
- g. Anomalous conditions encountered.
- h. Instrument locations, readings, and analysis.
- i. Location and description of structural support systems.
- j. Location and description of dewatering systems.
- k. Details, methods of emplacement, and location of seals used.

### 10 CFR 2

1. The Licensing Support System (LSS) shall include documentary material not privileged or excluded (2.1002 (b)). Documentary material is defined as any material or other information that is relevant to, or likely to lead to the discovery of information that is relevant to, the licensing of the likely candidate site for a geologic repository. The scope of documentary material shall be guided by the topical guidelines in the applicable NRC regulatory guide.
2. DOE shall submit to the LSS administrator an ASCII file, an image, and a bibliographic header, reasonably contemporaneous with its creation or acquisition, for all documentary material generated by, or at the direction of, or acquired by the DOE after the date on which the LSS is available for access (2.1003 (b) (1)).

Note: LSS availability is projected for January 1992.

3. DOE shall submit to the LSS administrator an ASCII file, an image, and a bibliographic header, no later than six months before the license application is submitted for all documentary material generated by, or at the direction of, or acquired by the DOE on or before the date on which the LSS is available for access (2.1003 (b) (2)).
4. DOE shall submit an image and a bibliographic header, in a time frame to be established through access protocols developed through the LSS Administrator, for all graphic-oriented documentary material. Graphic-oriented documentary material includes raw data, computer runs, computer programs and codes, field notes, laboratory notes, diagrams, and photographs that have been printed, scripted, handwritten, or otherwise displayed in any hard-copy form and which, while capable of being captured as an electronic image by a digital scanning device, may be captured and submitted to the LSS Administrator in any form of image. Text need not be captured in searchable full text. Graphic-oriented documents include calibration procedures, logs, guidelines, data, and discrepancies; gauge, meter, and computer settings; probe locations; logging intervals and rates; sensor data and procedures; data descriptions; field and laboratory notebooks; analog computer, meter, or other device printouts; digital computer printouts; photographs; graphs, plots, strip charts, and sketches; and descriptive material related to the above. (2.1003 (b) (C) (1))
5. DOE shall submit a bibliographic header, in a time frame to be established through access protocols developed through the LSS Administrator, a bibliographic header for each item of documentary material that is not suitable for entry into the LSS in searchable full text. Physical access shall be granted through access protocols developed through the LSS Administrator or through entry upon land for inspection or other purposes (2.1003 (b) (C) (2)).
6. Whenever documentary material has been collected or used in conjunction with other such information to analyze, critique, support, or justify any particular technical or scientific conclusion, or relates to other documentary material as part of the same scope of technical work or investigation, then a bibliographic header shall be submitted for a table of contents describing that package or information, and documentary material within that package shall be named and identified.

## AGENCY AGREEMENTS

Agreement Between the U.S. Nuclear Regulatory Commission and the U.S. Department of Energy Identifying Guiding Principles for Interface During Site Investigation and Site Characterization (Morgan-Davis Agreement) June 29, 1983

1. Data collected during site investigations will be made available to NRC on a current, continuing basis after the DOE (or DOE contractor) QA checks that are inherent in determining that the data has been obtained and documented properly (Sec. 3a).
2. DOE's analyses and evaluations of data will be made available to NRC in a timely manner (Sec. 3b).
3. Consistent with mutually agreed on procedures, the DOE will provide the NRC with site-specific samples to be used by the NRC for independent analysis and evaluation.

Interpretation: DOE must ensure that technical data associated with samples is traceable to the specific sample. Project-level access to these data must be provided.

DOE/NRC Site-Specific Procedural Agreement for Geologic Repository Site Investigations and Characterization Program Sept. 18, 1984

1. DOE shall prepare an inventory of reports, plans, procedures, and technical positions (products) both completed and in process (Sec. 3A).
2. DOE shall prepare a schedule of planned field and laboratory testing covering as long a period as practicable (Sec. 3C).
3. DOE will develop and maintain a catalog of data. This catalog will include descriptions of the data, the time, place, and method of acquisition, and where the data may be examined. The catalog will be updated and provided to the NRC at least quarterly (Sec. 3C).
4. On NRC request and at a location chosen by the DOE, the DOE will make data available to the NRC for examination. Data is to be provided to the NRC in a hard-copy format on request following the QA checks specified in Sec. 3a of the Procedural Agreement (normally within 45 days from date of acquisition). These data shall be designated as preliminary and shall carry the appropriate caveat to that affect (Sec. 3C).

5. On request by the NRC On-Site Representative (OR), the DOE or DOE contractor or subcontractor shall provide copies of any records of raw data provided that Procedural Agreement, Section 3a QA checks have been performed. Records that document the analysis, evaluation, or reduction of raw data or contain information deduced by reason will be made available to the OR, after documentation has been peer reviewed by the prime contractor, and cleared and approved by DOE (Appendix 7, Sec. 3).

# YUCCA MOUNTAIN PROJECT OFFICE DOCUMENT APPROVAL SHEET

Y-AD-002  
4/90

ADMINISTRATIVE PROCEDURE AP-5.3Q INFORMATION FLOW INTO  
THE PROJECT REFERENCE INFORMATION BASE

NO.  
 Q  
 Non Q

### APPROVAL

PROJECT MANAGER:	<u>Original signed by E. L. Wilmot</u>	<u>1/11/89</u>
	Signature	Date
DIRECTOR OF QUALITY ASSURANCE:	<u>Original signed by James Blaylock</u>	<u>1/11/89</u>
	Signature	Date
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
(OTHER, AS REQUIRED)	Signature	Date

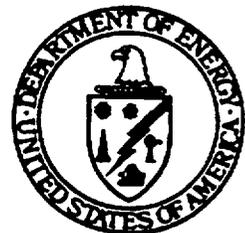
REVISION 0 EFFECTIVE DATE: 1/11/89

### REVISIONS

#### INITIAL AND DATE

	REVISION 1	REVISION 2	REVISION 3	REVISION 4
PROJECT MANAGER:	<u><i>[Signature]</i> 7/17/90</u>	_____	_____	_____
DIRECTOR, QA:	<u><i>[Signature]</i> 7/16/90</u>	_____	_____	_____
<u>N/A</u>	<u>N/A</u>	_____	_____	_____
(OTHER, AS REQUIRED)	_____	_____	_____	_____
EFFECTIVE DATE:	<u>8/3/90</u>	_____	_____	_____

# UNCONTROLLED



# YUCCA MOUNTAIN PROJECT PROCEDURE

Y-AD-001  
4/90

Title  
ADMINISTRATIVE PROCEDURE AP-5.3Q INFORMATION FLOW INTO THE PROJECT REFERENCE  
INFORMATION BASE

## 1.0 PURPOSE AND SCOPE

### 1.1 PURPOSE

This procedure establishes requirements and assigns responsibilities for the initiation, development, review, and evaluation of changes (i.e., additions, deletions, and modifications) to the Yucca Mountain Project Reference Information Base (RIB).

### 1.2 SCOPE

The scope of this procedure is limited to the processing of RIB Information Items for submittal through the Project change control process. This procedure implements technical data management requirements contained in the Project Technical Data Management Plan (TDMP) (YMP/88-18) and the Project Quality Assurance (QA) Requirements Document (RW-0214).

## 2.0 APPLICABILITY

This procedure applies to all Project participants and Yucca Mountain Project Office (Project Office) personnel.

## 3.0 DEFINITIONS

NOTE: Terms in this procedure are used as defined in the TDMP, AP-5.1Q, OCRWM QA Requirements and Program Description Documents or the Program Glossary.

## 4.0 RESPONSIBLE PARTIES

The following Yucca Mountain Project Office (Project Office) individuals or organizations are responsible for activities identified in Section 5 of this procedure:

1. Project Participant
2. RIB Administrator
3. Technical Data Manager (TDM)
4. Technical Project Officers (TPOs)

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# YUCCA MOUNTAIN PROJECT PROCEDURE

Y-AD-001  
4/90

Title ADMINISTRATIVE PROCEDURE AP-5.3Q INFORMATION FLOW INTO THE PROJECT REFERENCE INFORMATION BASE

## 5.0 PROCEDURE

NOTE: A flowchart of the following processes described in this procedure is attached as Figure 1.

<u>RESPONSIBLE PARTY</u>	<u>STEPS</u>	<u>PROCEDURE</u>
--------------------------	--------------	------------------

### INITIATING RIB CHANGES

- |                     |    |   |
|---------------------|----|---|
| Project Participant | 1. | Submit a written request to the RIB Administrator to initiate a change to the RIB.  |
| RIB Administrator   | 2. | Evaluate the request to determine whether to continue development of the change. This evaluation considers the appropriateness of the new information for inclusion in the RIB, availability of the information, and resource requirements. If the request is accepted, notify the originator and the TDM in writing. If the request is rejected, notify the originator and provide a reason for the rejection. |

### RIB INFORMATION ITEM DEVELOPMENT

- |                     |    |   |
|---------------------|----|---|
| TDM                 | 3. | Direct appropriate Project Participant(s) to compile information into a form acceptable to the RIB Administrator.   |
| RIB Administrator   | 4. | Coordinate development of the RIB Information Item. Coordinate with Participants to ensure that the format and scope of the RIB Information Item will be acceptable for its intended use. |
| Project Participant | 5. | Compile information to be used in the development of a RIB Information Item into a format acceptable to the RIB Administrator.  |
|                     | 6. | Conduct any analyses or interpretations in accordance with applicable requirements.   |

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# YUCCA MOUNTAIN PROJECT PROCEDURE

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Title ADMINISTRATIVE PROCEDURE AP-5.3Q INFORMATION FLOW INTO THE PROJECT REFERENCE INFORMATION BASE

<u>RESPONSIBLE PARTY</u>	<u>STEPS</u>	<u>ACTION</u>
	7.	Verify the satisfaction of all relevant Project and internal requirements.
	8.	Submit information to be used in the development of the RIB Information Item to the RIB Administrator. This information must include the following as a minimum: quality assurance information associated with the submittal; identification and verification of the origin of the information; constraints, limitations, assumptions, and intended uses of the information, as applicable; and any other information as specified by the RIB Administrator.

### REVIEW OF RIB INFORMATION ITEMS

RIB Administrator	9.	Determine evaluation criteria and coordinate the review process required for the proposed RIB Information Item in accordance with internal procedure(s).
TPOs	10.	Identify qualified reviewers and submit documentation of reviewers' qualifications to the RIB Administrator.
Project Participant Reviewers	11.	Review draft RIB Information Item in accordance with evaluation criteria provided by the RIB Administrator.
	12.	Document review comments on a RIB Change Evaluation (RIBCE) form (Attachment 1) and return the completed RIBCE to the RIB Administrator within the specified time period.
	13.	Designate review comments as major or minor based upon the following criteria:

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# YUCCA MOUNTAIN PROJECT PROCEDURE

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4/90

Title  
ADMINISTRATIVE PROCEDURE AP-5.3Q INFORMATION FLOW INTO THE PROJECT REFERENCE  
INFORMATION BASE

<u>RESPONSIBLE PARTY</u>	<u>STEPS</u>	<u>ACTION</u>
		<p>a. Major - Comments of such importance, as determined by the reviewer, that they should require documented comment resolution between the RIB Administrator and the reviewer.</p> <p>b. Minor - Comments, as determined by the reviewer, that should not require documented comment resolution between the RIB Administrator and the reviewer, and the document would be acceptable as written.</p>
<b>COMMENT RESOLUTION</b>		
RIB Administrator	14.	Coordinate comment resolution in accordance with internal procedures.
Project Participant Reviewers	15.	Document acceptance or rejection of the resolution of major comments by providing reviewer's initials and date in the appropriate location on the RIBCE.
	16.	Return the completed RIBCE to the RIB Administrator within the specified time period.
RIB Administrator	17.	If a dispute exists with the reviewer, submit the RIBCE to the TDM.
TDM	18.	Resolve and document the dispute resolution.
	19.	Return the RIBCE and dispute resolution to the RIB Administrator.
RIB Administrator	20.	Submit the draft RIB Information Item to the Change Control Board (CCB) in accordance with QMP-03-09, Project Change Control Board Process.

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# YUCCA MOUNTAIN PROJECT PROCEDURE

Y-AD-001  
4/90

Title

ADMINISTRATIVE PROCEDURE AP-5.3Q INFORMATION FLOW INTO THE PROJECT REFERENCE  
INFORMATION BASE

## 6.0 REFERENCES

NOTE: Refer to the latest revision of the documents listed below unless otherwise stated.

### 6.1 REQUIREMENTS DOCUMENTS

Yucca Mountain Project Technical Data Management Plan, YMP/88-18

NNWSI Project Quality Assurance Requirements Document, RW-0214

### 6.2 INTERFACE DOCUMENTS

QMP-03-09, Project Change Control Board Process

AP-5.1Q, Control and Transfer of Technical Data on the Yucca Mountain  
Project

QMP-17-01, Records Management: Record Source Implementation

## 7.0 FIGURES AND ATTACHMENTS

Figure 1, Flowchart for submittal of information to the RIB

Attachment 1, RIB Change Evaluation Form

## 8.0 RECORDS

The following documents used or generated in the implementation of this procedure have been identified as quality assurance records and shall be forwarded to the CRF for processing in accordance with the QMP-17-01, Records Management: Record Source Implementation:

1. Written request initiating the RIB change. If the written request is rejected by the RIB Administrator, written correspondence between the RIB Administrator and the originator documenting the rejection and the reason for the rejection
2. Records associated with the development and preparation of the draft RIB Information Item, including correspondence between the RIB Administrator and Project participants, identification and verification of information sources, and relevant supporting information necessary to ensure a traceable record of the development process
3. Draft RIB Information Item

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**YUCCA MOUNTAIN PROJECT  
PROCEDURE**

Y-AD-001  
4/90

**Title**  
ADMINISTRATIVE PROCEDURE AP-5.3Q INFORMATION FLOW INTO THE PROJECT REFERENCE  
INFORMATION BASE

4. Evaluation criteria prepared by the RIB Administrator used for the review of the draft RIB Information Item
5. Records as defined in the RIB internal procedure
6. RIBCE forms
7. Documentation of the submittal of the draft RIB Information Item to the CCB

**Effective Date**

8/3/90

**Revision**

1

**Supersedes**

**Page**

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**No.**

AP-5.3Q

# YUCCA MOUNTAIN PROJECT PROCEDURE

Y-AD-001  
4/90

Title

ADMINISTRATIVE PROCEDURE AP-5.3Q INFORMATION FLOW INTO THE PROJECT REFERENCE INFORMATION BASE

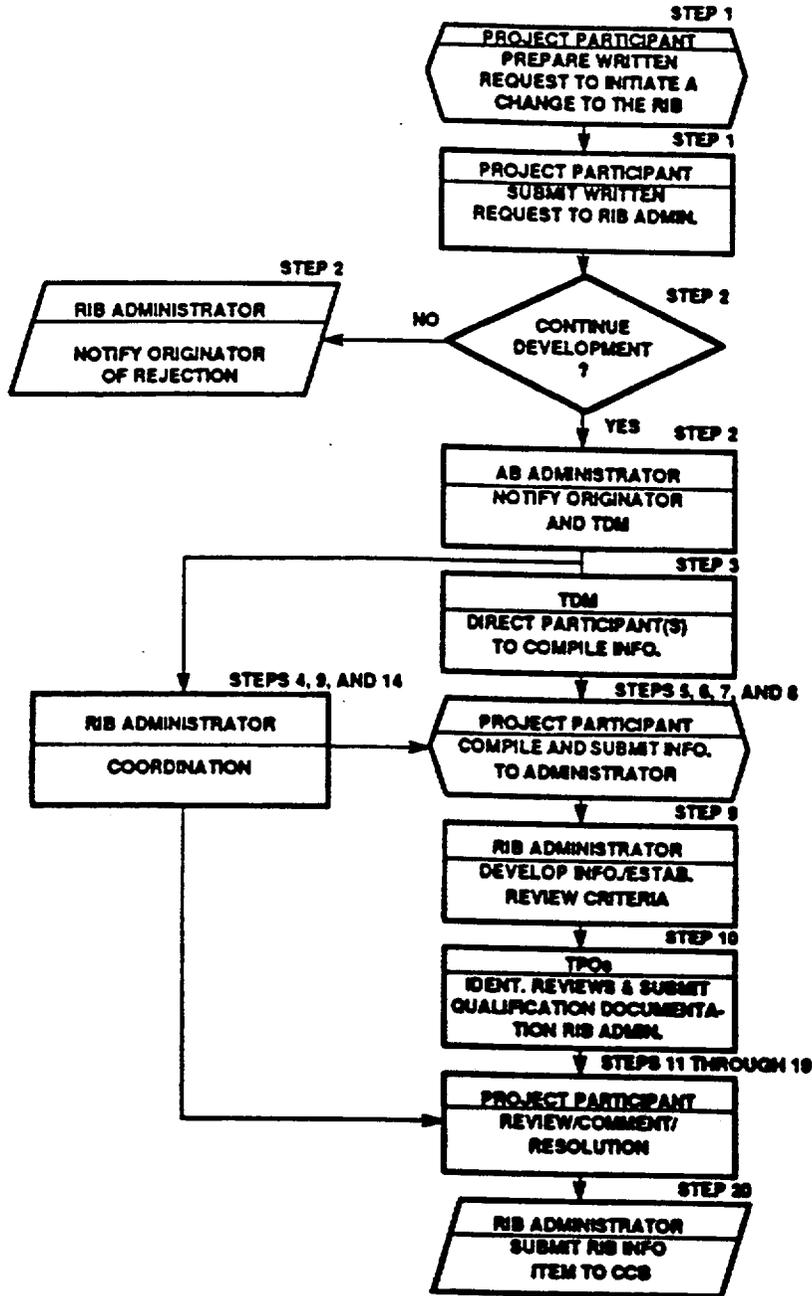


Figure 1 - Flowchart for submittal of information to the RIB

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# YUCCA MOUNTAIN PROJECT PROCEDURE

Y-AD-001  
4/90

Title ADMINISTRATIVE PROCEDURE AP-5.3Q INFORMATION FLOW INTO THE PROJECT REFERENCE INFORMATION BASE

N-OA-069

**YUCCA MOUNTAIN PROJECT  
REFERENCE INFORMATION BASE  
CHANGE EVALUATION FORM**

RIB Control Number: \_\_\_\_\_ Date: \_\_\_\_\_  
 Subject: \_\_\_\_\_  
 Reviewer: \_\_\_\_\_  
 Date Received by Reviewer: \_\_\_\_\_  
 Comments Returned on: \_\_\_\_\_  
 (Name, Organization, Phone)  
 Comments Required by: \_\_\_\_\_  
 Comments Received by RIB Administrator on: \_\_\_\_\_

REVIEWER'S COMMENTS		RESOLUTION		REVIEWER'S DISPOSITION <sup>2</sup>
No.	Loc./Type <sup>1</sup>	Response <sup>2</sup>	Reason	

Page \_\_\_\_ of \_\_\_\_

<sup>1</sup> Indicates type as either Major or Minor.  
<sup>2</sup> Indicates acceptance or rejection.

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FORM 91 CF

Attachment 1 - RIB Change Evaluation Form

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# YUCCA MOUNTAIN PROJECT PROCEDURE

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4/90

Title ADMINISTRATIVE PROCEDURE AP-5.3Q INFORMATION FLOW INTO THE PROJECT REFERENCE INFORMATION BASE

N-QA-009

YUCCA MOUNTAIN PROJECT  
REFERENCE INFORMATION BASE  
CHANGE EVALUATION FORM  
(continuation sheet)

Date: \_\_\_\_\_  
Subject: \_\_\_\_\_  
Reviewer: \_\_\_\_\_

REVIEWER'S COMMENTS		RESOLUTION	REVIEWER'S DISPOSITION <sup>2</sup>
No.	Loc./Type 1	Reason	

Page \_\_\_\_ of \_\_\_\_

1 Indicate type as either Major or Minor.  
2 Indicate acceptance or rejection.

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Attachment 1 - RIB Change Evaluation Form (continued)

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# YUCCA MOUNTAIN PROJECT OFFICE DOCUMENT APPROVAL SHEET

Y-AD-002  
4/90

Title ADMINISTRATIVE PROCEDURE AP-5.2Q TECHNICAL INFORMATION FLOW TO AND FROM THE YUCCA MOUNTAIN PROJECT TECHNICAL DATA BASE

NO.  
 Q  
 Non Q

### APPROVAL

PROJECT MANAGER:	<u>Original signed by E. L. Wilmot</u>	<u>1/26/89</u>
	Signature	Date
DIRECTOR OF QUALITY ASSURANCE:	<u>Original signed by N. A. Voltura</u>	<u>1/25/89</u>
	Signature	Date
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
(OTHER, AS REQUIRED)	Signature	Date

REVISION 0 EFFECTIVE DATE: 1/26/89

### REVISIONS

#### INITIAL AND DATE

	REVISION 1	REVISION 2	REVISION 3	REVISION 4
PROJECT MANAGER:	<u><i>[Signature]</i> 7/17/90</u>	_____	_____	_____
DIRECTOR, QA:	<u><i>[Signature]</i> 7/16/90</u>	_____	_____	_____
<u>N/A</u>	<u>N/A</u>	_____	_____	_____
(OTHER, AS REQUIRED)				
EFFECTIVE DATE:	<u>8/3/90</u>	_____	_____	_____

**UNCONTROLLED**



# YUCCA MOUNTAIN PROJECT PROCEDURE

Y-AD-001  
4/90

Title ADMINISTRATIVE PROCEDURE AP-5.2Q TECHNICAL INFORMATION FLOW TO AND FROM THE YUCCA MOUNTAIN PROJECT TECHNICAL DATA BASE

## 1.0 PURPOSE AND SCOPE

### 1.1 PURPOSE

This procedure establishes requirements and assigns responsibilities for interaction of Yucca Mountain Project (Project) Participants with the Project Technical Data Base (TDB). Interactions with the TDB include

1. The identification of candidate information for inclusion in the TDB.
2. The actual submission of data and supporting information.
3. Requests for the retrieval of information contained in the TDB for use in Project-related activities.

### 1.2 SCOPE

This procedure implements technical data management requirements contained in the Project Technical Data Management Plan (TDMP), YMP/88-18 and the Project Quality Assurance Requirements Document (QARD), RW-0214.

## 2.0 APPLICABILITY

This procedure applies to all Project Participants and Project Office personnel.

## 3.0 DEFINITIONS

NOTE: Terms in this procedure are used as defined in the TDMP, AP-5.1Q, Control and Transfer of Technical Data on the Yucca Mountain Project, Office of Civilian Radioactive Waste Management (OCRWM) Quality Assurance (QA) Requirements and Program Description Documents or the Program Glossary.

## 4.0 RESPONSIBLE PARTIES

The following Project individuals or organizations are responsible for activities identified in Section 5.0 of this procedure:

1. Project Participant
2. TDB Administrator

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# YUCCA MOUNTAIN PROJECT PROCEDURE

Y-AD-001  
4/90

Title

ADMINISTRATIVE PROCEDURE AP-5.2Q TECHNICAL INFORMATION FLOW TO AND FROM THE YUCCA MOUNTAIN PROJECT TECHNICAL DATA BASE

- 3. Project Office
- 4. Project Participant Requester

## 5.0 PROCEDURE

NOTE: A flowchart of the following processes described in this procedure is attached as Figure 1.

<u>RESPONSIBLE PARTY</u>	<u>STEPS</u>	<u>ACTION</u>
--------------------------	--------------	---------------

### IDENTIFICATION OF CANDIDATE DATA

- |                     |  |
|---------------------|--|
| Project Participant | <ul style="list-style-type: none"> <li>1. Identify candidate data for the TDB, including the appropriate component of the TDB that will store the data, in accordance with the criteria established in the TDMP.</li> <li>2. Contact the appropriate TDB Administrator to develop format and scope of data sets prior to submission to the TDB.</li> </ul> |
| TDB Administrator   | <ul style="list-style-type: none"> <li>3. Coordinate with Participants to ensure that data formats and the scope of the data sets are appropriate for their intended use.</li> </ul>   |

### SUBMISSION OF TECHNICAL DATA

- |                     |  |
|---------------------|--|
| Project Participant | <ul style="list-style-type: none"> <li>4. Compile data sets into the format and scope as specified by the TDB Administrator.</li> <li>5. Prepare a Data Transmittal Record Package for each data set to be submitted to the TDB. Include the Technical Project Officer's (TPO) authorizing signature to document verification that all appropriate preparation, review, and storage of relevant supporting records have been accomplished and all appropriate quality assurance requirements have been met.</li> </ul> |
|---------------------|--|

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# YUCCA MOUNTAIN PROJECT PROCEDURE

Y-AD-001  
4/90

Title

ADMINISTRATIVE PROCEDURE AP-5.2Q TECHNICAL INFORMATION FLOW TO AND FROM THE YUCCA MOUNTAIN PROJECT TECHNICAL DATA BASE

<u>RESPONSIBLE PARTY</u>	<u>STEPS</u>	<u>PROCEDURE</u>
	6.	Submit the Data Transmittal Record Package to the appropriate TDB Administrator for inclusion in the TDB. Submit the Technical Data Information Form (TDIF), Attachment 1, to the Central Records Facility (CRF) for entry into the Automated Technical Data Tracking (ATDT) System.

### PROCESSING OF DATA SUBMITTALS

Project Office	7.	Submit approved non-Participant requests for data to the appropriate Data Base Administrator. Include any special directions or constraints as appropriate.
TDB Administrator	8.	Review the Data Transmittal Record Package to determine if it is acceptable for inclusion in the TDB and process acceptable submittals into the TDB in accordance with internal procedure(s).
	9.	Verify that data base activity requirements have been met.
	10.	Update the TDIF included with the Data Transmittal Record Package to indicate entry into the TDB and submit to the CRF for entry into the ATDT System.
	11.	For unacceptable submittals, return the Data Transmittal Record Package to the originator with an explanation for the rejection.
	12.	Update the TDIF included with the Data Transmittal Record Package to indicate the rejection and submit to the CRF for entry into the ATDT System.

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# YUCCA MOUNTAIN PROJECT PROCEDURE

Y-AD-001  
4/90

Title

ADMINISTRATIVE PROCEDURE AP-5.2Q TECHNICAL INFORMATION FLOW TO AND FROM THE YUCCA MOUNTAIN PROJECT TECHNICAL DATA BASE

<u>RESPONSIBLE PARTY</u>	<u>STEPS</u>	<u>PROCEDURE</u>
--------------------------	--------------	------------------

### RELEASE AND REPORTING OF DATA FROM THE TDB

- |                               |     |  |
|-------------------------------|-----|--|
| Project Participant Requester | 13. | Use the ATDT System or consult the Project Data Catalog to identify data available from the TDB.   |
|                               | 14. | Submit a written request for information to the appropriate TDB Administrator including the following information as a minimum: the requester's name, organization, address and telephone number; the scope of the information requested; a description of the intended use of the information; and format requirements. |
| TDB Administrator             | 15. | Review the written request to determine availability of the data.  |
|                               | 16. | If data are not immediately available, notify the requester when the request will be filled.   |
|                               | 17. | If data are available, prepare a Data Transmittal Record Package.  |
| TDB Administrator Staff       | 18. | For each TDB product, verify that established data base activity requirements have been met.   |
| TDB Administrator             | 19. | Send the TDB Transmittal Record Package to the requester as appropriate.   |
|                               | 20. | Submit the TDIF to the CRF for entry into the ATDT System.   |

### 6.0 REFERENCES

NOTE: Refer to the latest revision of the documents listed below unless otherwise stated.

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# YUCCA MOUNTAIN PROJECT PROCEDURE

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**Title**

ADMINISTRATIVE PROCEDURE AP-5.2Q TECHNICAL INFORMATION FLOW TO AND FROM THE YUCCA MOUNTAIN PROJECT TECHNICAL DATA BASE

## 6.1 REQUIREMENTS DOCUMENTS

Yucca Mountain Project Technical Data Management Plan, YMP/88-18

OCRWM Quality Assurance Requirements Document, RW-0214

OCRWM Quality Assurance Program Description, RW-0215

## 6.2 INTERFACE DOCUMENTS

AP-5.1Q, Control and Transfer of Technical Data on the Yucca Mountain Project

QMP-17-01, Records Management: Record Source Implementation

## 7.0 FIGURES AND ATTACHMENTS

Figure 1, Flowchart for Submitting Data to the TDB

Figure 2, Flowchart for Requesting Data from the TDB

Attachment 1, Example of a Technical Data Information Form

## 8.0 RECORDS

The following documents used or generated in the implementation of this procedure have been identified as quality assurance records and shall be forwarded to the CRF for processing in accordance with the QMP-17-01, Records Management: Record Source Implementation:

1. Data Transmittal Record Package
2. All supporting records associated with the preparation and review of candidate data
3. Other records as defined in TDB component internal procedures

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8/3/90

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1

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AP-5.2Q

# YUCCA MOUNTAIN PROJECT PROCEDURE

Y-AD-001  
4/90

Title ADMINISTRATIVE PROCEDURE AP-5.2Q TECHNICAL INFORMATION FLOW TO AND FROM THE YUCCA MOUNTAIN PROJECT TECHNICAL DATA BASE

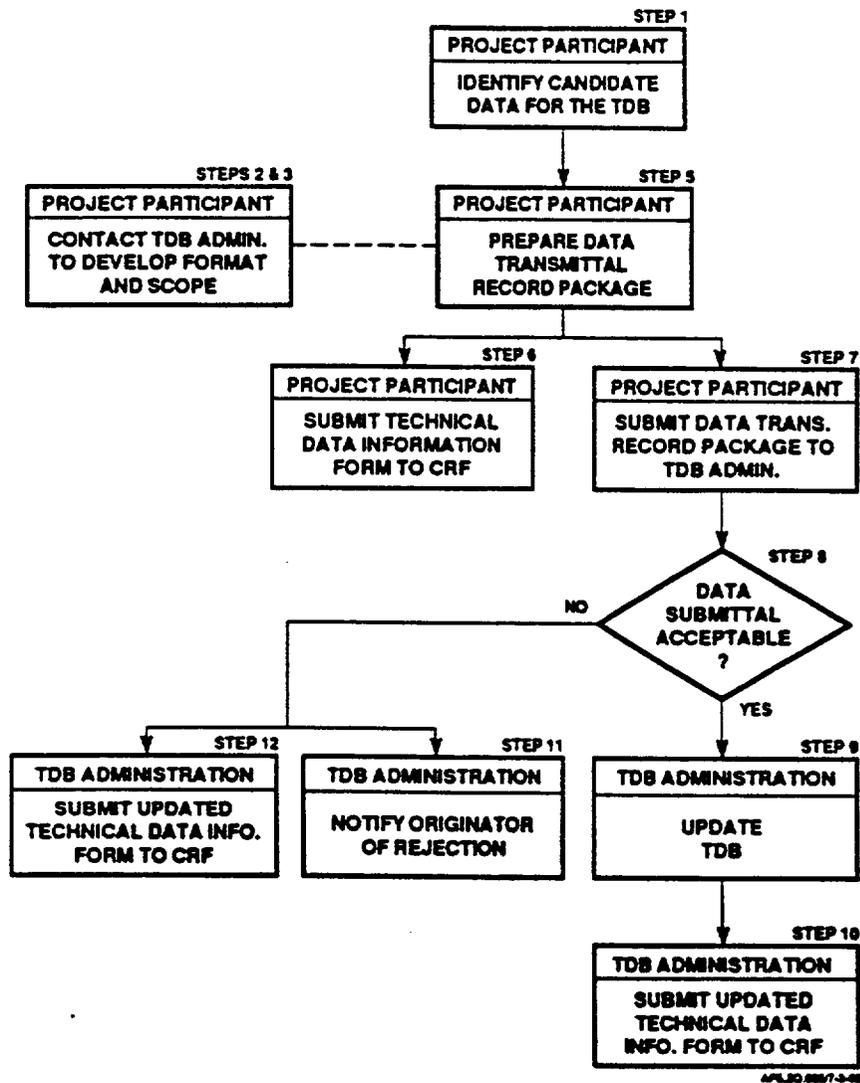


Figure 1 - Flowchart for submitting data to the TDB

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# YUCCA MOUNTAIN PROJECT PROCEDURE

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4/90

Title

ADMINISTRATIVE PROCEDURE AP-5.2Q TECHNICAL INFORMATION FLOW TO AND FROM THE YUCCA MOUNTAIN PROJECT TECHNICAL DATA BASE

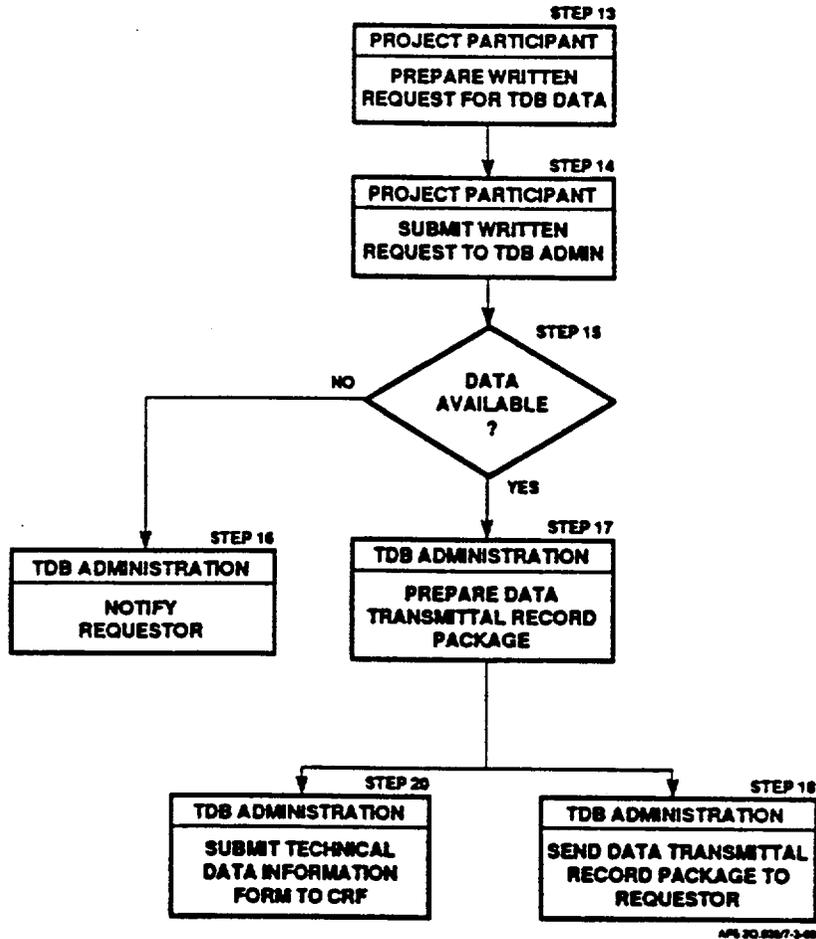


Figure 2 - Flowchart for requesting data from the TDB

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# YUCCA MOUNTAIN PROJECT PROCEDURE

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4/90

Title ADMINISTRATIVE PROCEDURE AP-5.2Q TECHNICAL INFORMATION FLOW TO AND FROM THE YUCCA MOUNTAIN PROJECT TECHNICAL DATA BASE

TECHNICAL DATA INFORMATION FORM		N-AD-065
CONTINUATION PAGE		Page 3 of 3 4/90
<p>g. The attached data were collected for the Yucca Mountain Project and they are hereby authorized for inclusion in the TDB. All appropriate reviews and quality assurance requirements have been met.</p>		
_____	_____	
TPO Signature/Organization		Date
For TDB Administrator Use:		
Data Entered into TDB <input type="checkbox"/>		
Data Submittal Rejected <input type="checkbox"/>		
TDB Product <input type="checkbox"/> Yes <input type="checkbox"/> No		
If yes, complete the following:		
a. TDB Component _____		
b. Recipient/Organization _____		
Interparticipant Transfer <input type="checkbox"/> Yes <input type="checkbox"/> No		
If yes, Recipient/Organization _____		
<b>PART III</b>		
Principal Investigator: _____		
Participating Organization Generating Data: _____		
Description of Test/Collection Method: _____		
_____		
_____		
_____		
_____		
_____		
Automated Recording Network Source Data: _____		
Identification		
Number of Test: _____		Sample Number: _____
Collection Location: _____		
Period of Data Acquisition: _____		

Attachment 1 - Example of a Technical Data Information Form

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# YUCCA MOUNTAIN PROJECT PROCEDURE

Y-AD-001  
4/90

Title ADMINISTRATIVE PROCEDURE AP-5.2Q TECHNICAL INFORMATION FLOW TO AND FROM THE YUCCA MOUNTAIN PROJECT TECHNICAL DATA BASE

TECHNICAL DATA INFORMATION FORM		N-AD-065
CONTINUATION PAGE		Page 2 of 3 4/90

**PART II**

Source Data Accession Number(s): \_\_\_\_\_

Full Package TDIF(s): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Partial Package TDIF(s): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TDB Submittal     Yes     No

If Yes, complete the following:

a. Identify TDB Component: \_\_\_\_\_

b. Format of document containing submitted data (e.g., magnet tape, floppy disc, etc.). Attach any remarks regarding special storage format or data organization that might be required. NOTE: A hard copy of the submitted data is required.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

c. Number of attached pages containing data: \_\_\_\_\_

d. Identification number(s) or Local Record Center (LRC) code(s) on each submitted document:  
\_\_\_\_\_  
\_\_\_\_\_

e. Is submitted data published?     Yes     No

Published reference: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

f. If submittal includes a modification (addition, correction, etc.) to a previous submittal, indicate reference to previous submittal. Also indicate which data are to be removed or superceded, the data and information as it should be in the TDB, and the reason for the modification (include attachments if necessary).  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Attachment 1 - Example of a Technical Data Information Form (continued)

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# YUCCA MOUNTAIN PROJECT PROCEDURE

Y-AD-001  
4/90

Title ADMINISTRATIVE PROCEDURE AP-5.2Q TECHNICAL INFORMATION FLOW TO AND FROM THE YUCCA MOUNTAIN PROJECT TECHNICAL DATA BASE

TECHNICAL DATA INFORMATION FORM		N-AD-065 4/90
Page 1 of 3		
<p>(check one):</p> <p><input type="checkbox"/> DATA RESULTING FROM DATA ACQUISITION (complete PARTS I and III)</p> <p><input type="checkbox"/> DEVELOPED DATA (complete PARTS I and II)</p> <p><input type="checkbox"/> DATA TRANSFER (complete PARTS I and II)</p>		
<p><b>PART I</b></p> <p>Submission Date: _____ WBS Number: _____</p> <p>Version Number: _____ Is Data Qualified? _____</p> <p>Preparer: _____</p> <p style="margin-left: 100px;">Name</p> <p style="margin-left: 400px;">Organization</p> <p>Communal Recording System Data Source: _____</p> <p>_____</p> <p>Title/Description of Data: _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Activity Number: _____ Governing Plan(s): _____</p> <p>Comments: _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>		

Attachment 1 - Example of a Technical Data Information Form (continued)

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# YUCCA MOUNTAIN PROJECT PROCEDURE

Y-AD-001  
4/90

**Title**  
ADMINISTRATIVE PROCEDURE AP-5.2Q TECHNICAL INFORMATION FLOW TO AND FROM THE YUCCA MOUNTAIN PROJECT TECHNICAL DATA BASE

## INSTRUCTIONS FOR PREPARATION OF TECHNICAL DATA INFORMATION FORM N-AD-065

- Submission Date:** Today's date.
- WBS Number:** WBS number of technical data described by this form.
- Version Number:** In case of data package revision or updates, increment the version number.
- Is Data Qualified?** Was data acquired or developed under a fully qualified QA program or qualified in accordance with appropriate Project procedures? Answer Yes or No as appropriate.
- Preparer Name and Organization:**  
Name of individual providing data for this form and his/her organization.
- Communal Recording System Data Source:**  
If submittal is for data resulting from data acquisition and data were originally recorded by a communal recording system, identify original tape or disc.
- Title/Description of Data:**  
Provide descriptive data in no more than 480 characters.
- Activity Number:** Provide the Site Characterization Plan Activity Number and governing plan(s) under which this data was produced. (not the TDMP)
- Comments:** Provide comments (i.e. any constraints, limitations, or assumptions concerning the data) or write "N/A" in the Comments field.
- Source Data Accession Number(s):**  
Provide the CRF Accession Numbers of all technical data (e.g. Source Data) used to produce the data described by this form. If the Source Data is an entire Data Records Package (DRP) submitted previously, then write the accession numbers of the TDIF(s) included in the DRP in the Full Package TDIF(s) field. If the Source Data is a portion of a DRP submitted previously, then write only the accession numbers of the TDIF(s) which pertain to the Source Data in the Partial Package TDIF(s) field.
- TDB Submittal:** Indicate if the submittal is to the TDB, and if Yes, complete steps "a" through "g."
- TDB Product:** Indicate if the submittal is a product of the TDB, and if Yes, complete steps "a" and "b."
- Interparticipant Transfer:**  
Indicate if the submittal is a transfer of data between participants, and if Yes, complete step "a."
- Principal Investigator:**  
Person responsible for this activity.
- Participating Organization Generating Data:**  
For example, LANL, SNL, LLNL, etc.
- Description of Test/Collection Method:**  
Briefly describe the overall test/collection approach followed.
- Identification Number of Test:**  
Provide the Identification Number of the test which was performed to produce this data (no more than 28 characters long).
- Sample Number:** Provide the Sample Identification Number or write "N/A" if not applicable.
- Collection Location:**  
Provide, as appropriate, the bore hole identification number, the latitude/longitude coordinates, etc.
- Period of Data Acquisition:**  
Provide the date (MMDDYY) or range of dates (MMDDYY - MMDDYY format) over which data was acquired.

Attachment 1 - Example of a Technical Data Information Form (continued)

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**YUCCA MOUNTAIN PROJECT OFFICE  
DOCUMENT APPROVAL SHEET**

Y-AD-002  
4/90

Title ADMINISTRATIVE PROCEDURE AP-5.1Q CONTROL AND TRANSFER OF TECHNICAL DATA ON THE YUCCA MOUNTAIN PROJECT	NO. <input checked="" type="checkbox"/> Q <input type="checkbox"/> Non Q
---	--

APPROVAL

PROJECT MANAGER:	Original signed by E. L. Wilmot	1/29/90
	Signature	Date
DIRECTOR OF QUALITY ASSURANCE:	Original signed by D. G. Horton	1/26/90
	Signature	Date
N/A	N/A	N/A
(OTHER, AS REQUIRED)	Signature	Date

REVISION 0 EFFECTIVE DATE: 3/29/90

REVISIONS

INITIAL AND DATE

	REVISION 1	REVISION 2	REVISION 3	REVISION 4
PROJECT MANAGER:	<i>[Signature]</i> 7/17/90			
DIRECTOR, QA:	<i>[Signature]</i> 7/16/90			
N/A	N/A			
(OTHER, AS REQUIRED)				
EFFECTIVE DATE:	8/3/90			

**UNCONTROLLED**



# YUCCA MOUNTAIN PROJECT PROCEDURE

Y-AD-001  
4/90

Title  
ADMINISTRATIVE PROCEDURE AP-5.1Q CONTROL AND TRANSFER OF TECHNICAL DATA ON THE  
YUCCA MOUNTAIN PROJECT

## 1.0 PURPOSE AND SCOPE

### 1.1 PURPOSE

The purpose of this procedure, Control and Transfer of Technical Data on the Yucca Mountain Project (Project), establishes requirements and assigns responsibilities for the control and transfer of technical data within the Project. Data control and transfer begin at data acquisition, through measurement by Participant staff, procurement through subcontractors, interagency agreements, or any other means.

### 1.2 SCOPE

The scope of this procedure implements technical data management requirements contained in the Project Technical Data Management Plan (TDMP) (YMP/88-18), the Site-Specific Agreement, and the Project Quality Assurance Requirements Document (RW-0214). Strict adherence to this procedure, and the QAP regarding completeness of records, is necessary to qualify data to support the license application for repository construction, operation, and closure.

## 2.0 APPLICABILITY

This procedure is applicable to the Yucca Mountain Project Office (Project Office) and all other Project Participants who acquire, manipulate, or disseminate technical data. This procedure is applicable to technical data collected subsequent to the procedure's approval date, including technical data to be entered into the Project Technical Data Base (TDB), Reference Information Base (RIB), resident files, Participant data archives, and the Project Records Management System.

## 3.0 DEFINITIONS

Other definitions are provided in the Program Glossary and the TDMP.

### 3.1 AUTOMATED RECORDING NETWORK

An Automated Recording Network is any computerized data collection system used to automatically record, store, and transfer data generated by a group of related data gathering activities (e.g., the Integrated Data System (IDS) and the Integrated Data Acquisition System (IDAS)).

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ADMINISTRATIVE PROCEDURE AP-5.1Q CONTROL AND TRANSFER OF TECHNICAL DATA ON THE  
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## 3.2 DATA ACQUISITION

Data acquisition is the process of obtaining, recording, and documenting technical data as a result of a data-gathering activity. Data acquisition is complete when the data have been recorded and checks can be performed to determine that the data have been acquired according to applicable technical procedures. Data acquired by Communal Recording Systems, or under a Memorandum of Understanding (MOU) (per AP-5.19Q), shall be considered complete when received by the Participant for whom the data were acquired.

## 3.3 DATA RECORD PACKAGE SEGMENT

A Data Record Package Segment (DRPS) consists of subsets of technical data obtained as a result of data acquisition or data development activities and supporting information. A DRPS is not a complete record.

## 3.4 DATA TRANSMITTAL RECORD PACKAGE

The Data Transmittal Record Package consists of the data and supporting documentation provided in response to a data request, or as a submittal to the TDB. The Data Transmittal Record Package shall include the following, as a minimum:

- a. The subject data
- b. Identification of originating activity, quality assurance (QA) information, and Participant data set identifiers
- c. Bibliographic citations for published reports, if any
- d. Constraints, limitations, or assumptions, as applicable
- e. Technical Data Information Form
- f. For modifications or changes to a previous submittal, the identification of the data to be modified and a reference to the original submittal
- g. Any other information as specified in TDB component internal procedures

## 3.5 PROJECT DATA CATALOG

The Project Data Catalog provides users with the following information as a minimum: a listing of acquired data types or information, a description of the data, the location where the data was acquired, the date and time of data acquisition, the method of data acquisition, and the location where data may be examined.

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## 3.6 AUTOMATED TECHNICAL DATA TRACKING SYSTEM

The Automated Technical Data Tracking (ATDT) System, is an information management system designed to maintain references to data, resulting from data acquisition and development activities. This system is designed for use by Technical Data Management (TDM) personnel in the tracking of technical data records submitted to, or transferred from, Participant Data Archives (PDA), the Central Records Facility (CRF), the Project TDB, and the RIB.

## 3.7 TECHNICAL DATA

Technical data are scientific, environmental, socioeconomic, and engineering numerical values, or factual information resulting from data acquisition or data development activities. Technical data can be qualitative, quantitative, or graphic.

## 3.8 PARTICIPANT DATA ARCHIVE (PDA)

A PDA is a facility and/or computer system, which provide(s) controlled interim storage of acquired or developed Technical Data Record Packages or Package Segments, prior to their transfer to the Project CRF. The archive may be the Participant's Local Records Center, resident files, computer databases, or other suitable facility or system.

## 3.9 TECHNICAL DATA INFORMATION FORM (TDIF)

The TDIF is used to provide input to the Automated Technical Data Tracking System. The form is included with DRPS and Data Transmittal Record Packages.

## 3.10 DATA DEVELOPMENT

Data development is the process of reducing, analyzing, or interpreting technical data obtained during data acquisition.

## 3.11 DATA TRANSFER

Data transfer is the transmittal of technical data by a Project Participant in response to a specific request based upon information in the ATDT System or the Project Data Catalog. Data transfer includes, but is not limited to, transfer of data between Participants; transfer of data, with Project Office approval, to outside parties; submittal of data to the TDB; and submittal of products of the TDB to the requester of the data. Data transfer does not include the submittal of data from a Communal Recording System to the Participant for whom the data were collected. Data transfer does not include data provided by one Project Participant to another in fulfillment of agreements documented in an MOU and controlled by AP-5.19Q, Interface Control.

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ADMINISTRATIVE PROCEDURE AP-5.1Q CONTROL AND TRANSFER OF TECHNICAL DATA ON THE YUCCA MOUNTAIN PROJECT

## 4.0 RESPONSIBILITY

The following Project individuals or organizations are responsible for activities identified in Section 5 of this procedure:

1. Project Participant
2. Local Records Center (LRC)
3. Technical Project Officer (TPO)
4. Technical Data Manager (TDM)
5. Division Directors (DD)
6. Project Manager (PM)
7. Automated Technical Data Tracking (ATDT) System Staff
8. ATDT Manager
9. Central Records Facility (CRF)

## 5.0 PROCEDURE

NOTE: Flowcharts are attached to this procedure as Figure 1 and Figure 2.

<u>RESPONSIBLE PARTY</u>	<u>STEPS</u>	<u>PROCEDURE</u>
--------------------------	--------------	------------------

### TECHNICAL DATA ACQUISITION AND DEVELOPMENT RECORDS

Project Participant	<ol style="list-style-type: none"> <li>1. Compile records of data acquisition or development into Data Record Packages or Package Segments.</li> <li>2. Complete a TDIF (Attachment 1), and include with each Data Record Package or Package Segment.</li> <li>3. Submit the Data Record Package or Package Segment to the appropriate PDA within 45-days of completion of data acquisition or development, or obtain an extension as described in Steps 11 through 14.</li> </ol>
---------------------	--

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# YUCCA MOUNTAIN PROJECT PROCEDURE

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ADMINISTRATIVE PROCEDURE AP-5.1Q CONTROL AND TRANSFER OF TECHNICAL DATA ON THE  
YUCCA MOUNTAIN PROJECT

RESPONSIBLE PARTY

STEPS

PROCEDURE

4. Submit the TDIF to the CRF for entry into the ATDT System.
5. Submit Data Record Package or Package Segments resulting from data acquisition and data development to the CRF within 45-days of the end of the quarter in which the data were placed in the PDA; or in accordance with a Project Office approved schedule as described in Steps 15 through 17. The appropriate accessioned TDIF shall accompany each Data Record Package or Package Segment.

### TRANSFER OF DATA

PM

6. Submit approved non-Participant requests for data to the appropriate Project Participant. Include any special directions or constraints as appropriate.

Project Participants

7. Upon receipt of a request for data that are not contained in the Project TDB or RIB, prepare a Data Transmittal Record Package for the data transfer from resident files or Participant data archives to the requester.
8. Complete a TDIF and include with each Data Transmittal Record Package.
9. Submit the TDIF to the CRF for entry into the ATDT System.
10. Complete the data transfer within 45-days from receipt of the request, or obtain an extension as described in Steps 11 through 14.

### VARIANCES TO REPORTING REQUIREMENTS

TPO

11. Provide written approval for extensions to the 45-day requirements defined in Steps 3 and 10.

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# YUCCA MOUNTAIN PROJECT PROCEDURE

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<u>RESPONSIBLE PARTY</u>	<u>STEPS</u>	<u>PROCEDURE</u>
	12.	Submit a request for concurrence to the responsible DDs before the end of the 45-day period of data acquisition.
TDM	13.	Assist in securing the disposition of the responsible DDs for the extension.
DD	14.	Disposition the request for concurrence by returning a written response to the responsible TPO.

### VARIANCES TO LRC SUBMITTAL REQUIREMENTS

Project Participants	15.	When an extension to the 45-day submittal requirement in Step 5 is desired, prepare and submit to the appropriate Project Office DDs schedules, or revisions thereto, of data submittals to the CRF.
DDs	16.	Provide written approval of schedules for data submittals to the CRF.
PM	17.	Resolve disputes between DDs and the Project Participants concerning data submission schedules.

### AUTOMATED TECHNICAL DATA TRACKING SYSTEM

CRF	18.	Upon receipt of TDIFs, update the ATDT System to show maturation of the data, transfer of the data, TDB data, or RIB information.
ATDT System Manager	19.	Prepare and issue, at least quarterly, a Project Data Catalog in accordance with internal procedures.

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# YUCCA MOUNTAIN PROJECT PROCEDURE

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ADMINISTRATIVE PROCEDURE AP-5.1Q CONTROL AND TRANSFER OF TECHNICAL DATA ON THE  
YUCCA MOUNTAIN PROJECT

## 6.0 REFERENCES

NOTE: Refer to the latest revision of documents listed below unless otherwise stated.

### 6.1 REQUIREMENTS DOCUMENTS

Agreement between the Department of Energy's Office of Geologic Repositories Projects (BWIP, NNWSI, SRP, CRP) and the Nuclear Regulatory Commission's Division of Waste Management during the Site Investigation and Characterization Programs and prior to the Submittal of an Application for Authorization to Construct a Repository, dated 6/14/85.

OCRWM Quality Assurance Requirements Document, RW-0214.

Yucca Mountain Project Technical Data Management Plan, YMP/88-18.

### 6.2 INTERFACE DOCUMENTS

AP-5.2Q, Technical Information Flow to and from the Yucca Mountain Project Technical Data Base

AP-5.3Q, Information Flow in to the Project Reference Information Base

AP-5.19Q, Interface Control

QMP-17-01, Records Management: Record Source Implementation

## 7.0 FIGURES AND ATTACHMENTS

Figure 1, Flowchart for Control of Technical Data

Figure 2, Flowchart for Transfer of Technical Data

Attachment 1, Technical Data Information Form

## 8.0 RECORDS

The following documents used or generated in the implementation of this procedure have been identified as quality assurance records and shall be forwarded to the CRF for processing in accordance with the QMP-17-01, Records Management: Record Source Implementation:

1. Records of technical data recorded manually or electronically
2. Data Record Package Segments

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3. Data Transmittal Record Packages
4. Records of TPO approval of, and Project Office DDs concurrence on, exceptions to procedure requirements
5. Approved schedules for submittals of DRPS to the CRF

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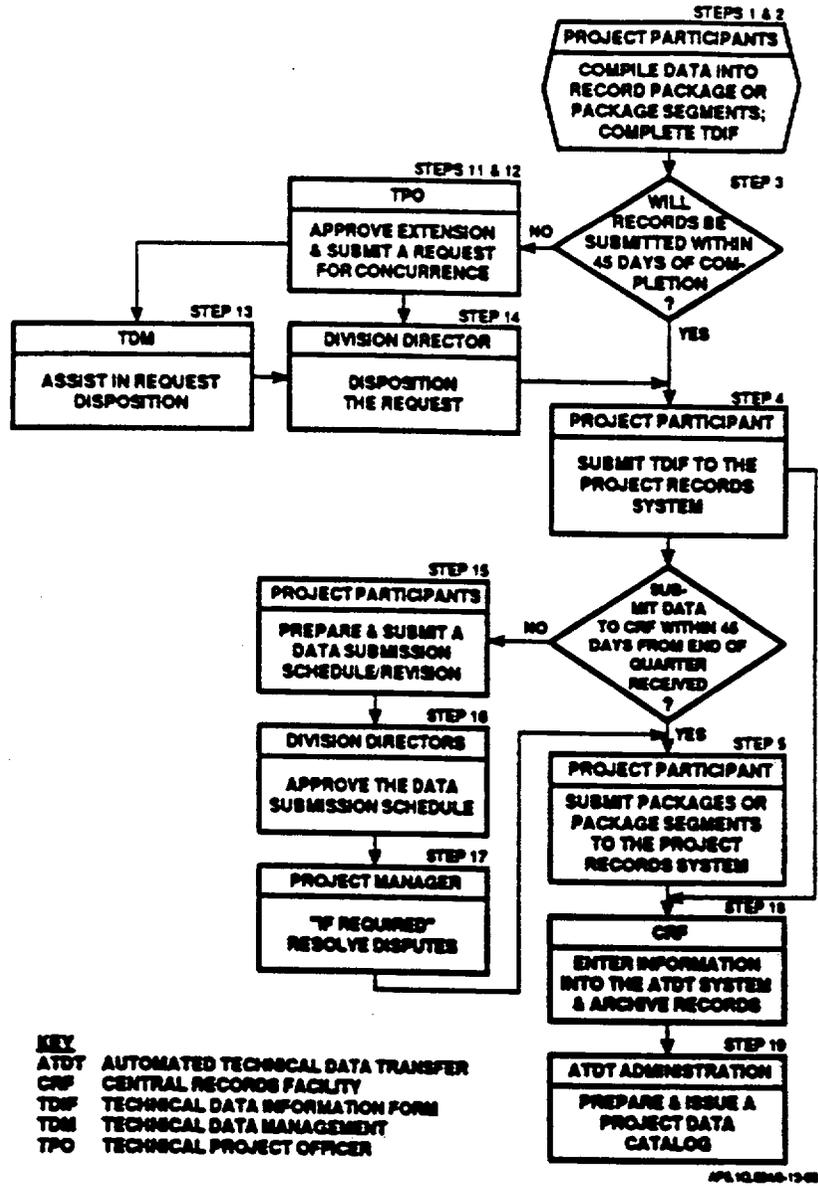


Figure 1 - Flowchart for Control of Technical Data

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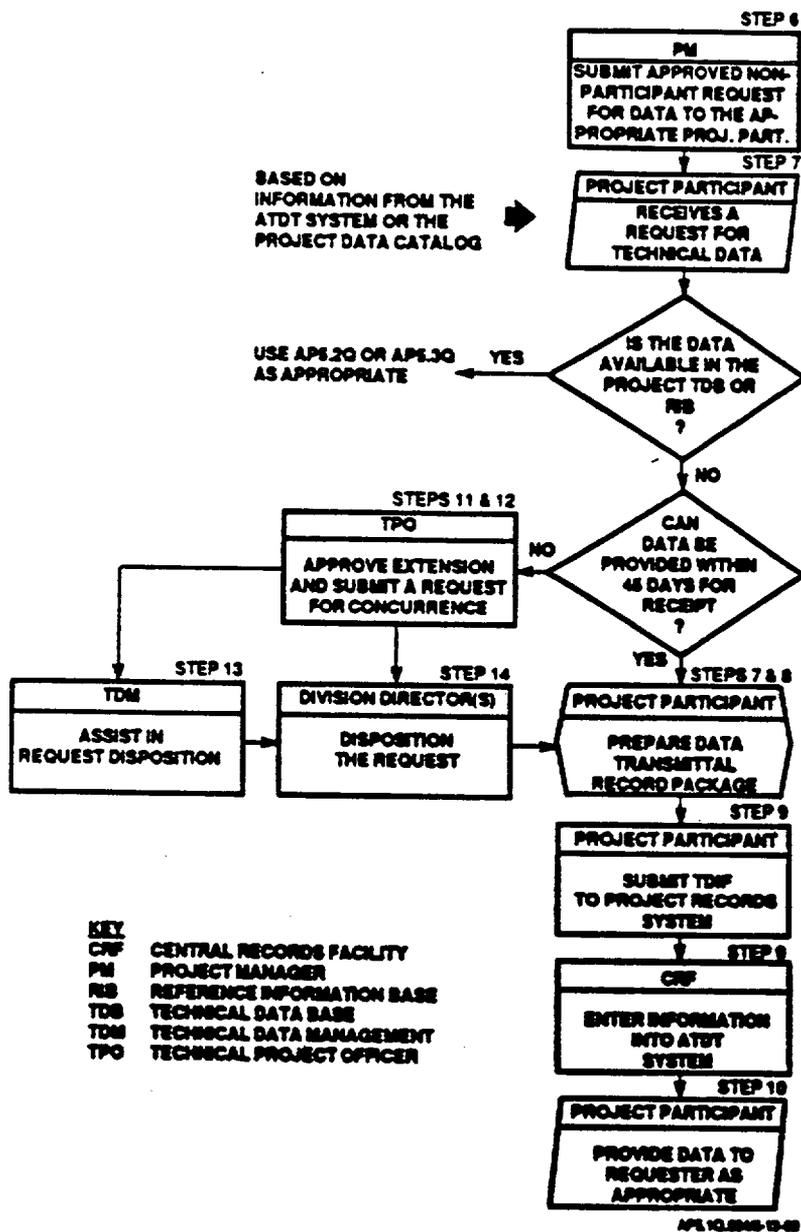


Figure 2 - Flowchart for Transfer of Technical Data

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TECHNICAL DATA INFORMATION FORM		Page 1 of 3	N-AD-065 4/90
<p>(check one):</p> <p><input type="checkbox"/> DATA RESULTING FROM DATA ACQUISITION (complete PARTS I and III)</p> <p><input type="checkbox"/> DEVELOPED DATA (complete PARTS I and II)</p> <p><input type="checkbox"/> DATA TRANSFER (complete PARTS I and II)</p>			
<p><b>PART I</b></p> <p>Submission Date: _____ WBS Number: _____</p> <p>Version Number: _____ Is Data Qualified? _____</p> <p>Preparer: _____</p> <p style="margin-left: 100px;">Name</p> <p style="margin-left: 300px;">Organization</p> <p>Communal Recording System Data Source: _____</p> <p>_____</p> <p>Title/Description of Data: _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Activity Number: _____ Governing Plan(s): _____</p> <p>Comments: _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>			

Attachment 1 - Example of a Technical Data Information Form

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# YUCCA MOUNTAIN PROJECT PROCEDURE

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TECHNICAL DATA INFORMATION FORM CONTINUATION PAGE	N-AD-065 Page 2 of 3 4/90
<b>PART II</b>	
Source Data Accession Number(s):	
Full Package TDIF(s): _____ _____ _____	
Partial Package TDIF(s): _____ _____ _____	
TDB Submittal <input type="checkbox"/> Yes <input type="checkbox"/> No	
If Yes, complete the following:	
a. Identify TDB Component: _____	
b. Format of document containing submitted data (e.g., magnet tape, floppy disc, etc.). Attach any remarks regarding special storage format or data organization that might be required. NOTE: A hard copy of the submitted data is required. _____ _____ _____	
c. Number of attached pages containing data: _____	
d. Identification number(s) or Local Record Center (LRC) code(s) on each submitted document: _____ _____	
e. Is submitted data published? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Published reference: _____ _____	
f. If submittal includes a modification (addition, correction, etc.) to a previous submittal, indicate reference to previous submittal. Also indicate which data are to be removed or superseded, the data and information as it should be in the TDB, and the reason for the modification (include attachments if necessary). _____ _____ _____	

Attachment 1 - Example of a Technical Data Information Form (continued)

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# YUCCA MOUNTAIN PROJECT PROCEDURE

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TECHNICAL DATA INFORMATION FORM CONTINUATION PAGE		N-AD-065 Page 3 of 3 4/90
<p>g. The attached data were collected for the Yucca Mountain Project and they are hereby authorized for inclusion in the TDB. All appropriate reviews and quality assurance requirements have been met.</p> <p style="text-align: center;">_____ Date _____ TPO Signature/Organization</p> <p>For TDB Administrator Use:</p> <p>Data Entered into TDB <input type="checkbox"/></p> <p>Data Submittal Rejected <input type="checkbox"/></p> <p>TDB Product <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If yes, complete the following:</p> <p>a. TDB Component _____</p> <p>b. Recipient/Organization _____</p> <p>Interparticipant Transfer <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If yes, Recipient/Organization _____</p>		
<p><b>PART III</b></p> <p>Principal Investigator: _____</p> <p>Participating Organization Generating Data: _____</p> <p>Description of Test/Collection Method: _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Automated Recording Network Source Data: _____</p> <p>Identification Number of Test: _____ Sample Number: _____</p> <p>Collection Location: _____</p> <p>Period of Data Acquisition: _____</p>		

Attachment 1 - Example of a Technical Data Information Form (continued)

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# YUCCA MOUNTAIN PROJECT PROCEDURE

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## INSTRUCTIONS FOR PREPARATION OF TECHNICAL DATA INFORMATION FORM N-AD-065

- Submission Date:** Today's date.
- WBS Number:** WBS number of technical data described by this form.
- Version Number:** In case of data package revision or updates, increment the version number.
- Is Data Qualified?** Was data acquired or developed under a fully qualified QA program or qualified in accordance with appropriate Project procedures? Answer Yes or No as appropriate.
- Preparer Name and Organization:**  
Name of individual providing data for this form and his/her organization.
- Communal Recording System Data Source:**  
If submitted is for data resulting from data acquisition and data were originally recorded by a communal recording system, identify original tape or disc.
- Title/Description of Data:**  
Provide descriptive data in no more than 480 characters.
- Activity Number:** Provide the Site Characterization Plan Activity Number and governing plan(s) under which the data was produced. (not the TDMP)
- Comments:** Provide comments (i.e. any constraints, limitations, or assumptions concerning the data) or write "N/A" in the Comments field.
- Source Data Accession Number(s):**  
Provide the CRF Accession Numbers of all technical data (e.g. Source Data) used to produce the data described by this form. If the Source Data is an entire Data Records Package (DRP) submitted previously, then write the accession numbers of the TDMP(s) included in the DRP in the Full Package TDMP(s) field. If the Source Data is a portion of a DRP submitted previously, then write only the accession numbers of the TDMP(s) which pertain to the Source Data in the Partial Package TDMP(s) field.
- TDS Submit:** Indicate if the submittal is to the TDS, and if Yes, complete steps "a" through "g."
- TDS Product:** Indicate if the submittal is a product of the TDS, and if Yes, complete steps "a" and "b."
- Interparticipant Transfer:**  
Indicate if the submittal is a transfer of data between participants, and if Yes, complete step "a."
- Principal Investigator:**  
Person responsible for this activity.
- Participating Organization Generating Data:**  
For example, LANL, SNL, LLNL, etc.
- Description of Test/Collection Method:**  
Briefly describe the overall test/collection approach followed.
- Identification Number of Test:**  
Provide the Identification Number of the test which was performed to produce this data (no more than 28 characters long).
- Sample Number:** Provide the Sample Identification Number or write "N/A" if not applicable.
- Collection Location:**  
Provide, as appropriate, the bore hole identification number, the latitude/longitude coordinates, etc.
- Period of Data Acquisition:**  
Provide the date (MMDDYY) or range of dates (MMDDYY - MMDDYY format) over which data was acquired.

Attachment 1 - Example of a Technical Data Information Form (continued)

Effective Date	Revision	Supersedes	Page	No.
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