

SUMMARY OF NRC-DOE TECHNICAL EXCHANGE
ON DATA MANAGEMENT
January 9, 1990
Rockville, Maryland

Agenda: See Attachment 1.

List of Attendees: See Attachment 2.

Summary:

On January 9, 1990, the U.S. Nuclear Regulatory Commission (NRC) and the U.S. Department of Energy (DOE) conducted a technical exchange on DOE's management and control of the technical data on the Yucca Mountain site. The purpose of the technical exchange was to discuss how DOE's plans for managing those data would allow them to be accessible to DOE, its participant organizations, the NRC, and other interested parties. DOE representatives presented an overview of its technical data management system (Attachment 3), discussed its technical data management concepts and priorities (Attachment 4), and explained the purpose of its Reference Information Base (RIB) (Attachment 5). NRC representatives discussed the need for timely access to all data collected by DOE in both hard copy and electronic formats. The relationship of DOE's data management system to the Licensing Support System (LSS) was briefly discussed, but DOE indicated that it has not determined how its system will channel data into the LSS. A representative of Clark County, Nevada attended this exchange.

NRC and DOE representatives considered that the exchange had clarified for NRC DOE's present and developing plans for management of the data on the Yucca Mountain site and the process by which NRC can obtain those data from DOE, and for DOE what NRC's short-term and long-term needs for data and access to data are likely to be.

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King Stablein, Sr. Project Manager
Repository Licensing and Quality
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NRC-DOE TECHNICAL EXCHANGE
ON DATA MANAGEMENT
January 9, 1990
Rockville, Maryland

AGENDA

8:30 a.m.	Introductions and Opening Remarks	A11
8:45 a.m.	Control of Yucca Mountain Project Technical Data and NRC Access to those Data	DOE
9:00 a.m.	Discussion	A11
10:00 a.m.	Break	
10:15 a.m.	Further Discussion	A11
11:30 a.m.	Lunch	
12:30 p.m.	Control of Site Technical Data in SEPDB	DOE
12:40 p.m.	Discussion	A11
1:30 p.m.	Break	
1:45 p.m.	Control of Information in RIB	DOE
2:00 p.m.	Discussion	A11
3:00 p.m.	Closing Remarks	A11
3:15 p.m.	Adjourn	

NRC-DOE TECHNICAL EXCHANGE
ON DATA MANAGEMENT
JANUARY 9, 1990
LIST OF ATTENDEES

<u>NAME</u>	<u>ORGANIZATION</u>	<u>TELEPHONE #</u>
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Donald L. Chery Jr.	NRC	(301) 492-3461
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Robert V. Barton	DOE	702 794-7957
Gene Roseboom	USGS Dir Office	FTS-959-4423
John Buckley	NRC	FTS ⁴⁹² 942-0513
Keith McConnell	NRC	FTS 942 492-0532
MICHAEL BLACKFORD	NRC	FTS 492-0524
JOE SCHEWING	Sandia Labs	FTS 844-3138
RALPH CADY	NRC	FTS 492-3843
Barbara Cerny	DDE	FTS 896-5792
HENRY L. BERMANIS	UE&C / Weston	(202) 646-6664
STEPHEN H. KME	ERC I	703-246-0428
PHILIP JUSTUS	NRC HLW GEOLOGY-GEOPHYS	301-492-3460
William Ford	NRC	301-492-0504
John L. Russell	CNWRM	512-522-5183
Robert L Marshall	CNWRM	512-522-5248
Phil Altomare	NRC/NMSS	301-492-3400
Betsy Shelburne	NRC/LSSA	301-492-4030
Ray Wallace	USGS-HQ/DOE-HQ	202-586-1244
GARY L. KLINE	WESTON	202-646-6652 (FTS 544)
BRUCE HURLEY	SAIC-QA	(702) 794-7630 (FTS 544)
MICHAEL F. FOLEY	SAIC/TEMSS	(702) 794-7800 FTS 544
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Bill BELKE	NRC	FTS 492-0445
JOHN LINEHAN	NRC	FTS 492-3387

**TECHNICAL DATA MANAGEMENT
ON THE YUCCA MOUNTAIN PROJECT**

PRESENTED BY

ROBERT V. BARTON

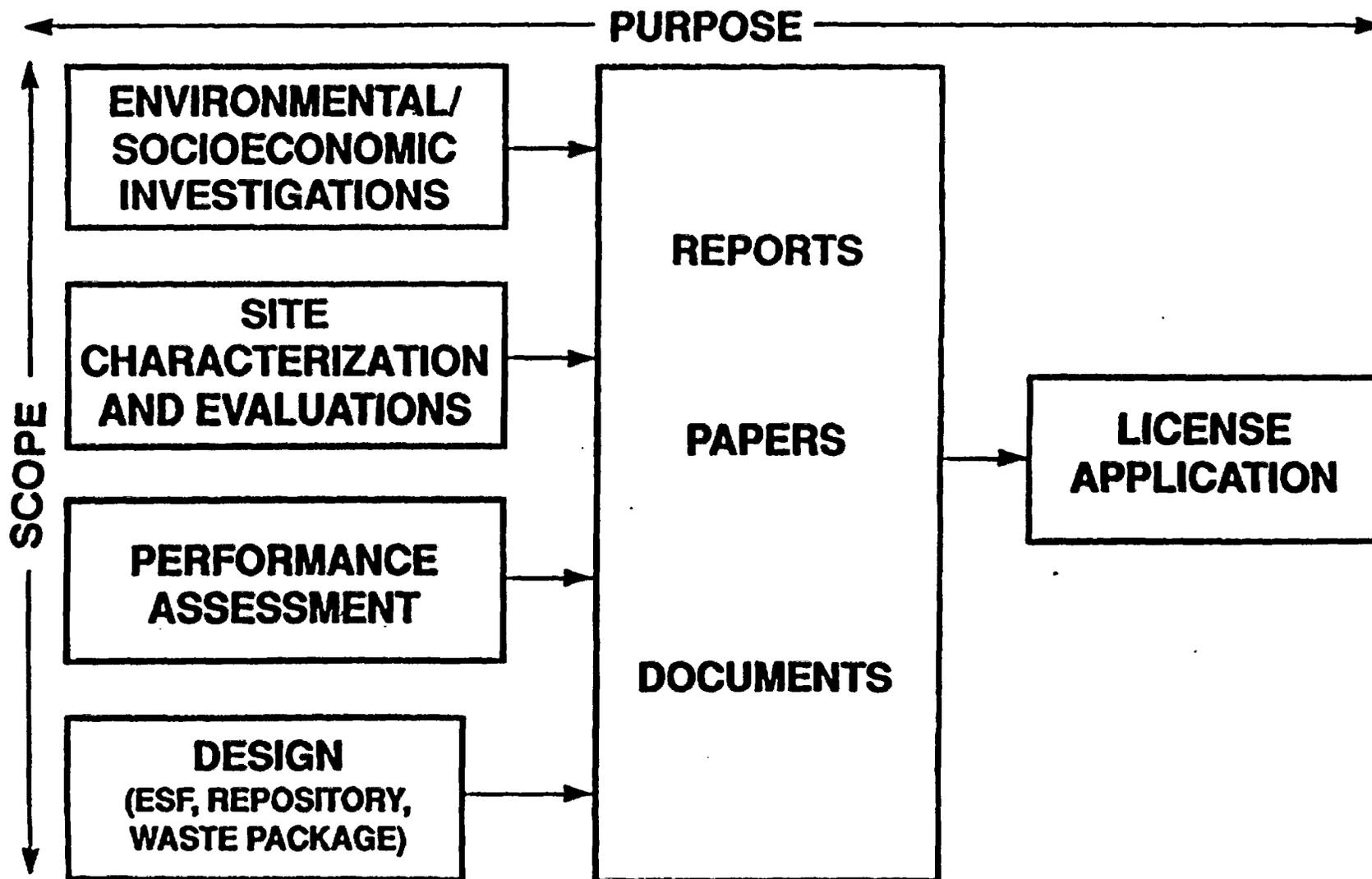
PURPOSE

**PROVIDE AN OVERVIEW OF THE PROJECT'S TECHNICAL DATA
MANAGEMENT SYSTEM WITH SPECIFIC EMPHASIS ON SYSTEM
PRIORITIES**

DISCUSSION FOCUS

- OVERVIEW OF TECHNICAL DATA MANAGEMENT - BOB BARTON
- TECHNICAL DATA MANAGEMENT CONCEPTS AND PRIORITIES - CLAUDIA NEWBURY
 - PARTICIPANTS
 - TECHNICAL DATA BASE
 - REFERENCE INFORMATION BASE - JOE SCHELLING

PURPOSE AND SCOPE OF TECHNICAL DATA MANAGEMENT



OVERVIEW OF TECHNICAL DATA MANAGEMENT

- **REQUIREMENTS**
- **SYSTEM DESCRIPTION**
- **TECHNICAL DATA INFORMATION SOURCES**
- **ACCESS TO TECHNICAL DATA**

OVERVIEW OF TECHNICAL DATA MANAGEMENT (CONTINUED)

TECHNICAL DATA MANAGEMENT REQUIREMENTS HAVE BEEN ESTABLISHED IN:

- NEVADA NUCLEAR WASTE STORAGE INVESTIGATION PROJECT QUALITY ASSURANCE PLAN (NNWSI/88-9)
- TECHNICAL DATA MANAGEMENT PLAN (TDMP) (CURRENTLY UNDER REVISION)
- THREE DETAILED TECHNICAL DATA MANAGEMENT PROCEDURES TO GOVERN ARCHIVING AND FLOW OF INFORMATION (TWO COMPLETED AND ONE IN PREPARATION)

OVERVIEW OF TECHNICAL DATA MANAGEMENT (CONTINUED)

TECHNICAL DATA MANAGEMENT REQUIREMENTS (NNWSI/88-9 AND TDMP)

- ALL DATA SHALL BE IDENTIFIED AND TRACEABLE TO THE SOURCE
- ESTABLISHED INTERFACES AMONG PARTICIPANTS TO ENSURE COMMUNICATIONS LINES BETWEEN DATA USERS AND DATA PROVIDERS
- PROCESSING OF TECHNICAL DATA SHALL BE VERIFIED AND DOCUMENTED
- DATA BASES STORING TECHNICAL DATA AND INFORMATION SHALL BE CONTROLLED
- ALL RECORDS GENERATED DURING ACQUISITION/REDUCTION/ ANALYSIS ACTIVITIES SHALL BE COLLECTED AND MAINTAINED IN A CONTROLLED MANNER

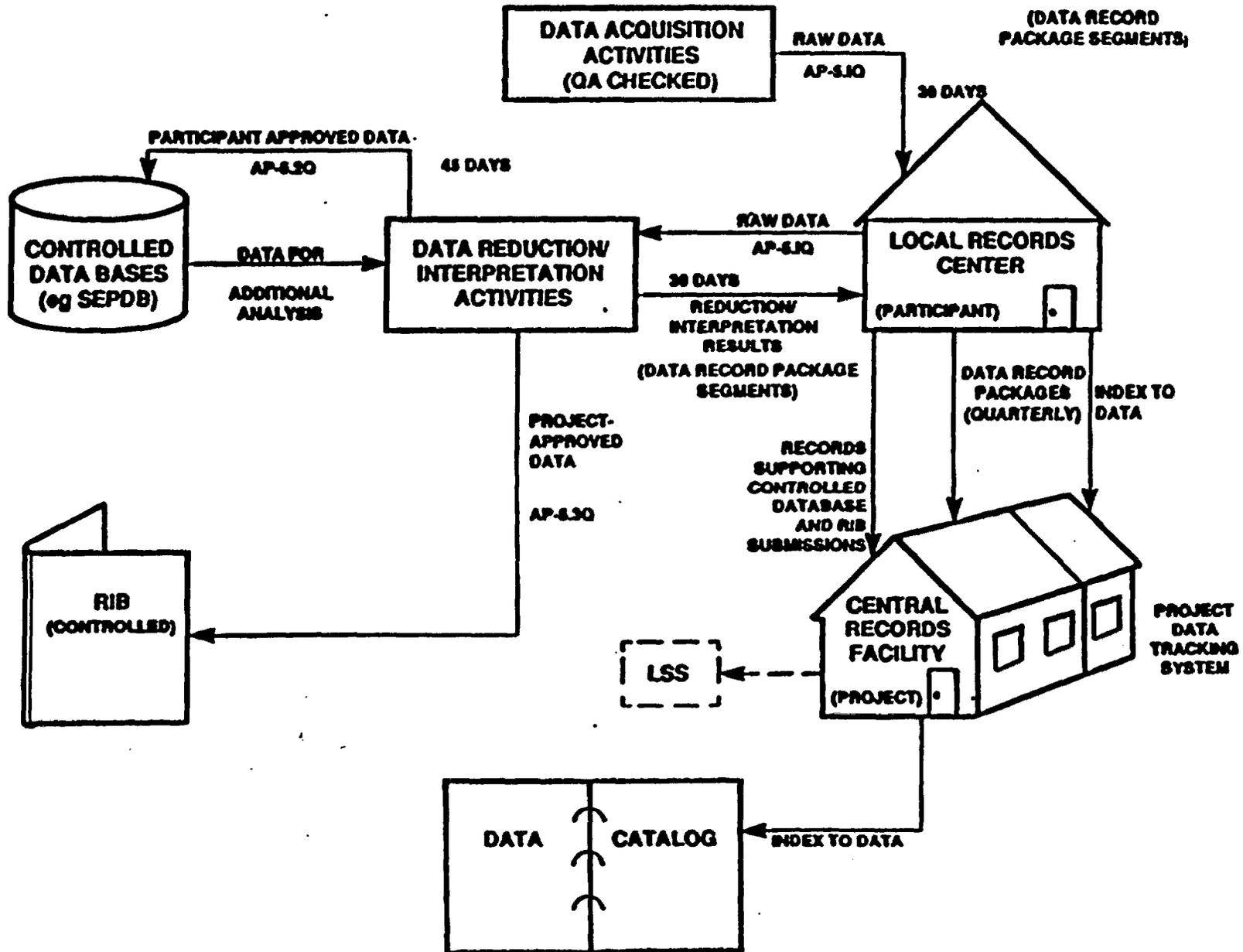
OVERVIEW OF TECHNICAL DATA MANAGEMENT (CONTINUED).

- DATA AND SUPPORTING INFORMATION SHALL BE PROVIDED TO THE CONTROLLED DATA BASES IN A TIMELY MANNER
- DATA SHALL BE PROVIDED TO REQUESTORS IN A TIMELY MANNER

OVERVIEW OF TECHNICAL DATA MANAGEMENT

- REQUIREMENTS
- **SYSTEM DESCRIPTION**
- TECHNICAL DATA INFORMATION SOURCES
- ACCESS TO TECHNICAL DATA

SYSTEM OVERVIEW



MANAGEMENT STRUCTURE

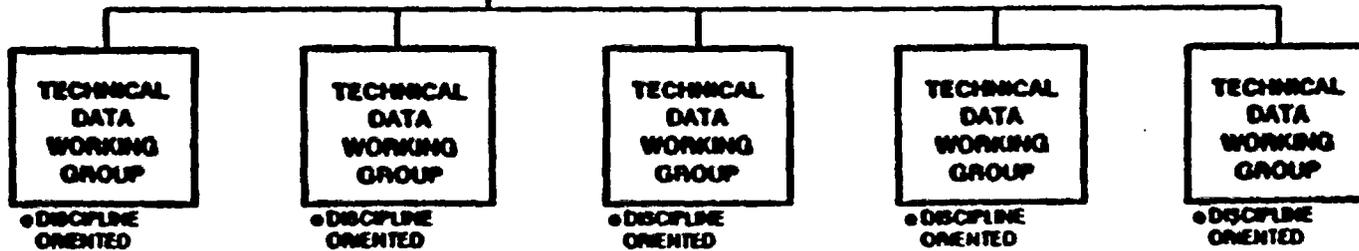
PROJECT MANAGER
REGULATORY & SITE EVALUATION DIVISION DIRECTOR
TECHNICAL ANALYSIS BRANCH CHIEF
TECHNICAL DATA MANAGER



• YUCCA MOUNTAIN
PROJECT OFFICE



• REPRESENTATIVES FROM EACH OF
THE PARTICIPANTS AND ADMINIS-
TRATORS FOR TDS AND RIB



TECHNICAL DATA WORKING GROUPS

AD HOC, DISCIPLINE-ORIENTED

USERS OF DATA IDENTIFY NEEDS, FORMAT REQUIREMENTS,
LEVEL OF REDUCTION, ETC.

PROVIDERS OF DATA SUPPLY DATA BASED UPON PROJECT AND
USER NEEDS

OVERVIEW OF TECHNICAL DATA MANAGEMENT

- REQUIREMENTS
- SYSTEM DESCRIPTION
- TECHNICAL DATA INFORMATION SOURCES
- ACCESS TO TECHNICAL DATA

TECHNICAL DATA INFORMATION SOURCES

DATA CATALOG

- INDEX TO:
 - RAW DATA
 - REDUCED & INTERPRETED DATA
 - DATA STORED IN THE TECHNICAL DATA BASE
- PUBLISHED QUARTERLY

TECHNICAL DATA INFORMATION SOURCES (CONTINUED)

PROJECT DATA TRACKING SYSTEM

- INFORMATION MANAGEMENT SYSTEM
- MAINTAINS REFERENCES TO TECHNICAL DATA USED ON THE PROJECT
- ASSISTS PROJECT IN DETERMINING STATUS/AVAILABILITY OF TECHNICAL DATA
- TRACKS SUBMITTALS OF RAW, REDUCED, AND INTERPRETED DATA TO LOCAL RECORD CENTERS
- LINKED WITH PROJECT RECORDS MANAGEMENT SYSTEM TO PROVIDE EXACT LOCATION OF TECHNICAL DATA

**TECHNICAL DATA INFORMATION SOURCES (CONTINUED)
REFERENCE INFORMATION BASE (RIB)**

- **CONTROLLED DOCUMENT**

- **PROVIDES INTERNALLY CONSISTENT VALUES FOR PROJECT WIDE
USE IN VARIOUS ANALYSES OF**
 - **SITE**
 - **DESIGN**
 - **PERFORMANCE**
 - **SOCIOECONOMIC**
 - **ENVIRONMENTAL**

- **REVISED ANNUALLY WITH QUARTERLY UPDATES AS INFORMATION
IS IDENTIFIED FOR INCLUSION BY TECHNICAL DATA ADVISORY
GROUP**

TECHNICAL DATA INFORMATION SOURCES (CONTINUED)

TECHNICAL DATA BASE (TDB)

- TDB CURRENTLY CONSISTS OF THE SEPDB AND THE IGIS
- SEPDB PROVIDES COMPUTER STORAGE AND RETRIEVAL FOR PHYSICAL PROPERTIES AND RELATED ALPHA-NUMERIC INFORMATION USED IN DESIGN, PERFORMANCE ASSESSMENT AND MODELING
- IGIS IS A COMPUTERIZED GRAPHICS SYSTEM USED FOR CREATING PROFILES AND DIAGRAMS FROM SEPDB DATA AND FOR STORAGE OF MAPS AND DESIGNS

TECHNICAL DATA INFORMATION SOURCES (CONTINUED)

TECHNICAL DATA BASE (TDB)

- COMPUTERIZED DATA BASES WITH INPUT CONTROLLED BY DATA BASE ADMINISTRATOR (IN ACCORDANCE WITH AP 5.2)
- DATA ARE SUBMITTED TO TDB WITHIN 45 DAYS OF COMPLETION OF THE DATA REDUCTION ACTIVITY

TECHNICAL DATA INFORMATION SOURCES (CONTINUED)

CENTRAL RECORDS FACILITY

- COPIES OF ALL TECHNICAL DATA STORED AT LRC ARE SUBMITTED QUARTERLY TO THE CRF
- PROVIDES SECURE CENTRAL STORAGE AND COPYING FACILITY
- FOUNDATION FOR LICENSING SUPPORT SYSTEM (LSS)
- MAINTAINS PROJECT DATA TRACKING SYSTEM AND PRODUCES QUARTERLY DATA CATALOG

TECHNICAL DATA INFORMATION SOURCES (CONTINUED)

LOCAL RECORD CENTERS

- RAW DATA ARE PLACED IN STORAGE WITHIN 30 DAYS OF ACQUISITION
- REDUCED & INTERPRETED DATA ARE PLACED IN STORAGE WITHIN 30 DAYS OF COMPLETION OF ACTIVITY
- PROVIDES LIMITED ACCESS STORAGE AREA
- PROVIDES FULL DOCUMENTATION OF DATA DEVELOPMENT
- TRANSMITS INDEX OF ALL TECHNICAL DATA ACQUISITIONS OR MANIPULATIONS TO CRF FOR INCLUSION IN DATA CATALOG

OVERVIEW OF TECHNICAL DATA MANAGEMENT

- REQUIREMENTS
- SYSTEM DESCRIPTION
- TECHNICAL DATA INFORMATION SOURCES
- ACCESS TO TECHNICAL DATA

ACCESS TO TECHNICAL DATA BY PARTICIPANTS

- **PARTICIPANTS NEEDING DATA FOR DESIGN AND PERFORMANCE ASSESSMENT MUST USE DATA FROM A CONTROLLED DATA BASE**
- **THE RIB AND THE TDB ARE CONTROLLED AT THE PROJECT-LEVEL AND ARE EXPECTED TO BE USED BY THE PARTICIPANTS IN THEIR DESIGN AND PERFORMANCE ASSESSMENT ACTIVITIES**

ACCESS TO TECHNICAL DATA BY OUTSIDE PARTIES

DOE'S PROCESS TO RESPOND TO DATA REQUESTS:

- DATA NEEDS IDENTIFIED IN DATA CATALOG
- REQUEST FOR DATA SUBMITTED TO DOE
- DOE TRANSMITS INCOMING REQUEST TO APPROPRIATE RECORDS CENTER FOR COMPLETION
- THE APPROPRIATE RECORD CENTER WILL PROVIDE DATA TO PROJECT OFFICE FOR TRANSMITTAL TO REQUESTER
- DOE WILL COORDINATE AS NECESSARY WITH REQUESTING PARTY AND WILL KEEP REQUESTER INFORMED OF STATUS
- DOE WILL PROVIDE DATA FROM MOST APPROPRIATE SOURCE IF DATA IS NOT YET IN DATA CATALOG OR RIB

CURRENT STATUS

- PROJECT DATA TRACKING SYSTEM IS UNDER DEVELOPMENT
- DATA CATALOG HAS BEEN PUBLISHED QUARTERLY FOR SEVERAL YEARS, BUT DOES NOT YET INCORPORATE INFORMATION FROM ALL PARTICIPANTS
- RIB, AND TDB SYSTEMS ARE OPERATIONAL AND CONTAIN DATA
- NONE OF THE SYSTEMS CURRENTLY CONTAIN THE COMPLETE SET OF EXISTING PROJECT DATA
- RIB, AND TDB WILL CONTINUE TO EXPAND AS SITE CHARACTERIZATION AND DESIGN INFORMATION BECOMES AVAILABLE
- LOCAL AND CENTRAL RECORDS CENTERS ARE FUNCTIONAL

SUMMARY

YMP IS IN THE PROCESS OF REVISING ITS DATA MANAGEMENT SYSTEM TO INCLUDE AN AUTOMATED DATA TRACKING/RETRIEVAL SYSTEM THAT WILL PROVIDE:

- TIMELY AVAILABILITY OF DATA FROM LOCAL AND CENTRAL RECORDS CENTERS
- ON-LINE ACCESS TO INFORMATION CONTAINED IN THE DATA CATALOG

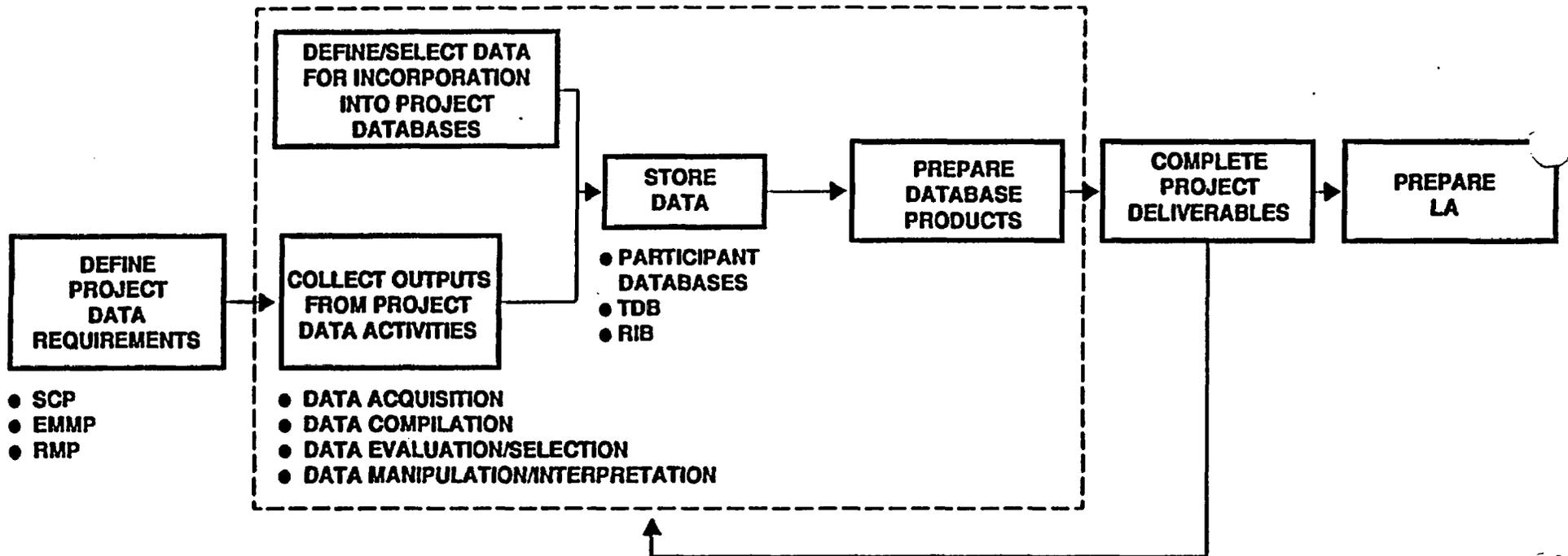
CENTRAL RECORDS FACILITY WILL BE THE PRINCIPAL SOURCE OF DATA TO THE LSS

TECHNICAL DATA MANAGEMENT CONCEPTS AND PRIORITIES

TECHNICAL DATA MANAGEMENT OBJECTIVES

- o SUPPORT RESOLUTION OF PROJECT TECHNICAL CONCERNS
- o ENSURE TIMELY ACCESS TO TECHNICAL DATA
- o ENSURE TRACEABILITY OF TECHNICAL DATA
- o PROVIDE FOR CONTROLLED STORAGE AND USE OF TECHNICAL DATA
 - PROMOTE CONFIDENCE IN THE ADEQUACY OF TECHNICAL DATA FOR ITS INTENDED APPLICATION
 - PROMOTE CONSISTENCY IN APPLICATION OF DATA VALUES

HIGH-LEVEL TECHNICAL DATA MANAGEMENT FUNCTIONS¹



SCP-SITE CHARACTERIZATION PLAN
 EMMP-ENVIRONMENTAL MONITORING AND MITIGATION PLAN
 RMP-RADIOLOGICAL MONITORING PLAN
 TDB-TECHNICAL DATA BASE
 RIB-REFERENCE INFORMATION BASE
 LA-LICENSE APPLICATION

¹ DOTTED LINE REPRESENTS THOSE FUNCTIONS THAT ARE WITHIN THE SCOPE OF THE TECHNICAL DATA MANAGEMENT SYSTEM

TECHNICAL DATA MANAGEMENT PRIORITIES

- o COLLECT EXISTING DATA FROM PROJECT PARTICIPANTS
 - FORMATION OF TECHNICAL DATA WORKING GROUPS
 - EXPANSION OF THE TDB
 - EXPANSION OF RIB
- o IMPLEMENT PROJECT DATA TRACKING SYSTEM
 - PRODUCTION OF COMPREHENSIVE PROJECT DATA CATALOG
- o STANDARDIZE PROTOCOLS FOR TRANSFERRING AND ACCESSING TECHNICAL DATA
 - TRANSFER AMONG PARTICIPANTS
 - PARTICIPANT ACCESS
 - OUTSIDE PARTY ACCESS

COLLECT EXISTING DATA

CAPTURE OF EXISTING PARTICIPANT DATA

EXISTING PARTICIPANT DATA ACQUIRED FROM PAST ACTIVITIES IS
THE CURRENT FOCUS

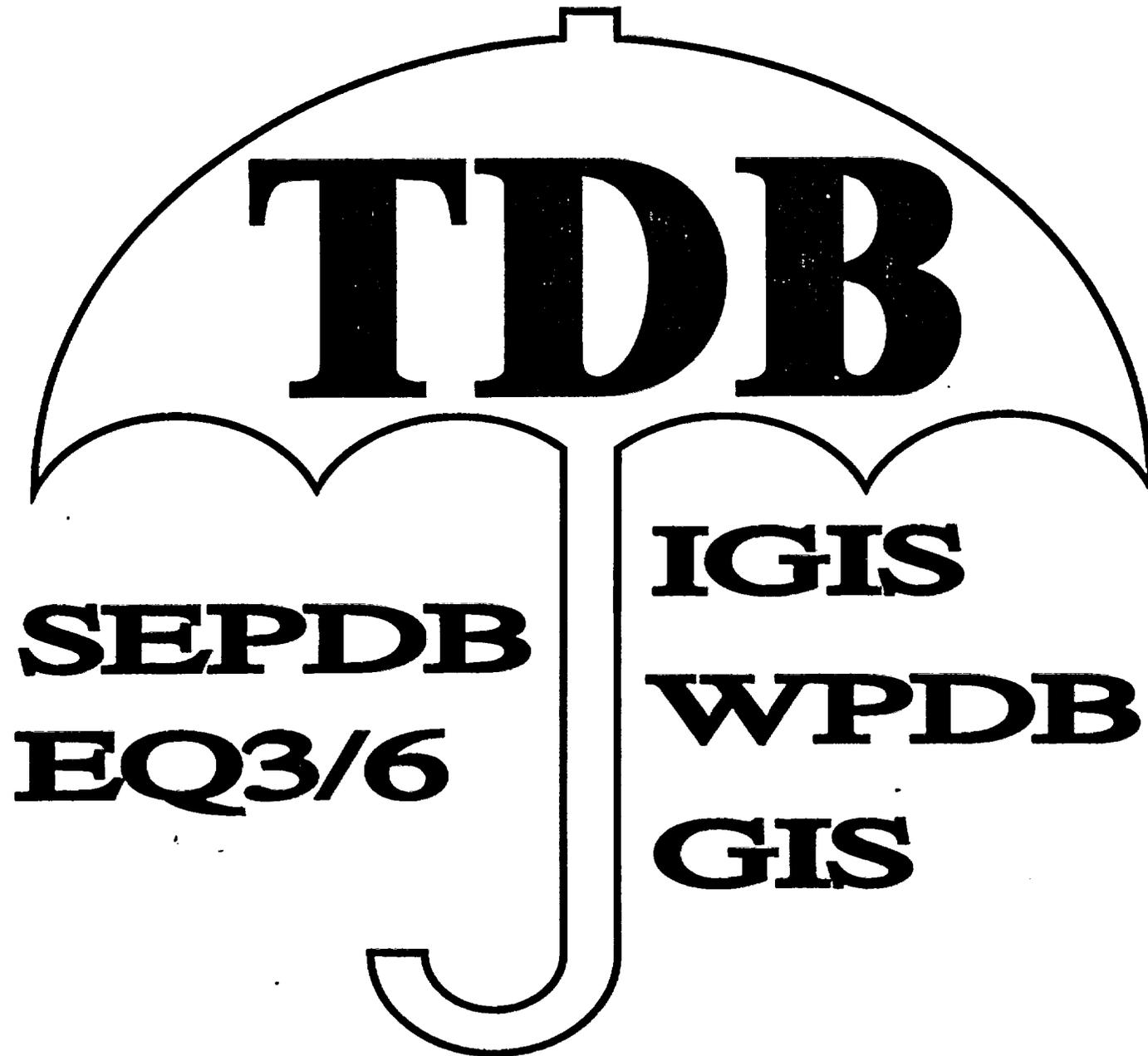
NEAR-TERM ACTIVITIES DETERMINE PRIORITY OF DATA TO BE
CAPTURED

TECHNICAL DATA WORKING GROUPS (TDWGs)

- o ORGANIZED BY THE TECHNICAL DATA MANAGER TO COMPILE DATA ASSOCIATED WITH SPECIFIC DISCIPLINES
- o TDWGs IN COOPERATION WITH INVOLVED PARTICIPANT TDAG MEMBERS, EXAMINE TECHNICAL DATA AT THE PARTICIPANT'S LOCATION
- o COMPILED DATA ARE ASSEMBLED INTO DATA RECORD PACKAGES AND SUBMITTED TO THE RECORDS SYSTEM
- o REDUCED/INTERPRETED DATA ARE TRANSFERRED TO THE TDB AND RIB, AS APPROPRIATE
- o DATA SUBMISSIONS ARE TRACKED THROUGH THE PROJECT DATA TRACKING SYSTEM

EXPANSION OF THE TDB

- o INCREASE CONTENT OF CURRENT TDB
- o EXPAND SCOPE OF GRAPHICS SYSTEM
- o INCLUDE THE PROJECT DATA BASES UNDER THE TDB UMBRELLA



TDB

SEPDDB

EQ3/6

IGIS

WPDB

GIS

EXPANSION OF THE RIB

- o UPDATE RIB TABLE OF CONTENTS TO PROVIDE A STRUCTURE TO CAPTURE DATA AS CALLED OUT IN THE SCP
- o PROVIDE A REFERENCE TO TDB DATA THAT WERE USED IN GENERATING SPECIFIC RIB INFORMATION ITEMS
- o WORKING GROUPS TO UPDATE AND EXPAND RIB CONTENTS

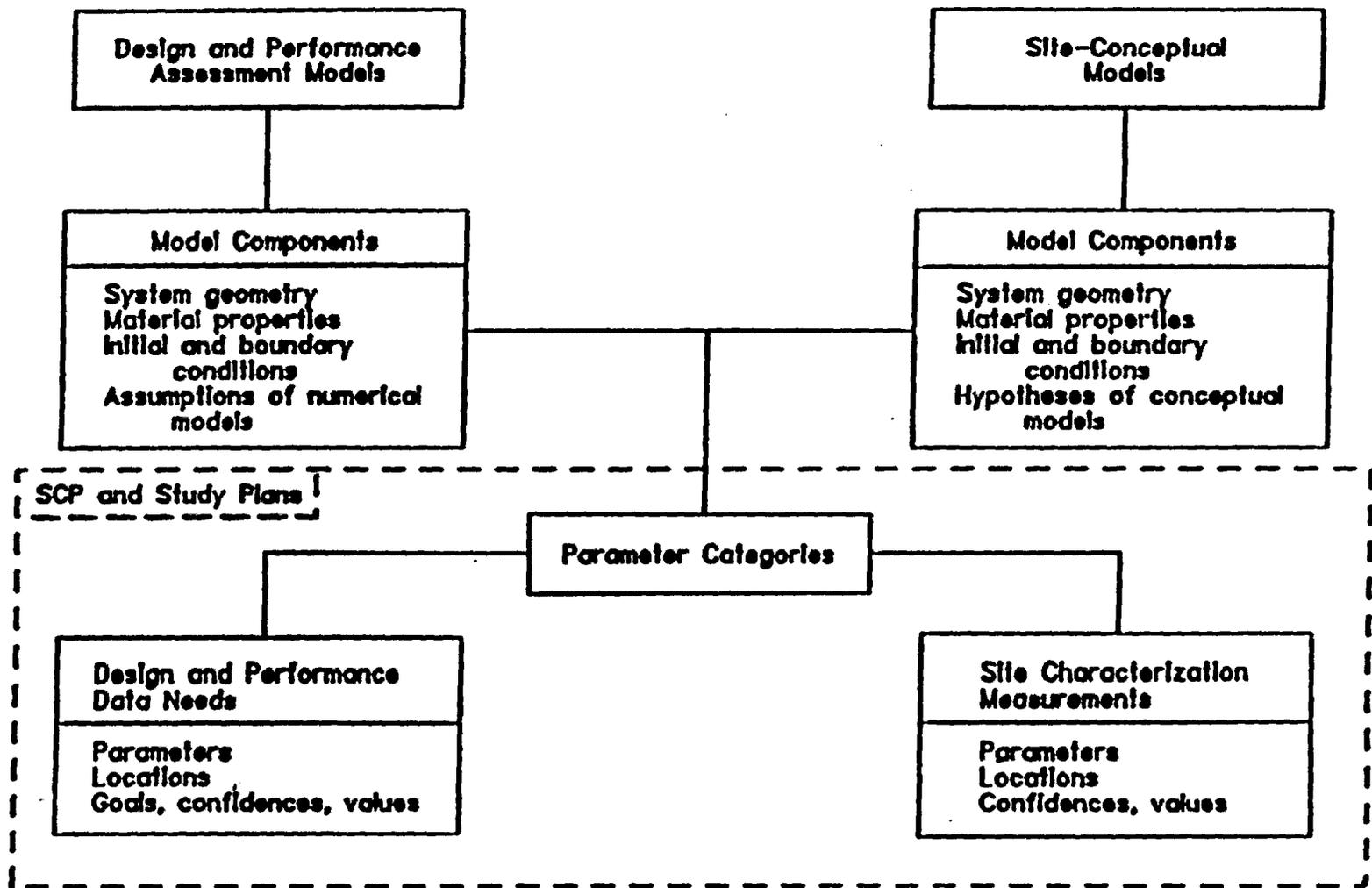
**YMP REFERENCE INFORMATION BASE
TABLE OF CONTENTS
VERSION 4**

	<u>CURRENT REVISION</u>	<u>RELEASE DATE</u>	<u>PAGE COUNT</u>
TITLE PAGE	0	2/1/89	1
INTRODUCTION	0	2/1/89	2
TABLE OF CONTENTS	0	2/1/89	2
TOPIC INDEX	0	2/1/89	6
VERSION CHANGE HISTORY	0	2/1/89	2

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	1.1.2	Borehole Stratigraphy	0	2/1/89	3
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	1.2.2	Rock Thermal Conductivity	0	2/1/89	4
	1.2.3	Rock Linear Thermal Expansion	0	2/1/89	3
	1.2.4	Heat Capacity and Rock Mass Thermal Capacitance	0	2/1/89	15
	1.2.5	Intact Rock Mechanical Properties	0	2/1/89	4
	1.2.6	Rock Mass Failure	0	2/1/89	2
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	1.2.8	Soil Mechanical Properties	0	2/1/89	7
	1.2.9	Vertical In Situ Stress Near Repository	0	2/1/89	4
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1.3	<u>Geochemistry</u>				
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1.4	<u>Geohydrology</u>				
	1.4.1	Maximum Flood Conditions	0	2/1/89	6
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1.5	<u>Environmental Conditions</u>				
	1.5.1	Regional Meteorological Conditions	0	2/1/89	7
1.6	<u>Socioeconomic Conditions</u>				

INTEGRATION OF PARAMETERS



**Table 1. Site models, model components, and parameter categories
(an outline for site-characterization parameters described in SCP Section 8.3.1)**

Model component number	Model component	Parameter category number	Parameter category
<u>Model: Rock-characteristics model</u>			
11100	Rock-unit geometry and properties	11110	Rock-unit contact location and configuration
		11120	Rock-unit lateral and vertical variability
		11130	Rock-unit mineralogy/petrology and physical properties
11200	Fracture geometry and properties	11210	Fracture distribution
		11220	Fracture orientation
		11230	Fracture aperture
		11240	Fracture length
		11250	Fracture-filling mineralogy and physical properties
11300	Fault geometry and properties	11310	Fault location
		11320	Fault orientation
		11330	Fault length and width
		11340	Fault displacement
		11350	Fault-zone mineralogy and physical properties
		11360	Faulting - recurrence and potential future activity, site
11400	Geologic model hypotheses	11400	Geologic model hypotheses.
12000	Geologic conceptual/descriptive models	12000	Geologic conceptual/descriptive models

IMPLEMENT PROJECT DATA TRACKING SYSTEM

PROJECT DATA TRACKING SYSTEM

INFORMATION MANAGEMENT SYSTEM DESIGNED TO:

- o MAINTAIN REFERENCES TO TECHNICAL DATA USED ON THE PROJECT
- o ASSIST PROJECT IN DETERMINING STATUS/AVAILABILITY OF TECHNICAL DATA
- o TRACK SUBMITTALS OF RAW, REDUCED, AND INTERPRETED DATA TO LOCAL RECORD CENTERS AND THE TDB
- o LINK WITH PROJECT RECORDS MANAGEMENT SYSTEM FOR LOCATING TECHNICAL DATA AND SUPPORTING INFORMATION
- o PRODUCE THE PROJECT DATA CATALOG

PROJECT DATA CATALOG

- o SITE-SPECIFIC AGREEMENT REQUIRES PROJECT DATA CATALOG
- o INCLUDES:
 - DESCRIPTION OF TECHNICAL DATA
 - TIME, PLACE, METHOD OF ACQUISITION
 - IDENTIFIES LOCATION WHERE DATA MAY BE EXAMINED

PROTOCOLS FOR TRANSFER AND ACCESS

TECHNICAL DATA TRANSFER AND ACCESS

- o DATA ARE TRANSFERRED TO THE TDB AND THE RIB IN ACCORDANCE WITH PROJECT DATA PRIORITIES
- o DATA ARE TRANSFERRED BETWEEN PARTICIPANTS IN ACCORDANCE WITH INTERFACE AGREEMENTS TO PROVIDE THAT DATA
- o DATA ARE PROVIDED TO OUTSIDE PARTIES ON REQUEST FOLLOWING APPROVED PROTOCOLS
 - IDENTIFY DATA IN PROJECT DATA CATALOG AND SUBMIT REQUEST TO DOE
 - OBTAIN DATA FROM RIB

SUMMARY

THE YUCCA MOUNTAIN PROJECT IS IN THE PROCESS OF UPGRADING ITS TECHNICAL DATA MANAGEMENT SYSTEM. THE PROJECT WILL FOCUS ON THE FOLLOWING NEAR-TERM PRIORITIES:

- CAPTURE OF EXISTING TECHNICAL DATA
- EXPANSION OF THE TDB AND THE RIB
- IMPLEMENTATION OF THE PROJECT DATA TRACKING SYSTEM TO PROVIDE A COMPREHENSIVE DATA CATALOG

COMPLETION OF THESE PRIORITIES WILL PROVIDE THE FOUNDATION FOR ACCOMPLISHING THE TECHNICAL DATA MANAGEMENT OBJECTIVES



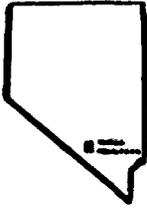
**YUCCA
MOUNTAIN
PROJECT**

RIB PURPOSE

The purpose of the Reference Information Base (RIB) is to:

- 1) assimilate, synthesize, distill, and interpret results obtained through Project data acquisition and analysis activities,**
- 2) serve as a central source of controlled technical information, and**
- 3) enhance communication and improve the consistency of use of data in Project activities.**





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RIB CHANGE CONTROL

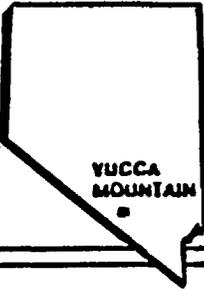
Changes to the RIB are controlled by the Project Change Control Board.

- helps to ensure consistency of data used in Project activities**
- monitors communication feedback between activities.**

Evolutionary growth is essential to RIB development.

- documents advances in Project knowledge and understanding**
- recognizes iterative nature of scientific process**
- responds to modifications to unique licensing process**
- serves as a source of information for use in ongoing activities and as a summary of output generated by activities**

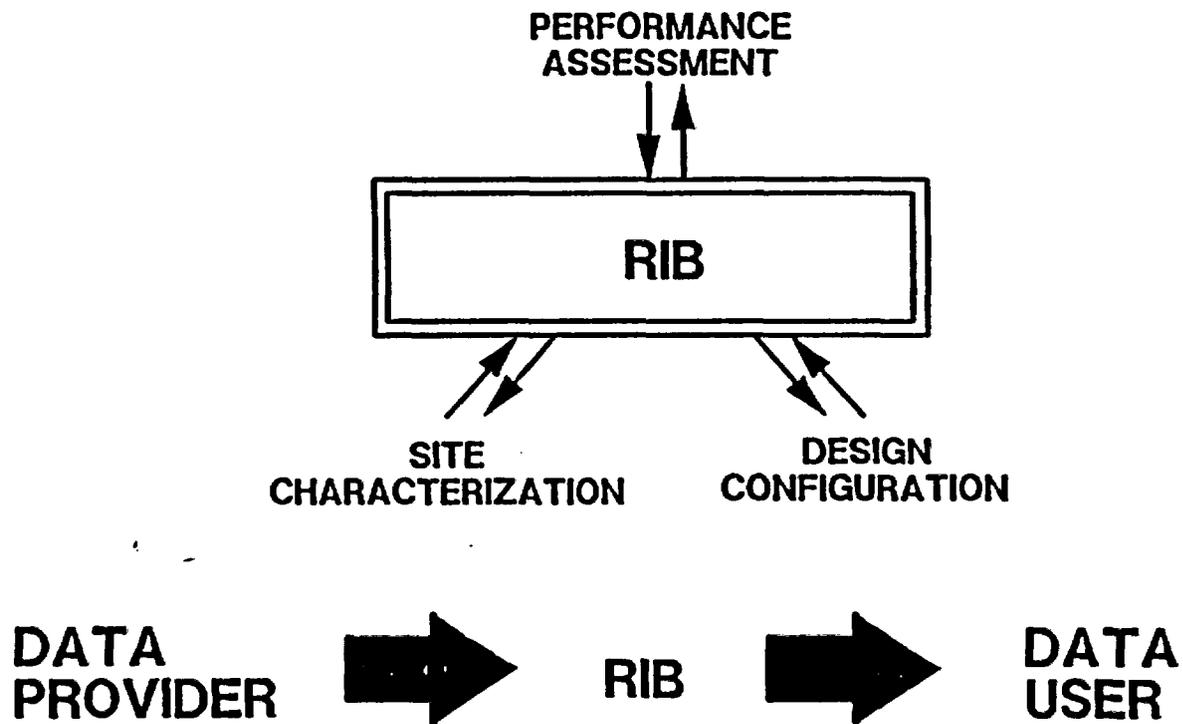


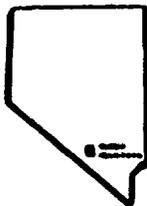


RIB INTERFACES



CONSISTENT USE OF INFORMATION IS ENHANCED BY COORDINATING AND CONTROLLING INFORMATION THROUGH THE RIB.





**YUCCA
MOUNTAIN
PROJECT**

RIB GOALS

Short-Term:

- **Document Project interpretation of the current understanding of technical data parameters to improve the consistency in the use of data in Project activities.**

Long-Term:

- **Evolution to a stable descriptive summary of technical information used in support of license application.**



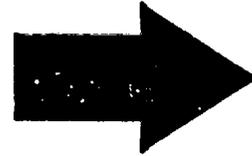
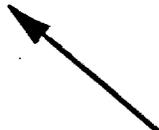


USE OF THE RIB FOR PROJECT ANALYSES



ENVIRONMENTAL/SOCIOECONOMIC

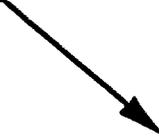
SITE CHARACTERIZATION



LICENSE
APPLICATION
SUPPORT

REPOSITORY DESIGN

PERFORMANCE ASSESSMENT





**YUCCA
MOUNTAIN
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INTENDED RIB CONTENT

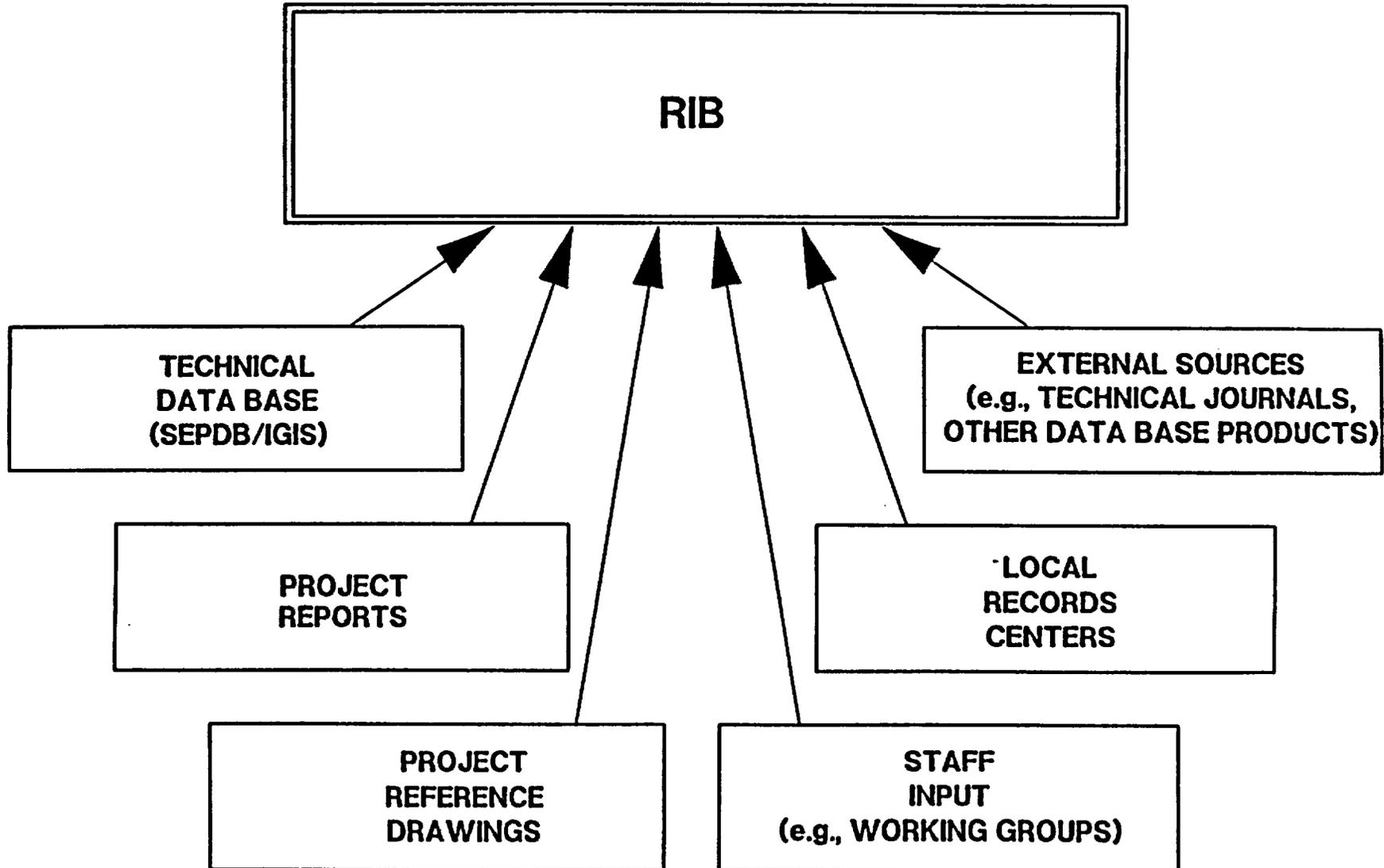
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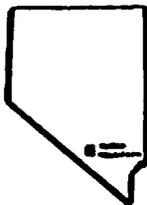
- **Site Characterization Plan (SCP) Parameters**
- **Issues Hierarchy and Information Needs**
- **Licensing Support System (10 CFR 2) Topical Guidelines**





RIB INFORMATION SOURCES





**YUCCA
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PROJECT**

RIB ITEM CONTENT

Header: Change control identification, e.g. RIB Version 4, Revision 0 of Item 1.2.2.

Keywords: List of topical keywords tied to Topic Index

Description

& Methodology:

A descriptive summary of the data, which describes the relationship to sources, assumptions, limitations, and recommendations for usage.

Quality

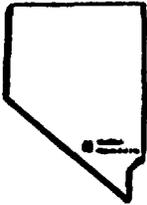
Assurance: A description of the quality assurance and traceability associated with the information.

Sources: Bibliographic summary of information sources, including both published and unpublished references.

Technical

Information: Tabular and graphic format reference data and information.





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CHANGE PROCESSING

- **Candidate information is established by Project priority or user-specified need.**

- **Participant technical staff are contacted to identify, prepare, and supply input to the RIB.**

- **Review process establishes Project concurrence on adequacy and validity of proposed information.**

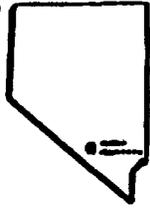
- **Proposed changes are submitted for Change Control Board approval and distribution.**



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RIB 01.001	April, '86	Draft example of typical form and content.
RIB 02.001	May, '87	Change-controlled, expanded draft example; submitted for Project approval; content based on SCP-CDR.
RIB 02.002	August, '87	Draft update set to RIB 02.001, as an example of continuous updating and growth of RIB content.
RIB 03.001	January, '88	Project-approved and baselined version; initial content drawn from draft RIB 02.002, but limited to ESF Title I data needs.
RIB 4	February, '89	Project controlled base version; initial content primarily prepared for ESF Title II start; improved change control and information traceability.





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RIB DEFINITION

The RIB provides a distillation of Project technical data, which establishes nominal values and ranges of uncertainty for technical parameters relevant to Project applications.

The "information base" format provides descriptive summaries of assumptions, limitations, and recommendations on uses of data and data interpretations, and identifies sources of more detailed information.

