

LPDR
WM-10 (2)

✓ 405/JK/87/03/23 TRIP REP. 1/3/17

MAR 31 1987 WM Record File 101

WM Project 10
Docket No. _____

PDR ✓
XLPDR ✓ (B)

NOTE TO: John Linehan, Acting Chief
WMRP

Distribution: _____

(Return to WM, 623-SS)

FROM: James Kennedy, Section Leader
WMRP Original Signed By:

SUBJECT: TRIP REPORT FOR BWIP BRIEFING ON LIFTING OF STOP WORK ORDER,
MARCH 17, 1987

On March 17, 1987, Bob Cook and I attended a briefing given by BWIP on their progress in lifting of the stop work order imposed last May. The major points from the briefing are as follows:

- o BWIP (DOE-RL and Rockwell) is putting into place extensive management control systems and procedures for the site characterization program.
- o BWIP has conducted what appears to be thorough training of their staff on the use of these procedures.
- o BWIP DOE-RL has established a Readiness Review Board to oversee the lifting of the stop work order.
- o BWIP DOE-RL has also set up an Independent Management Review Team (mostly from MAC) to conduct an independent assessment of the program. It is composed of highly experienced industry personnel and uses techniques that MAC has utilized in evaluating nuclear utility programs.
- o A partial lifting of the stop work order could occur in May. The general lifting is expected to occur in the fall of this year. Between then and now BWIP will be briefing us, DOE HQ, and the States and Tribes on progress. After the general lifting of the stop work order, we will be invited to perform our audits of the program to determine if it is fully qualified for site characterization.

One major issue we need to resolve which was highlighted by this briefing is how much of this program is QA as defined in Appendix B and subject to our review. One view is that virtually all of the management control systems are part of the QA program (a broad interpretation). If this is so, it will expand the scope of our current review and require more resources and expertise.

A related issue is whether we should evaluate the DOE and Rockwell management in general. Part of this review would be the management control systems they have put into place and discussed in this meeting. Another part could be more subjective evaluations based on interviews with project personnel as are being utilized in the Independent Management Review that DOE has established. Both the Ford Study and Thompson's TVA Lessons Learned report from last November

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recommended increased use of management assessments, but for us to do so will require at least expertise, if not resources, we do not currently have.

Enclosed are the handouts from the BWIP presentations.

Enclosure:
As stated

OFFICIAL CONCURRENCE AND DISTRIBUTION RECORD

NOTE TO: John Linehan, Acting Chief
WMP

FROM: James Kennedy, Section Leader
WMP Original Signed By:

SUBJECT: TRIP REPORT FOR BWIP BRIEFING ON LIFTING OF STOP WORK ORDER, MARCH
17, 1987

DATE: ~~MAR~~ 31 1987

DISTRIBUTION

<u>WM/SF 3405</u>	NMSS RF	RBrowning, WM	MBell, WM
JBunting, WMPC	PJustus, WMGT	MKnapp, WMLU	JLinehan, WMRP
JGreeves, WMEG	JKennedy & r/f	LRiddle	JDonnelly
CF	WMP r/f		

Record Note: This note was read to Bob Cook on 3/23/87. He had two comments; first, that it should be noted that the partial lifting of the SWO will not involve data collection activities (these will follow later after development of test procedures). Second, he felt that management reviews as described here are without question part of the QA program. I do not agree that this question is settled. Different and reasonable readings of Appendix B argue for a smaller scope that that espoused by Bob Cook.

(Mailed by the WMDCC)
 8/1/87 9:15
 Date J... Time ✓

**BASALT WASTE ISOLATION PROJECT
STOP WORK ORDER (SWO)/RESTART**

BRIEFING FOR

**OCRWM, NRC, STATES
AND AFFECTED INDIAN TRIBES**

**MARCH 17, 1987
RICHLAND, WASHINGTON**

INTRODUCTION

J.H. ANTTONEN

BRIEFING OBJECTIVE IS TO PROVIDE PROJECT PARTICIPANTS WITH

- **OVERVIEW OF BWIP MANAGEMENT CONTROL SYSTEMS**
- **PLANS FOR LIFTING STOP WORK ORDER (SWO)**
- **CURRENT STATUS OF SWO/RESTART**
- **FUTURE ACTIONS AND SCHEDULES FOR RESTART
ACTIVITIES**
- **DOCUMENTATION AND FEEDBACK PROCESS**

AGENDA

**BWIP STOP WORK ORDER/RESTART BRIEFING FOR OCRWM,
NRC, STATES AND AFFECTED INDIAN TRIBES**

**HOLIDAY INN, RICHLAND, WASHINGTON
TUESDAY, MARCH 17, 1987**

8:30 - 8:40	INTRODUCTION	JOHN ANTTONEN
8:40 - 9:00	STOP WORK ORDER/RESTART OVERVIEW	LEE OLSON
9:00 - 9:30	BWIP MANAGEMENT CONTROL SYSTEMS	PIERRE SAGET
9:30 - 11:45	ROCKWELL HANFORD OPERATION - BWIP MANAGEMENT CONTROL SYSTEMS AND STOP WORK ORDER/RESTART ACTIVITIES	DON MAHAGIN JANE KIRKENDALL ROGER JOHNSON JOE RIVIERA

**15 MINUTE BREAK AT APPROXIMATELY
10:00 A.M.**

AGENDA

BWIP STOP WORK ORDER/RESTART BRIEFING FOR OCRWM, NRC, STATES AND AFFECTED INDIAN TRIBES (CONT)

11:45 - 1:00	LUNCH	
1:00 - 1:20	DOE-RL READINESS REVIEW BOARD PROCESS, ACTIONS AND STATUS	LEE OLSON
1:20 - 2:00	DOE-RL READINESS REVIEW TEAM PROCESS, ACTIONS AND STATUS	TED PETRIE
2:00 - 2:30	INDEPENDENT MANAGEMENT REVIEW TEAM PROCESS, ACTIONS AND STATUS	JOHN AMARAL DARREL HUBBARD
2:30 - 3:00	SUMMARY, FUTURE ACTIONS AND CLOSURE	LEE OLSON

OVERVIEW

- **BACKGROUND/HISTORY OF SWO**
- **SWO RESTART PROCESS**

O.L. OLSON

EARLY 1986 STATUS

- **PROGRAMMATIC COMMITMENT**
 - BEFORE ISSUING SCP, MANAGEMENT CONTROL SYSTEMS, INCLUDING QUALITY ASSURANCE, UPGRADED TO MEET NRC LICENSING STANDARDS
- **CONCERNS**
 - PROGRESS IN UPGRADING MANAGEMENT CONTROL SYSTEMS WAS INSUFFICIENT TO MEET PROGRAMMATIC COMMITMENT
 - WORK WAS ONGOING OR PLANNED WITHOUT SUFFICIENT CONTROLS

ACTIONS LEADING TO SWO

- **MARCH 14, 1986 REQUEST FOR RHO TO EVALUATE WORK ACTIVITIES AGAINST MANAGEMENT CONTROL PREREQUISITES**
- **APRIL 11, 1986 RHO RESPONSE**
 - **REVIEWED 450 WORK ACTIVITIES - RECOMMENDED 41 BE STOPPED**
 - **DID NOT IDENTIFY BASIS FOR RECOMMENDATION**
 - **WORK EVALUATION SHEETS DID NOT SUPPORT RECOMMENDATION**
- **AUDITS/SURVEILLANCES FOUND**
 - **LACK OF ADEQUATE QA PROCEDURES**
 - **LACK OF TECHNICAL PROCEDURES**
 - **LACK OF TRAINING/TRAINING PROGRAM**
 - **STOP WORK ON PEER REVIEWS ISSUED APRIL 24, 1986**

ACTIONS LEADING TO SWO (CONT)

- **MAY 1, 1986 DOE-RL ISSUED SWO TO RHO. SIX WORK CATEGORIES WERE EXCEPTIONS**
 - DATA GATHERING FOR ONGOING TESTS *- hydraulic seismic testing*
 - MANAGEMENT CONTROL SYSTEM UPGRADES
 - SAFETY/MAINTENANCE ACTIVITIES
 - ADMINISTRATIVE ACTIVITIES
 - SCP PREPARATION ACTIVITIES
 - ESSENTIAL ACTIVITIES/IMPRUDENT TO STOP

ACTIONS SUBSEQUENT TO SWO

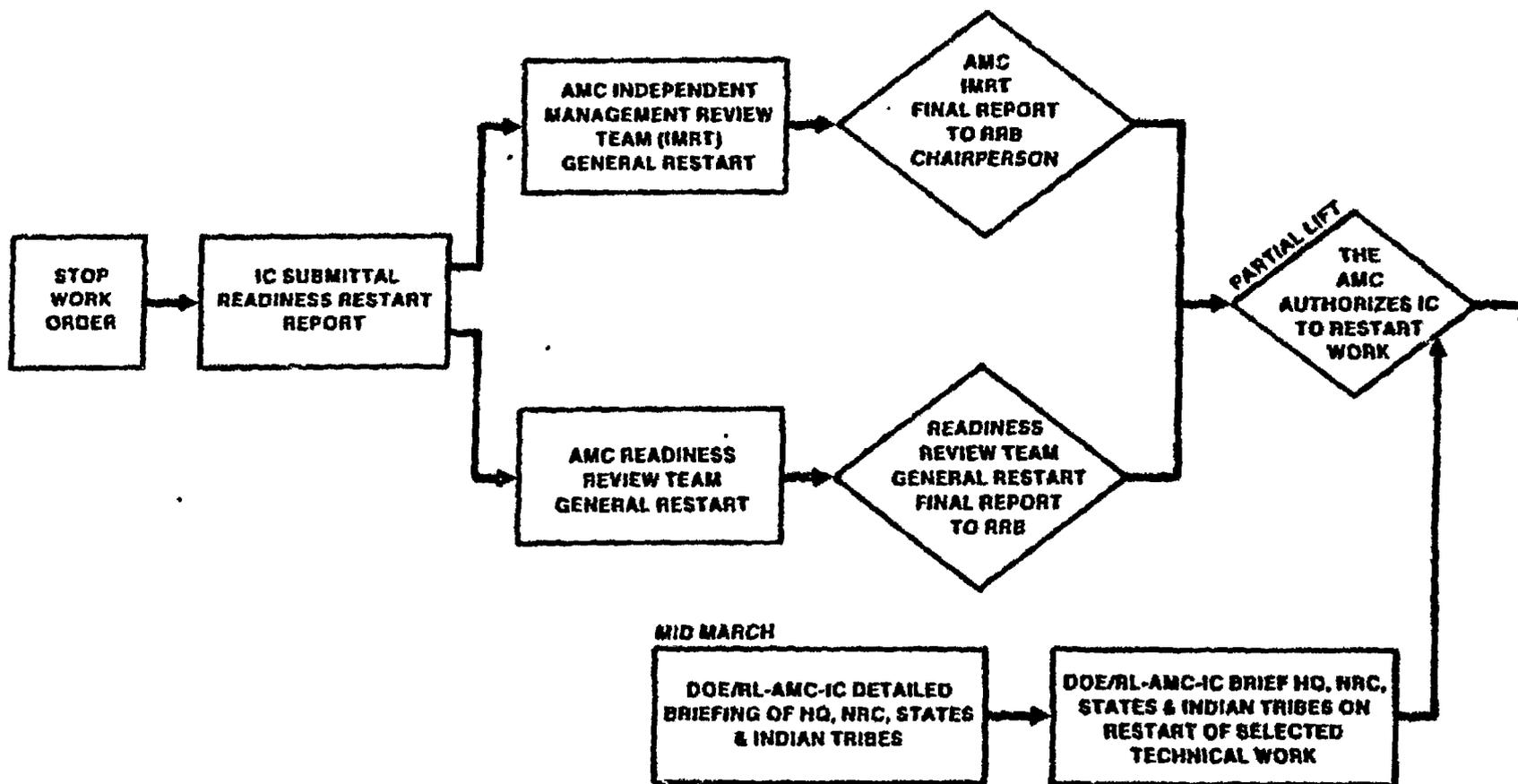
- **MAY 14, 1986 RHO RESPONSE TO SWO**
 - **APPROXIMATELY 850 WORK ACTIVITIES REVIEWED**
 - **APPROXIMATELY 350 WORK ACTIVITIES RECOMMENDED FOR STOP WORK**
- **FOLLOW-ON REVIEW**
 - **APPROXIMATELY 1300 WORK ACTIVITIES REVIEWED**
 - **APPROXIMATELY ONE-HALF WERE STOPPED**
- **SEPTEMBER 4, 1986 RHO SUBMITTED RESTART PLAN AND SCHEDULE**
- **JANUARY 4, 1987 RHO SUBMITTED RESTART READINESS REPORT**
 - **IDENTIFIED OPEN ITEMS TO BE COMPLETED BY FEBRUARY 28, 1987**
 - **REQUESTED LIFTING OF SWO UPON COMPLETION OF DOE REVIEW**
- **DOE-RL CURRENTLY REVIEWING RESTART READINESS**
- **CONTINUED AUDIT/SURVEILLANCE ACTIVITY OF EXEMPTED WORK AND RESTART ACTIVITIES**

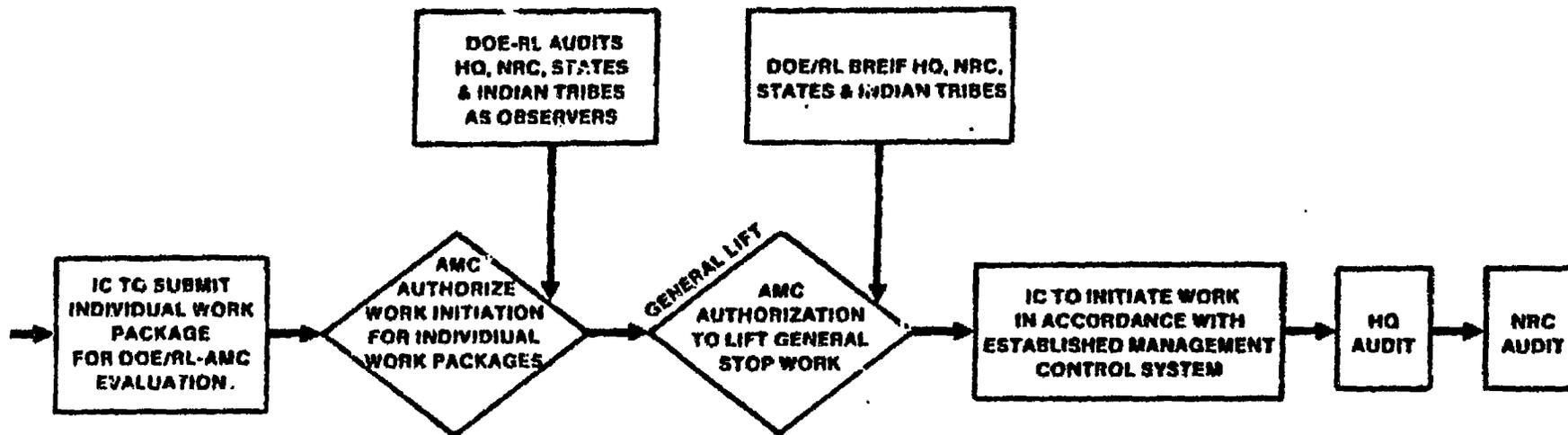
LIFTING STOP WORK ORDER 2-STEP PROCESS

- **PARTIAL LIFT OF SWO**
 - WHEN RHO MANAGEMENT CONTROL SYSTEMS, INCLUDING QA, ARE FUNCTIONAL, AND
 - WHEN DOE AGREES CONTROLS ARE FUNCTIONAL
 - DOE-RL USING READINESS REVIEW PROCESS TO ASSESS ADEQUACY OF RHO MANAGEMENT CONTROL SYSTEMS
 - DOE-RL USING INDEPENDENT MANAGEMENT REVIEW TEAM TO ASSESS EFFECTIVENESS OF MANAGEMENT CONTROLS
 - ALLOWS WORK UNDER CONTROLLED CONDITIONS
 - DOE-RL APPROVE WORK RELEASE
 - DOE-RL AUDITS IMPLEMENTATION
- **COMPLETE LIFT OF SWO**
 - WHEN DOE HAS ASSURANCE THAT MANAGEMENT CONTROL SYSTEMS AND WORK IMPLEMENTATION PROCESSES ARE WORKING SATISFACTORILY
 - ALLOWS WORK UNDER CONTROLS ESTABLISHED BY MANAGEMENT CONTROL SYSTEMS

schedule?

**OFFICE OF ASSISTANT MANAGER FOR COMMERCIAL NUCLEAR WASTE
 BASALT WASTE ISOLATION PROJECT
 FLOW CHART
 STOP WORK ORDER BSWO-86-004
 GENERAL RESTART PROGRAM**





LEGEND:
 IC - INTEGRATING CONTRACTOR
 AMC - OFFICE OF ASSISTANT MANAGER
 FOR COMMERCIAL NUCLEAR WASTE
 RRB - READINESS REVIEW BOARD

CURRENT STATUS

- **RHO ESTIMATES APPROXIMATELY APRIL 15, 1987 COMPLETION OF OPEN ITEMS AND RESOLUTION OF ISSUES IDENTIFIED BY RRT**
- **READINESS REVIEW TEAM AND INDEPENDENT MANAGEMENT REVIEW TEAM ASSESSMENT IN PROCESS - CANNOT COMPLETE UNTIL RHO ACTIONS COMPLETED**
- **PARTIAL LIFT COULD OCCUR IN MAY BASED ON CURRENT STATUS**

BWIP MANAGEMENT CONTROL SYSTEM

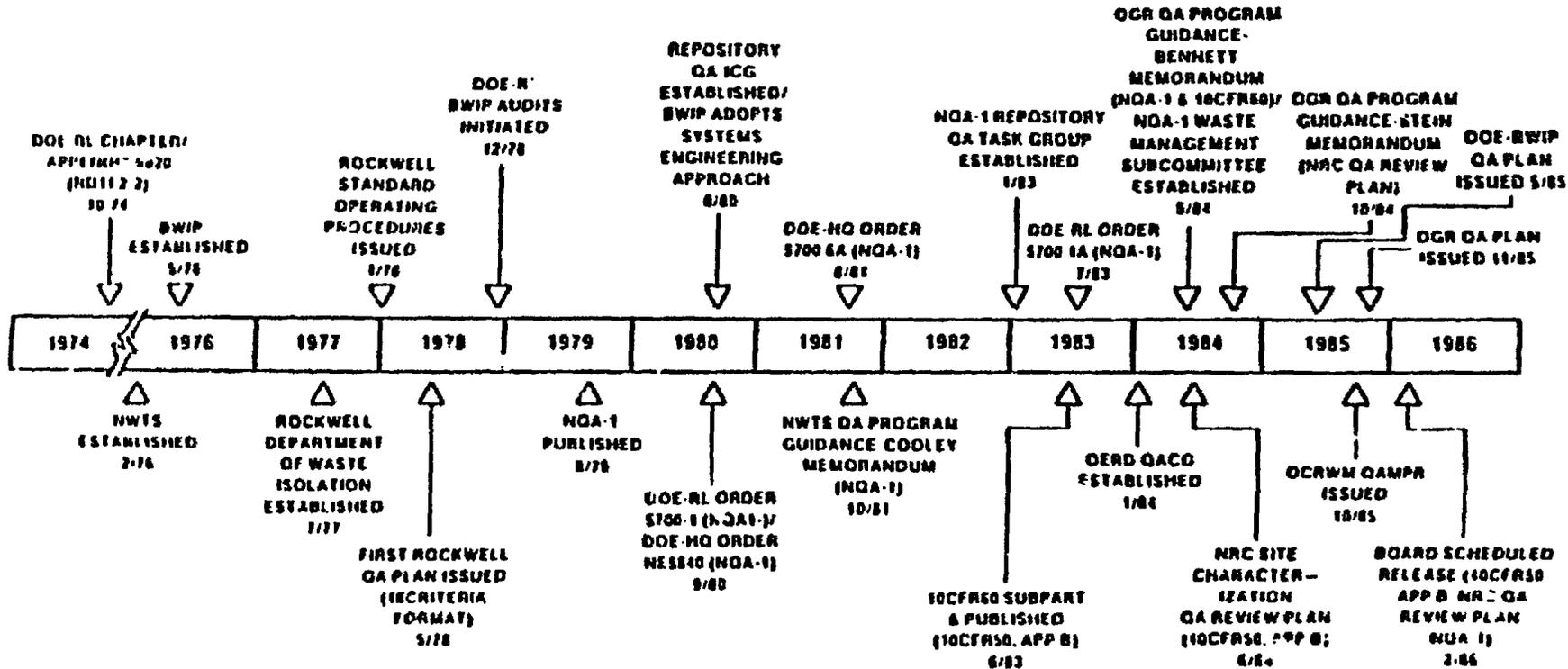
R. PIERRE SAGET

- **A MANAGEMENT CONTROL SYSTEM IS ALL THE PLANS, POLICIES, PROCEDURES, SYSTEMS, AND PROCESSES THAT SERVE AS THE MECHANISM FOR MANAGING PROGRAM ELEMENTS TO MEET SAFETY, Q.A., AND TECHNICAL REQUIREMENTS IN A COHESIVE, COST-EFFECTIVE MANNER**
- **EXTERNAL DOCUMENTS REQUIRE BWIP TO DEVELOP A MANAGEMENT CONTROL SYSTEM**
 - **DEFINE REQUIREMENTS**
 - **ESTABLISH POLICY**

*Safety and
Environment*

- **NUCLEAR WASTE POLICY ACT OF 1982 - SIGNED JANUARY 1983**
 - **REQUIRES SITE CHARACTERIZATION ACTIVITIES BE PERFORMED AT 3 SELECTED SITES**
 - **REQUIRES CONSULTATION AND COOPERATION WITH STATES AND AFFECTED INDIAN TRIBES**
 - **ASSIGNS RESPONSIBILITIES TO NRC AND DOE**
- **NUCLEAR REGULATORY COMMISSION ISSUED 10CFR60 IN 1981**
 - **RULES GOVERNING THE LICENSING OF DOE TO POSSESS BYPRODUCT MATERIAL AT A GEOLOGIC REPOSITORY**
 - **AMENDED TO CONFORM TO NWPA - FEBRUARY 1986**
 - **SUBPART G DEFINES Q.A. REQUIREMENTS - INVOKES 10CFR50 APP. B**
 - **NRC REVIEW PLAN (JUNE 1984) DEFINES HOW APP. B CAN BE APPLIED TO SITE CHARACTERIZATION**
- **DOE ORDER 5700.4 (4700-DRAFT)**
 - **DEFINES REQUIREMENTS FOR PROJECT MANAGEMENT SYSTEM**
 - **REQUIRES PROJECT TO DEVELOP A PROJECT PLAN, PROJECT CHARTER, PROJECT MANAGEMENT PLAN, SYSTEMS ENGINEERING MANAGEMENT PLAN, Q.A. PROGRAM, ETC.**

CHRONOLOGY OF BWIP QA PROGRAM DEVELOPMENT



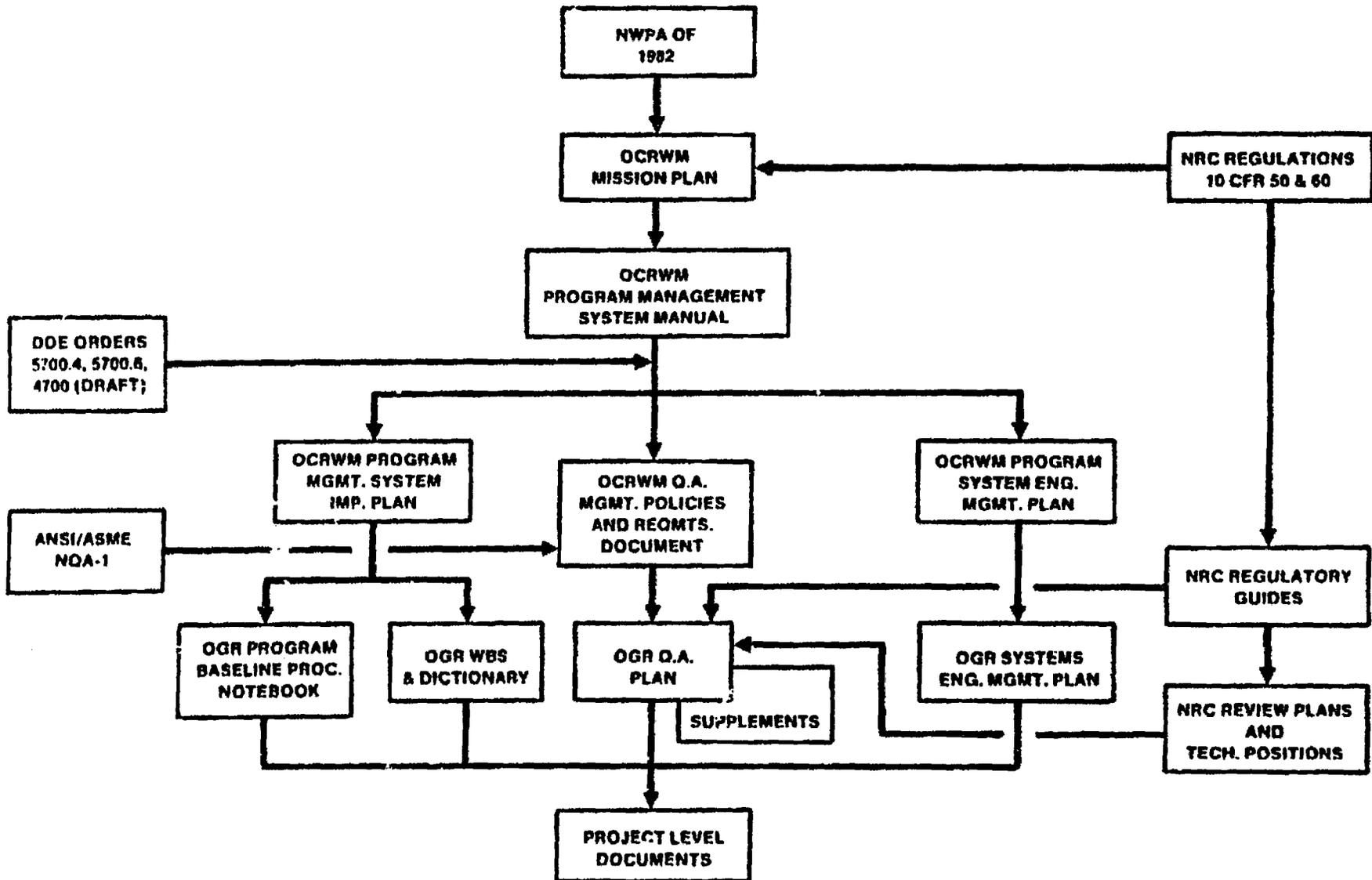
ACRONYMS

DOE RL DEPARTMENT OF ENERGY RICHLAND OPERATIONS OFFICE
 RDT REACTOR DEVELOPMENT TECHNOLOGY
 NWTS NUCLEAR WASTE TERMINAL STORAGE PROGRAM
 BWIP BASALT WASTE ISOLATION PROJECT
 NOA NUCLEAR QUALITY ASSURANCE
 QA ICE QUALITY ASSURANCE INTERFACE COORDINATION GROUP
 NE NUCLEAR ENERGY
 OGRD OFFICE OF GEOLOGIC REPOSITORY DEPLOYMENT
 QACC QUALITY ASSURANCE COORDINATION GROUP

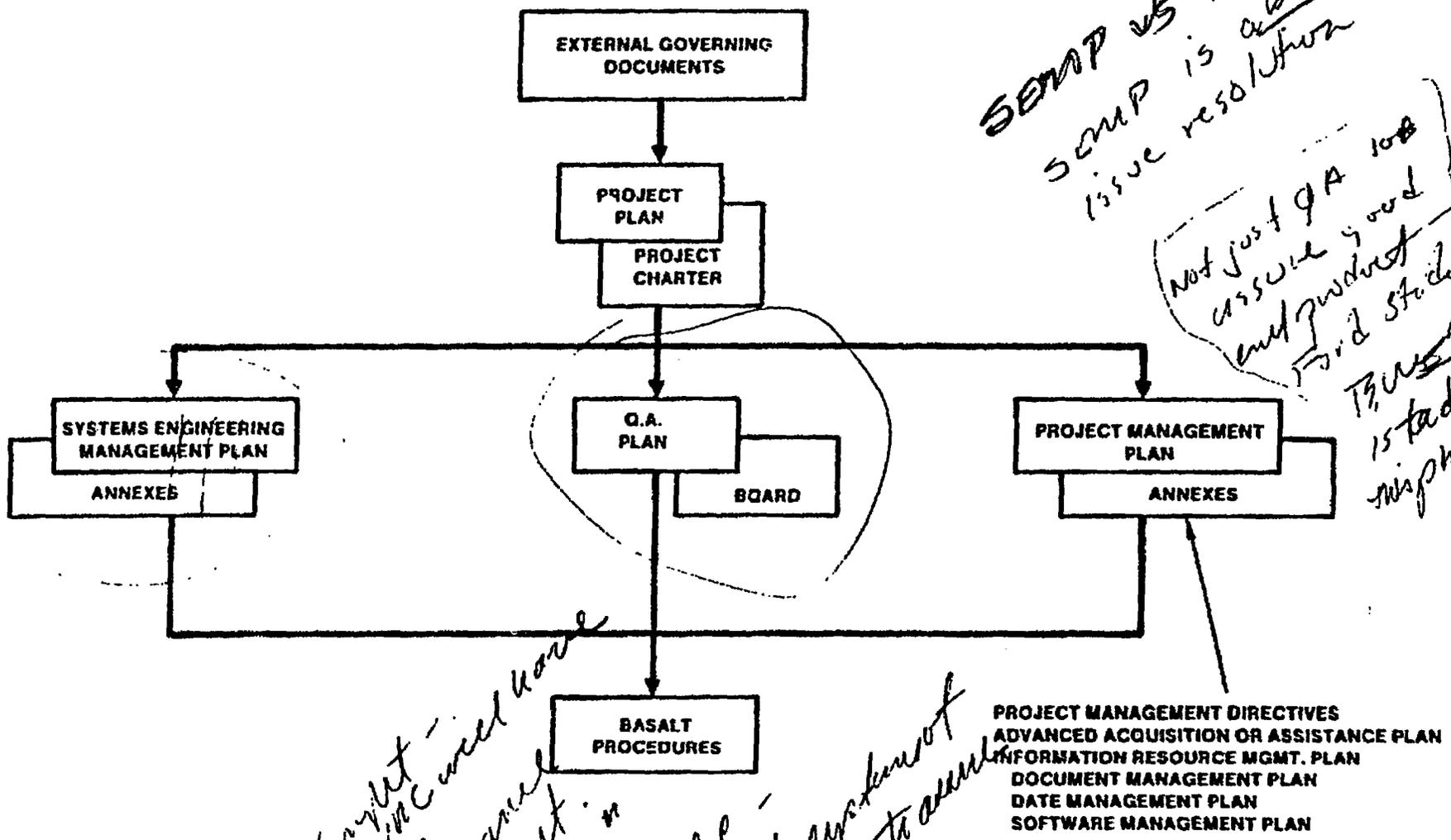
NRC NUCLEAR REGULATORY COMMISSION
 OGR OFFICE OF GEOLOGIC REPOSITORIES
 OGRWM OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
 QAMPA QUALITY ASSURANCE MANAGEMENT POLICIES AND REQUIREMENTS
 BOARD BASALT QUALITY ASSURANCE REQUIREMENTS DOCUMENT

PREPARED BY M F NICOL
 2/14/86 6 8456

EXTERNAL GOVERNING DOCUMENT



DOE-RL PROJECT MANAGEMENT CONTROL SYSTEM



SEMP vs SEMP is above issue resolution

Not just QA 100% assurance good and product Ford Study TRUST 15 ta dopting misph. loop left

Key get some NAC will have all impact systems in

NAC - mpm + systems of all kinds to avail ability

DOE-RL PROJECT MANAGEMENT DIRECTIVES

DOCUMENT NO.	TITLE
PMD 19.0	PMD DEVELOPMENT
PMD 19.1	SCHEDULE BASELINE MANAGEMENT
PMD 19.2	FUNDS MANAGEMENT
PMD 19.3	COST BASELINE MANAGEMENT AND CONTROL
PMD 19.4	WORK BREAKDOWN STRUCTURE PREPARATION AND MAINTENANCE
PMD 19.5	WORK AUTHORIZATION
PMD 19.6	CHANGE MANAGEMENT
PMD 19.7	INFORMATION RESOURCE MANAGEMENT
PMD 19.8	MANAGEMENT PLANS, REPORTS, ANALYSES, REVIEWS, GUIDANCE AND ACTION
PMD 19.10	ACQUISITION/PROCUREMENT PROCESS OVERVIEW
PMD 19.11	READINESS REVIEW
PMD 19.13	CONTROL AND RELEASE OF PROPRIETARY INFORMATION
PMD 19.15	RECORDS MANAGEMENT PROGRAM
PMD 19.16	DOCUMENT CONTROL PROGRAM
PMD 19.19	CONFIGURATION MANAGEMENT
PMD 19.20	PROCESSING REQUESTS UNDER THE FREEDOM OF INFORMATION ACT

DOE-RL BASALT PROCEDURES

BP 1.1	ORGANIZATION
BP 1.2	WBS PREPARATION
BP 1.3	WORK AUTHORIZATION
BP 1.4	COST BASELINE MANAGEMENT AND CONTROL
BP 1.5	SCHEDULE BASELINE MANAGEMENT AND CONTROL
BP 1.6	FUNDS BASELINE MANAGEMENT AND CONTROL
BP 1.7	COMMITMENT ACTION TRACKING SYSTEM
BP 1.8	CORRESPONDENCE CONTROL
BP 1.9	INFORMATION RESOURCE MANAGEMENT
BP 1.10	MANAGEMENT PLANS, REPORTS, ANALYSIS, REVIEWS AND ACTION CONTROL
BP 1.11	STOP WORK
BP 2.1	QA PROGRAM ASSESSMENT
BP 2.2	WORK PROGRESS AND DESIGN REVIEWS
BP 2.5	PERSONNEL TRAINING
BP 2.7	APPEALS ON QUALITY CONCERNS
BP 2.8	CONTROL AND RELEASE OF LICENSING DOCUMENTS
BP 2.10	REPORTING OF SIGNIFICANT DEFICIENCIES
BP 3.1	PROJECT REVIEWS

DOE-RL BASALT PROCEDURES (CONT)

BP 3.2	DISPOSITION OF CHANGE REQUESTS
BP 3.3	PEER REVIEWS
BP 4.1	PREPARATION AND CONTROL OF PROCUREMENT DOCUMENTS
BP 4.2	CONTRACTOR INITIATED PROCUREMENTS
BP 5.1	PROCEDURE DEVELOPMENT
BP 6.1	PREPARATION AND RELEASE OF BWID DOCUMENTS
BP 6.2	CONTROLLED DOCUMENTS ISSUED TO BWID STAFF
BP 6.3	REVIEW AND APPROVAL OF EXTERNAL DOCUMENTS
BP 7.1	SUPPLIER EVALUATION, SELECTION AND VERIFICATION
BP 7.2	SUPPLIER FURNISHED RECORDS
BP 15.1	PROCESSING CONTRACTOR NCRs AND UNUSUAL OCCURRENCES
BP 15.2	TREND ANALYSIS
BP 16.1	CORRECTIVE ACTION
BP 17.1	QUALITY RECORDS
BP 18.1	AUDIT AND SURVEILLANCE PLANNING
BP 18.4	AUDITOR QUALIFICATIONS
BP 18.5	SURVEILLANCE OF PROJECT ACTIVITIES
BP 18.6	QA AUDITS

AGENDA

Management Systems

J.R. Kirkendall

Restart Activities

D.E. Mahagin

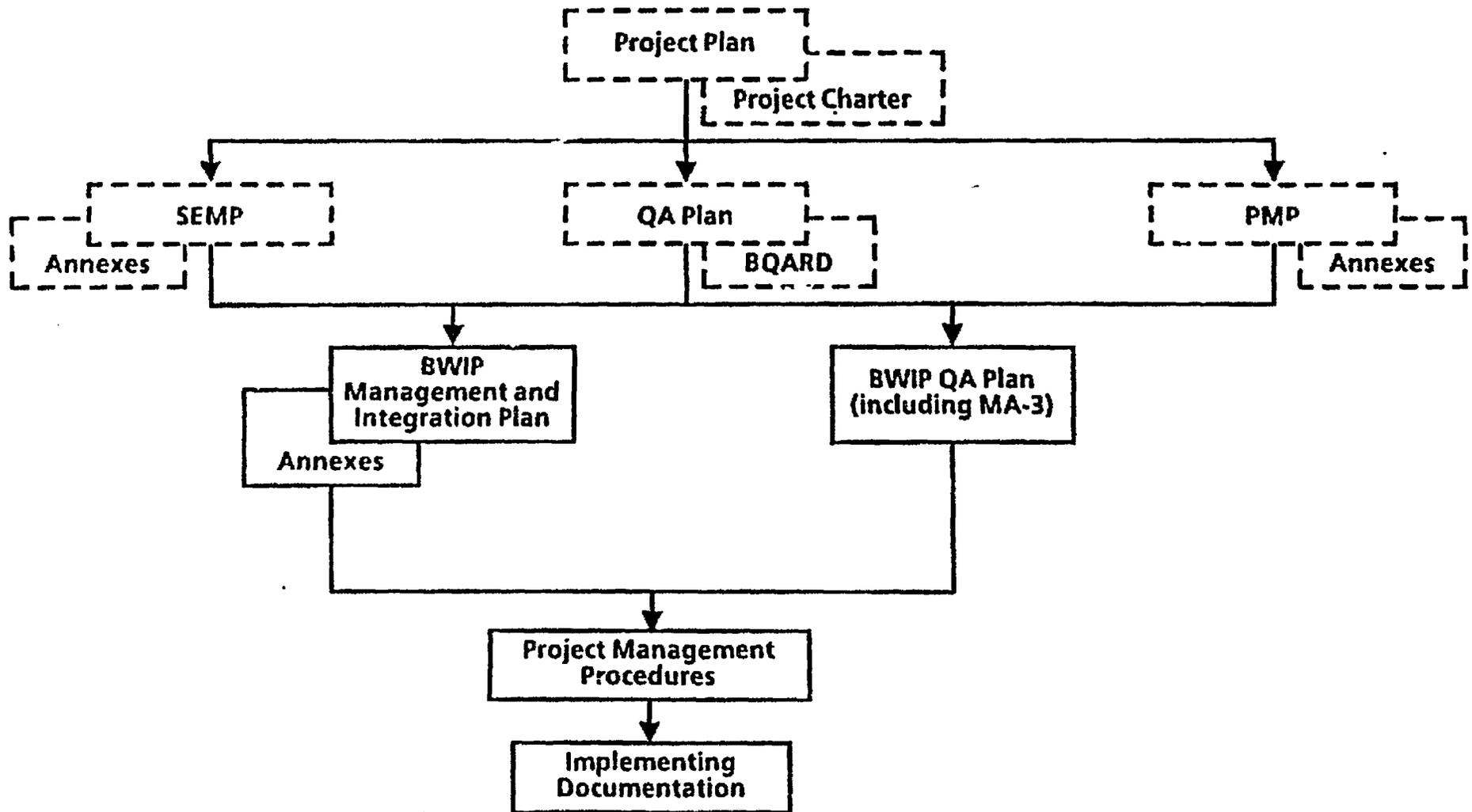
Systems Appraisal

R.T. Johnson

CONTROL SYSTEM

**AN ORGANIZED SET OF RELATED DECISION POINTS, ACTIONS
AND FEEDBACK MECHANISMS FOR ENSURING THE CORRECT (VALID)
OUTCOME OF A PROCESS – ORDINARILY AN INTEGRATED STRUCTURE
OF INDIVIDUAL CONTROLS**

INTEGRATING CONTRACTOR PROJECT MANAGEMENT SYSTEM



MANAGEMENT SYSTEM DOCUMENTATION

<u>Documents Required for Restart</u>	<u>Required for Restart</u>	<u>Rev. 0 Approved</u>
Plans	28	13
Project Management Procedures	93 ²	87
TOTAL	121	100

APPROVED MANAGEMENT PLANS

SCP MANAGEMENT PLAN

BASALT QUALITY ASSURANCE REQUIREMENTS DOCUMENT

BASALT QUALITY ASSURANCE PLAN

SYSTEM ENGINEERING MANAGEMENT PLAN (SEMP)

PROJECT MANAGEMENT PROCEDURES MANUAL

RHO BWIP QUALITY ASSURANCE PROGRAM REQUIREMENTS MANUAL

**POLICIES AND GUIDANCE FOR THE OPERATION AND USE OF THE BWIP
INTEGRATED DATABASE**

TEST CONTROL PLAN

NSTF/ES FACILITY OPERATIONS PLAN

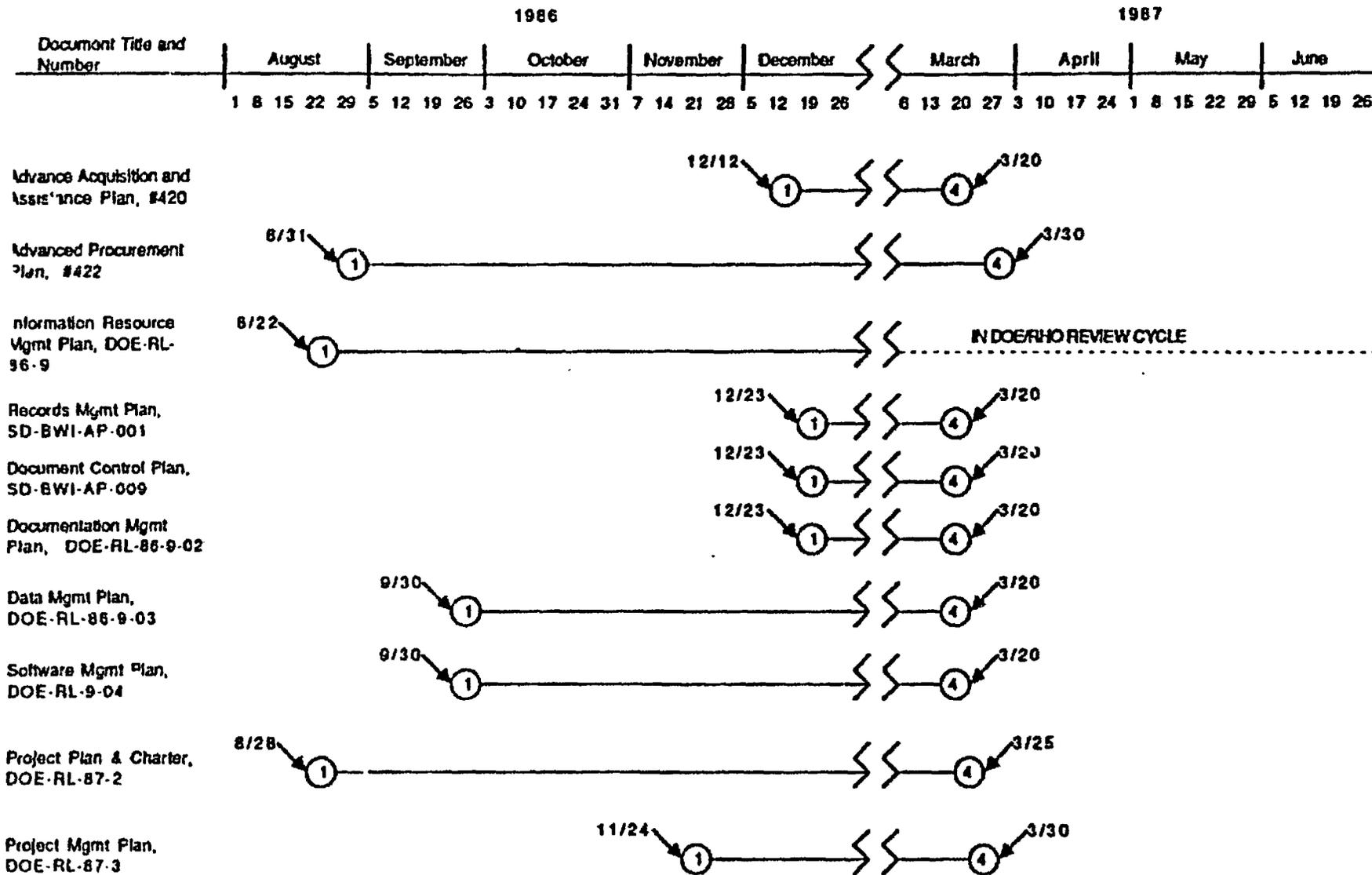
BASALT MGDS DESIGN AND DEVELOPMENT PLAN

ES CONSTRUCTION PLAN

ES PREREQUISITES PLAN

ES FUNCTIONAL ANALYSIS PLAN

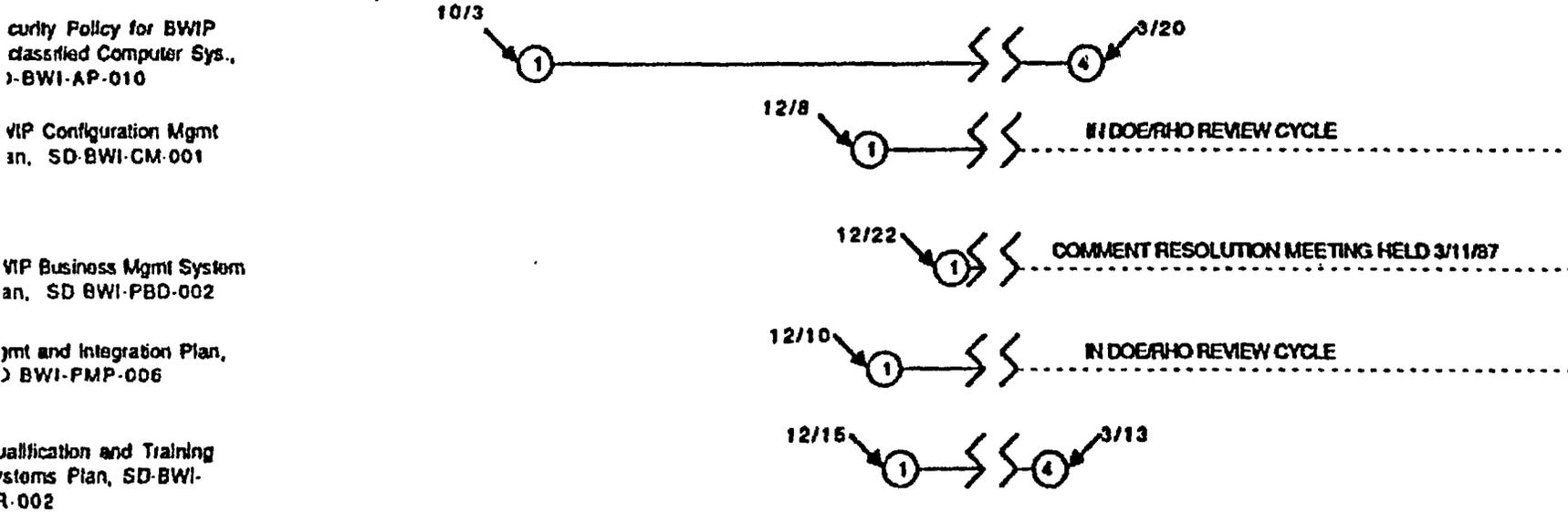
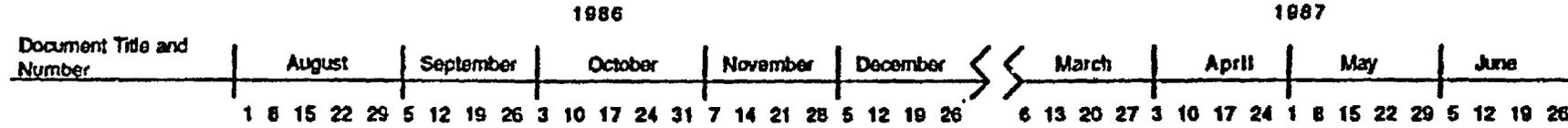
**MANAGEMENT PLANS
REQUIRED FOR RESTART, NOT APPROVED**



LEGEND

- 1 Submitted to DOE-RL for comment/approval
- 2 Disapproved
- 3 Resubmitted

**MANAGEMENT PLANS
REQUIRED FOR RESTART, NOT APPROVED**



LEGEND

- Submitted to DOE-RL for comment/approval
- Disapproved
- Resubmitted
- Anticipated Approval

RESTART CLASSIFICATIONS DOCUMENT LIST

DOCUMENT NO.	REV	RESTART	TITLE	ISSUED	APPROVAL REQUIRED BY		
					IC	DOE-RL	DOE-NC
01-101	4	Y	PREPARATION AND CONTROL OF PROJECT MGMT PROCEDURES	03/05/87	X		
01-102	1	Y	DESK INSTRUCTIONS	02/10/87	X		
01-107	1	Y	RESOURCE MANAGEMENT SYSTEM	02/11/87	X		
01-109	1	Y	DELEGATION OF AUTHORITY	09/04/86	X		
01-110	3	Y	PROJECT DIRECTIVES	03/02/87	X		
01-111	1	Y	BWIP ACTION TRACKING SYSTEM	03/05/87	X		X
01-112	1	Y	WORK INITIATION	01/13/87	X		
01-114	1	Y	PROJECT MANAGEMENT AND WORK PROCESS CONTROL	02/12/87	X		X
02-101	3	Y	PREPARATION OF TECHNICAL REQUIREMENTS DOCUMENTS	02/05/87	X		
02-102	1	Y	TECHNICAL DOCUMENT REVIEW	02/25/87	X		
02-104	1	Y	DESIGN FIELD CHANGE	02/25/87	X		
02-107	3	Y	BWIP ENGINEERING ORDER SYSTEM	02/20/87	X		
02-108	1	Y	COMPUTATIONAL BRIEFS	03/02/87	X		
02-113	1	Y	PREPARATION & CONTROL OF DESIGN REQUIREMENTS DOCUMENT	02/13/87	X		
02-117	3	Y	PREPARATION OF ENGINEERING PLANS	03/02/87	X		
02-126	0	Y	DESIGN CONTROL PROCESS	02/26/87	X		X
02-130	0	Y	CONTROL OF SPECIAL PROCESSES	12/01/86	X		X
03-101	0	Y	CONTROLLED NOTEBOOKS	07/28/86	X		
03-102	0	Y	PEER REVIEW	01/28/87	X		X
03-106	0	Y	TEST DATA COLLECTION SPECIFICATIONS	11/25/86	X		
03-110	0	Y	NSTF TEST SUPPORT REQUIREMENTS	09/20/86	X		
03-111	4	Y	PREPARATION OF STUDY PLANS	03/02/87	X		

RESTART CLASSIFICATIONS DOCUMENT LIST

DOCUMENT NO.	REV	RESTART	TITLE	ISSUED	APPROVAL REQUIRED BY:		
					IC	DOE-RL	DOE-HQ
04-103	0	Y	SURVEILLANCE ACTIVITIES	07/28/86	X	X	
04-104	1	Y	QUALITY ASSURANCE AUDITS	01/28/87	X	X	
04-105	0	Y	NONCONFORMANCE REPORTS		X	X	
04-106	0-B	Y	CONSTRUCTION NONCONFORMANCE REPORTS		X	X	
04-108	0	Y	INSPECTION ACTIVITIES	12/16/86	X	X	
04-113	1	Y	PREP OF FUNCTIONAL REQUIRMTS FOR CONST READINESS REVIEWS	01/27/87	X		
04-115	1	Y	STOP WORK ORDER	01/28/87	X	X	
04-121	0	Y	GRADED QUALITY ASSURANCE	02/25/87	X	X	
04-122	0	Y	CORRECTIVE ACTION REPORT	03/09/87	X	X	
05-101	1	Y	CHANGE PROPOSAL PROCESSING	02/03/87	X		
05-102	0	Y	CONFIGURATION VERIFICATION AND ACCOUNTING SYSTEM	01/19/87	X		
06-101	0	Y	MAJOR PARTICIPANT INTERFACE CONTROL	01/05/87	X	X	
06-103	0	Y	SUPPORT SERVICES FOR THE CONSTRUCTION MANAGER	09/25/86	X		
06-105	1	Y	DIRECTION OF TECHNICAL WORK	02/05/87	X		
06-106	1	Y	SUPPLIERS QUALIFICATION AND EVALUATION	02/06/87	X		
06-107	1	Y	SOURCE INSPECTION	02/09/87	X		
06-108	1	Y	RECEIVING INSPECTION	02/09/87	X		
06-112	0	Y	PROCUREMENT PLANNING ACTIVITIES	10/27/86	X		
06-114	3	Y	PROCUREMENT REQUISITION, DOCUME NTATION, AND REVIEW	03/03/87	X		
06-115	0	Y	PROCUREMENT MANAGEMENT SYSTEM		X	X	
06-116	1	Y	PROCUREMENT DOCUMENT CONTROL	12/30/86	X		
06-117	0	Y	MAJOR PROJECT PARTICIPANT PROCUREMENT INTFACE ACTIVITIES	01/28/87	X	X	
06-119	0	Y	SHIPPING AND STORAGE CONTROL	12/29/86	X	X	
06-120	3	Y	BWIP PROCUREMENT PROCESS	03/02/87	X		

RESTART CLASSIFICATIONS DOCUMENT LIST

DOCUMENT NO.	REV	RESTART	TITLE	ISSUED	APPROVAL REQUIRED BY:		
					IC	DOE-RL	DOE-MG
06-123	0	Y	SUPPLIER DEVIATION REQUESTS	01/22/87	X		
06-124	0	Y	PROPOSAL EVALUATION AND AWARD	01/27/87	X		
06-125	1	Y	MATERIAL RECEIVING AND DELIVERY	03/02/87	X		
07-104	0	Y	PREPARATION OF FACILITY PLANS	09/10/86	X		
07-105	0	Y	NSIF TEST MATERIAL/EQUIPMENT STORAGE AND HANDLING	09/25/86	X		
07-106	0	Y	NSIF DRILLING PERMIT	09/18/86	X		
07-118	0	Y	IDENTIFICATION AND CONTROL OF SAMPLES	02/12/87	X	X	
07-119	0	Y	DATA COLLECTION TEST CONTROL	01/05/87	X	X	
07-120	0	Y	CONTROL OF DATA GATHERING EQUIPMENT COMPONENTS & HTLS	12/29/86	X	X	
07-121	0	Y	INSPECTION, TEST & OPERATING STATUS INDICATORS	12/05/86	X	X	
08-101	1	Y	BWIP CORRESPONDENCE CONTROL	02/11/87	X		
08-103	0-B	Y	BWIP RECORDS MANAGEMENT SYSTEM		X	X	
08-105	1	Y	RECORDING DATA FOR QUALITY RECORDS & RECDING CORRECTIONS	03/09/87	X		
08-106	1	Y	CONTROL OF SUPPORTING DOCUMENTS	01/02/87	X		
08-107	4	Y	TEST AND OPERATIONS PROCEDURE PREPARATION AND CONTROL	12/18/86	X		
08-108	0	Y	CONTROL OF SUPPLIER/CONTRACTOR GENERATED DOCUMENTS	10/10/86	X		
08-110	1	Y	CONTROL OF GEOTECHNICAL SAMPLES	12/30/86	X		
08-113	1	Y	SUBMITTAL OF RAW DATA	02/13/87	X		
08-115	2	Y	CONTROL OF IN-PROCESS DOCUMENTS	02/20/87	X		
08-116	1		ESF TEST DESIGN ADMINISTRATION AND CONTROL	02/10/87	X		
08-117	2	Y	FORMAT OF TEST AND OPERATIONS PROCEDURES	12/19/86	X		

DOCUMENT NO.	REV	RESTART	TITLE	ISSUED	APPROVAL REQUIRED BY:		
					IC	DOE-RL	DOE-MG
08-120	0	Y	OFF-NORMAL CONDITIONS/EVENTS REPORT ING & RECORDING	09/25/86	X		
08-121	2	Y	DOCUMENT RECEIPT CONTROL	03/02/87	X		
08-125	0	Y	DOCUMENT UPDATE CONTROL	09/18/86	X		
08-127	0	Y	BWIP DOCUMENT CONTROL TRANSMITTAL NUMBERING SYSTEM	12/19/86	X		
08-129	0	Y	MASTER SUBMITTAL LIST	12/29/86	X		
08-133	0	Y	DOCUMENT CONTROL	01/09/87	X	X	
09-101	0	Y	PROJECT SCHEDULING	12/05/86	X		
09-107	0	Y	BWIP BUSINESS MANAGEMENT	11/19/86	X		
11-102	0	Y	EXPLORATORY SHAFT VISITOR ACCESS CONTROL	10/02/86	X		
11-103	1	Y	UNUSUAL OCCURRENCE REPORTING SYSTEM	03/05/87	X	X	
11-104	1	Y	NSTF ACCESS CONTROL	01/02/87	X		
13-108	0	Y	QUALIFICATION OF INSTRUCTIONAL STAFF	09/23/86	X		
13-109	0	Y	JOB/TASK ANALYSIS	09/13/86	X		
13-110	0	Y	TRAINING MATERIALS DEVELOPMENT	09/16/86	X		
13-112	1	Y	CONDUCT OF TRAINING	01/27/87	X		
13-113	0	Y	ON-THE-JOB TRAINING	09/10/86	X		
13-114	0	Y	WRITING LEARNING OBJECTIVES	09/18/86	X		
13-116	1	Y	QUALIFICATION AND TRAINING DOCUMENTA TION AND RECORDS	02/10/87	X		
13-121	1	Y	PERSONNEL TRAINING REQUIREMENTS	02/10/87	X		
14-101	0	Y	DETERMINATION OF SOFTWARE PROCEDURAL REQUIREMENTS & GLOSRY	11/12/86	X		
14-102	0-B	Y	SOFTWARE CHANGE CONTROL		X	X	
14-103	0	Y	SOFTWARE QUALITY ASSURANCE CHECKLIST	11/12/86	X		
14-109	1	Y	CONVERSION TESTING, BENCHMARKING, VERIF &/OR VALID OF SOFTW	02/05/87	X		
14-116	0	Y	SOFTWARE APPLICATION CONTROL	11/12/86	X		

PAGE NO.
03/16/87

RESTART CLASSIFICATIONS DOCUMENT LIST

REPORT NO. BDC-01

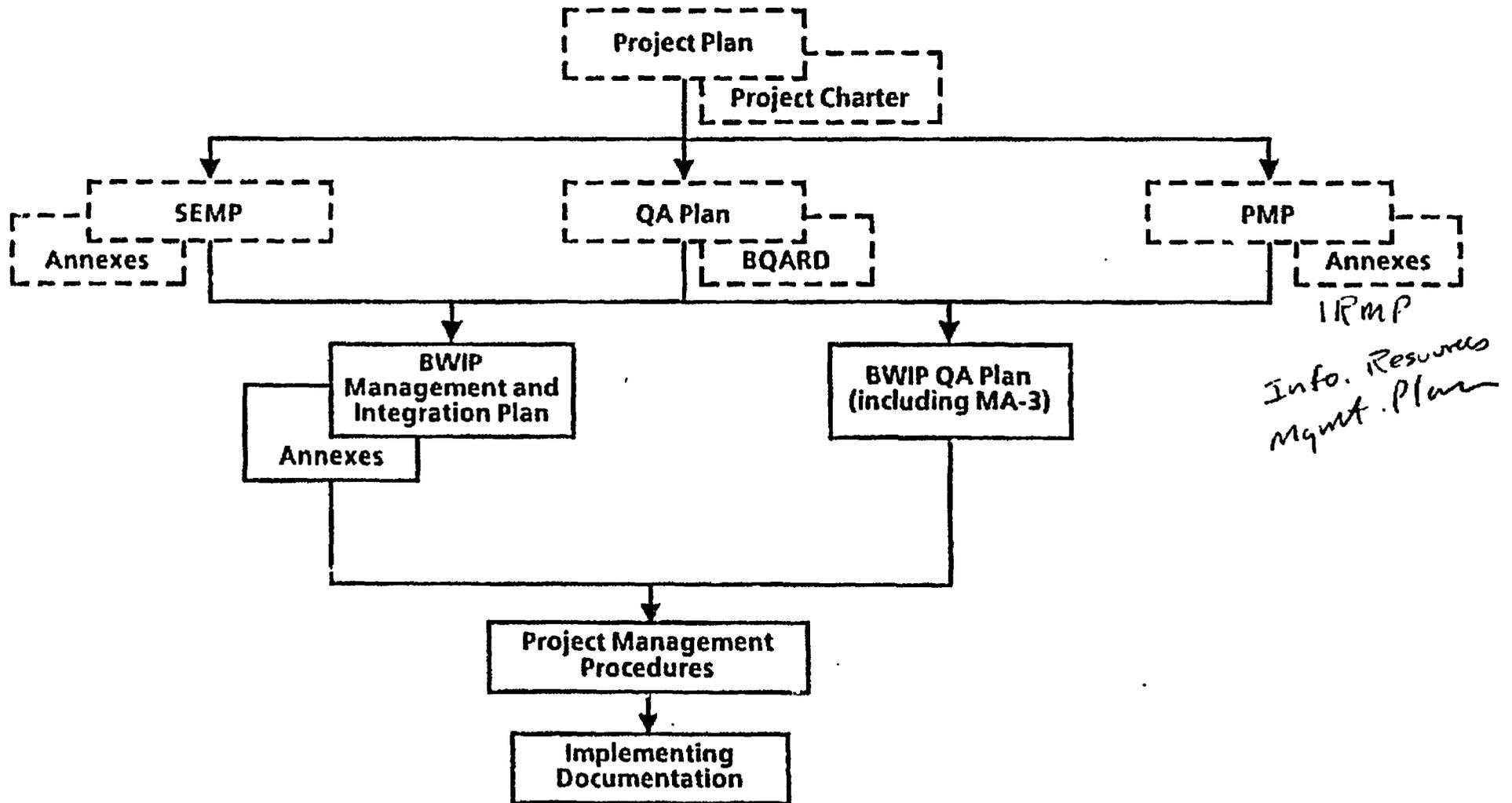
DOCUMENT NO.	REV	RESTART	TITLE	ISSUED	APPROVAL REQUIRED BY	
					IC	DOE-RL DOE-NQ
14-127	0-A	Y	ADDING OR CHANGING DATA WITHIN BWIP AUTOMATED DATABASES		X	
ORG-1.1	0	Y	ROCKWELL ORGANIZATION AND RESPONSIBILITIES	03/04/87	X	X

PROJECT MANAGEMENT PROCEDURES
REQUIRED FOR RESTART
NOT APPROVED

<u>DOCUMENT NUMBER</u>	<u>TITLE</u>	<u>SCHEDULED APPROVAL</u>	
		<u>ROCKWELL</u>	<u>DOE</u>
4-105	Nonconformance Reports	3/20	
4-106	Construction Nonconformance Reports	2/17	TBD
6-115	Procurement Management System	3/16	
8-103	BWIP Records Management System	2/27	TBD
14-102	Software Change Control	3/20	
14-121	Adding or Changing Data within BWIP Automated Data Bases	4/10	

MANAGEMENT SYSTEM OVERVIEW

INTEGRATING CONTRACTOR PROJECT MANAGEMENT SYSTEM



INFORMATION RESOURCES MANAGEMENT PLAN

- **OBJECTIVES**
- **ORGANIZATION AND ROLES**
- **IRM MANAGEMENT SYSTEM**
- **QUALITY ASSURANCE**
- **LICENSING SUPPORT PROCESS**

ANNEXES

- **DOCUMENTATION MANAGEMENT PLAN**
- **DATA MANAGEMENT PLAN**
- **SOFTWARE MANAGEMENT PLAN**
- **IRM LIFE CYCLE MANAGEMENT PLAN**
- **COMPUTER SYSTEMS MANAGEMENT PLAN**
- **TELECOMMUNICATIONS MANAGEMENT PLAN**
- **IRM FACILITIES MANAGEMENT PLAN**

MANAGEMENT AND INTEGRATION PLAN

- **PROJECT OBJECTIVES AND PERFORMANCE CRITERIA**
- **MANAGEMENT ORGANIZATION**
- **WORK PLAN AND WORK BREAKDOWN STRUCTURE**
- **PROJECT SCHEDULING AND LOGIC DIAGRAMS**
- **COST ESTIMATES**
- **PROJECT MANAGEMENT**
 - **Systems Engineering Management**
 - **Business Management**
 - **Configuration Management / Change Control**
 - **Records Management**
 - **Qualification and Training**
 - **Test Control**
 - **Contractor Interface Control**
 - **Meetings and Correspondance**
 - **Design Control**
 - **Scope of Design Control**
 - **Verification**
 - **Interface Control**
 - **Quality Assurance Review**
- **INFORMATION MANAGEMENT AND REPORTING**
- **QUALITY ASSURANCE**
- **REGULATORY AND INSTITUTIONAL INTERACTIONS**

BWIP MANAGEMENT AND INTEGRATION PLAN ANNEXES

- **BUSINESS MANAGEMENT SYSTEM PLAN**
- **CONFIGURATION MANAGEMENT PLAN**
- **QUALIFICATION AND TRAINING SYSTEM PLAN**
- **TEST CONTROL PLAN**
- **DOCUMENT CONTROL**
- **RECORDS MANAGEMENT**

BUSINESS MANAGEMENT SYSTEMS PLAN

● MANAGEMENT CONTROL SYSTEM

- Organization
- Scheduling
- Work Authorization
- Budgeting
- Funds Management
- Cost Account Planning
- Data Accumulation
- Indirect Cost Management
- Purchased Items And Services
- Project Reporting And Reviews
- Variance Analysis / Corrective Action
- Estimate At Completion
- Change Administration
- Major Project Participant Work
- Business Information System

*cost schedule
data*

● RESOURCE MANAGEMENT SYSTEM

- Planning
- Execution
- Reports
- Control

BUSINESS MANAGEMENT SYSTEMS PLAN (CONT'D)

- **PROCUREMENT MANAGEMENT SYSTEM**
 - **Planning**
 - **Execution**
 - **Reports**
 - **Control**
- **SYSTEM DEVELOPMENT AND STARTUP**

CONFIGURATION MANAGEMENT PLAN

- **ORGANIZATION**
- **CONFIGURATION IDENTIFICATION**
- **CONFIGURATION CONTROL**
- **CONFIGURATION STATUS ACCOUNTING**
- **CONFIGURATION VERIFICATION**
- **CONFIGURATION MANAGEMENT AUDITS**

*Qualification
Requirements*

Requirements

QUALIFICATION AND TRAINING SYSTEM PLAN

- **ROLE OF PROJECT PARTICIPANT RESPONSIBILITIES**
- **THE ROLE OF THE INTEGRATING CONTRACTOR**
- **QUALIFICATION AND TRAINING PROGRAMS**
 - **Program Definition**
 - **Course And Lesson Development**
 - **Course And Lesson Delivery**
 - **Program Assessment**
 - **Program Documentation**
 - **Performance Evaluation**
 - **Update Training**
 - **Tracking Systems**

TEST CONTROL PLAN

- **ROLE OF THE INTEGRATING CONTRACTOR AND MAJOR PROJECT PARTICIPANTS**
- **TEST CONTROL FLOW PROCESS**
- **QUALITY ASSURANCE**
 - **Basalt Quality Assurance Requirements Document**
 - **Graded Quality Assurance**
 - **Quality Level 1**
 - **Quality Level 2**
 - **Quality Level 3**
 - **Quality Assurance Inspections And Hold Points**
 - **Quality Assurance Audits And Surveillances**
- **GOVERNING DOCUMENTATION**
 - **Study Plans**
 - **Test Data Collection Specification Document**
 - **Test Plans**
 - **Management Procedures**
 - **Technical Procedures**

TEST CONTROL PLAN (CONT'D)

- ^{specimens} ~~QUALITY ASSURANCE~~
 - Test Design
 - Qualification And Training Of Test Personnel
 - Safety Review Of Test
 - Measurement And Test Equipment
 - Storage And Transmittal Of Raw Data And Samples
 - Raw Data Handling And Storage
 - Handling And Storage Of Samples And/Or Specimens
 - Transmittal Of Raw Data And Samples To Integrating Contractor
 - Procurement
 - Identification
 - Inspection, Test, And Operating Status
- OPEN ITEM REVIEW AND CONSTRAINTS LIST
- CONDUCT OF TEST
 - Nonconformances
 - Interim Problem Reports
 - Procedural Deviations
- PERIODIC AND FINAL REPORTS
- SUBMITTAL TO THE BASALT WASTE ISOLATION PROJECT DOCUMENT CONTROL CENTER

RECORDS MANAGEMENT PLAN

- RESPONSIBILITIES
- REQUIREMENTS
 - General
 - Integrating Contractor
 - Participating Contractors
 - Basalt Records Management Center (Brmc)
 - General
 - Receipt Control
 - Document Indexing
 - Microfilm Preparation / Microfilming
 - Archival Storage / Retrieval
 - Document Retrieval
 - Records Correction
 - Records Replacement
 - Records Disposition
- TRAINING
- FACILITIES / EQUIPMENT

*Others access ?
not direct
access*

CONFIGURATION MANAGEMENT PLAN

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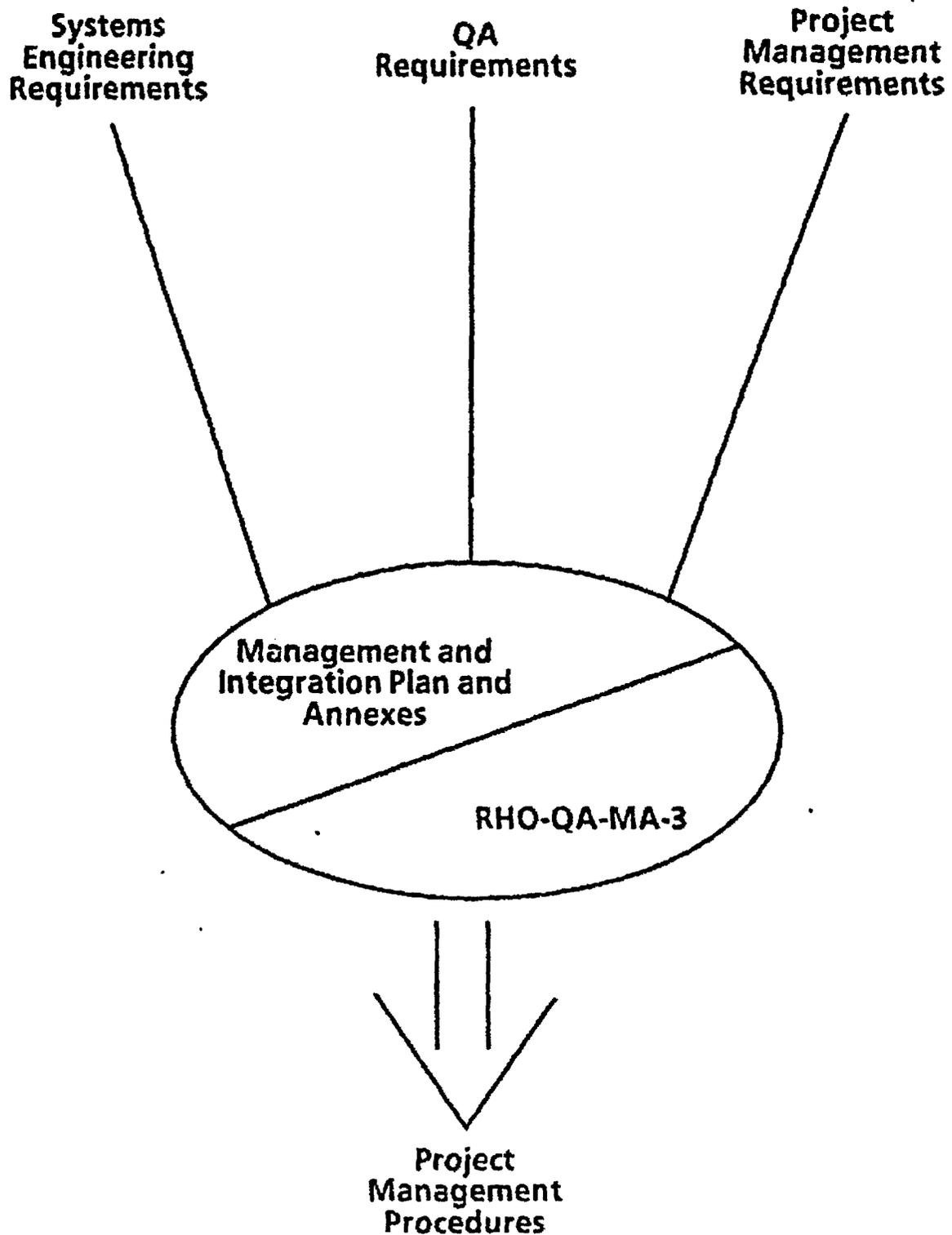
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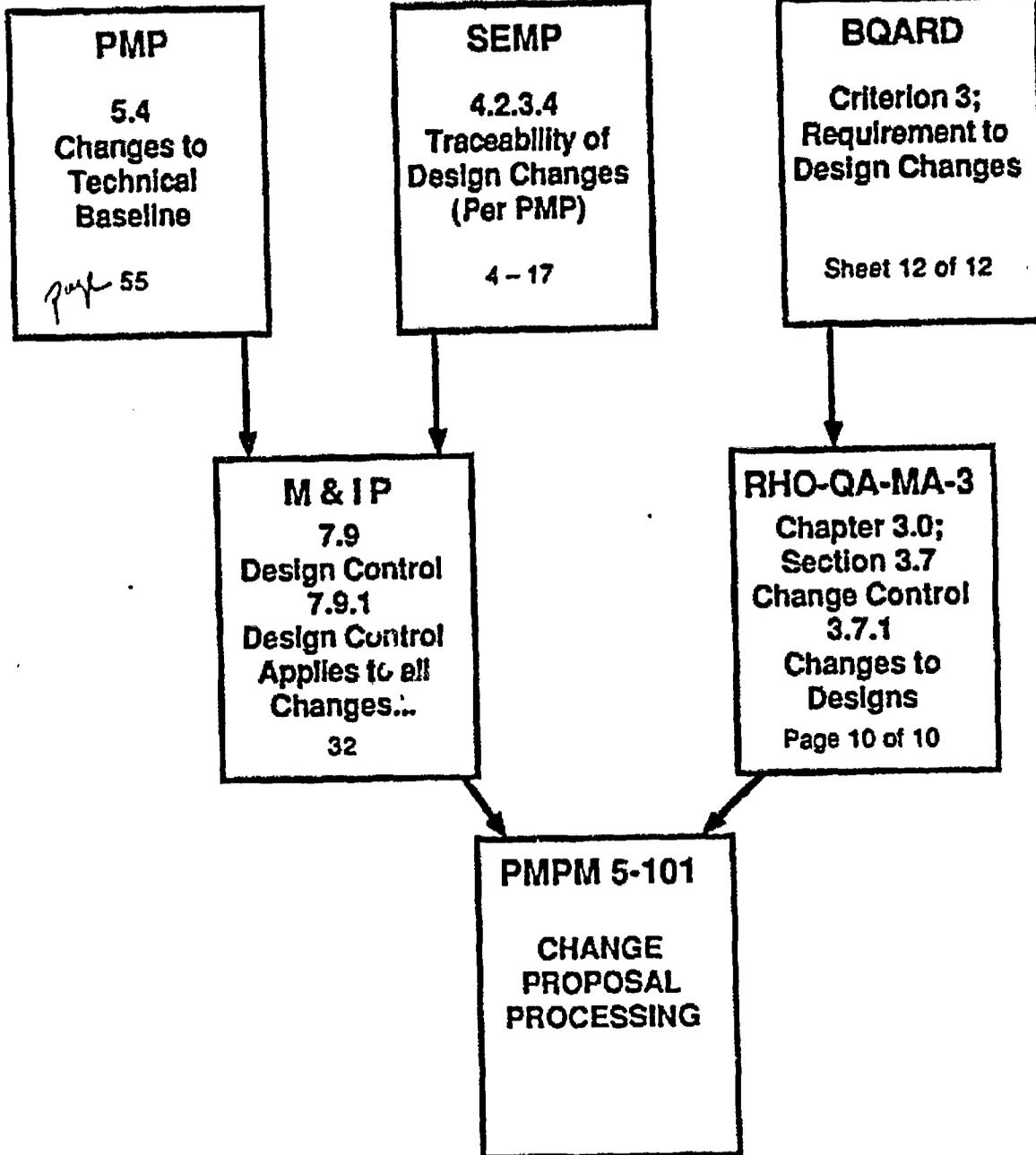
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INTEGRATED APPROACH TO REQUIREMENTS IMPLEMENTATION



MANAGEMENT REQUIREMENTS TRACEABILITY

Control of Change



5.4 PROJECT REVISION AND BASELINE CHANGES

As a result of the magnitude of the SWIP project, project revisions must be managed in a disciplined fashion. The SWIP approach to managing project changes is based on maintaining an accurate description of the Project - the Project Baseline - and methodically evaluating proposals to alter the currently authorized baseline. These proposals may originate internally or may originate from the DOE-HQ Program Office.

The document description the process.

It is required. How Request (CR) p

- o The proj
- o The
- o The imp

BASALT WASTE ISOLATION PROJECT PROJECT MANAGEMENT PLAN

U.S. DEPARTMENT OF ENERGY
RICHLAND OPERATIONS OFFICE

Date: March 4, 1987
(DOE-RL-86-XX2 REV.K)
(DRAFT)

Technical Management

will be of the Change g criteria:

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chedule

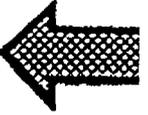
- o The change is required to meet as-built conditions for a manmade item, or as-found conditions for the natural system.

In addition, the CR procedure for control of changes to technical, schedule, or cost baselines will include the following elements:

- o The technical basis for the change must be clearly documented.
- o The technical, cost and schedule impacts of the change must be evaluated, and the basis for the impacts must be documented.
- o The change must be approved by the original approving authority unless specifically exempted by the DOE.
- o The approved change must be completely incorporated into all affected documents.
- o The change must be proposed against the specifics of the highest level affected document.

Disposition of a proposed change is made by the CCS at DOE-HQ, DOE-RL, the IC, or other major contractors, depending on the change classification and severity of impact the change has on the Project Baseline. The change control process is diagrammatically shown in Figure 5-6. The initial step may require preparation and disposition of an Advanced Change Request (ACR) if it is anticipated that the CR requires in excess of \$50,000 to prepare. The CRs contain a description of the proposed course of action sufficiently detailed

A uniform approach to decision methodology and criteria will be used for all studies on the project, including the systems studies conducted during the design process. The decision methodology to be used is further described in section 4.2.4.2. Traceability of all design changes will be through the change control process as set forth in the PMP.



The documentation of the design itself will be initially in the design report submitted by the A-E. Applicable portions of the design report will be included as part of the applicable subsystem description (see section 5.3.3).

4.2.3.5 Performance Assessment. Performance assessment includes analysis of preclosure safety considerations in support of design, construction, and operations of the repository and analysis of long-term waste isolation potential subsequent to closure of the operating repository (postclosure).

The purpose of the repository design safety requirements is to ensure that operations personnel are protected during the period of repository operation.

Preclosure safety analyses during design and construction will identify those hazards, their probabilities, and how to mitigate those hazards.

The purpose of the Preclosure Risk Assessment Methodology and will include the following as a minimum:

BASALT WASTE ISOLATION PROJECT

**SYSTEM ENGINEERING
MANAGEMENT PLAN**

DECEMBER 1, 1986

DRAFT

that biological release and ingestion of radionuclides from the repository will be controlled.

These analyses will determine the effectiveness of the control measures with respect to the repository safety.

1. Failure modes and effects analysis (FMEA)
2. Hazards analysis
3. Fault tree analysis.

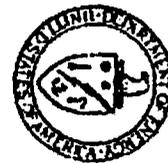
The OGR is developing an overall Preclosure Risk Assessment Methodology (PRAM) to be used consistently by BWIP and the other two sites.

Results of each safety analysis will be used to evaluate compliance with regulatory criteria and to refine performance criteria and operating procedures. The level of detail for each safety analysis will be commensurate with the level of design detail (i.e., the more advanced the design, the more comprehensive the safety analysis review). Safety analyses will be performed in accordance with the BWIP Safety Plan and approved procedures.

The purpose of postclosure performance assessment is to evaluate the long-term radiological release to the accessible environment.

BOARD
CRITERION 3: DESIGN CONTROL - FOR SITE CHARACTERIZATION
REVISION 1 (sheet 12 of 12)

Requirement	BWIP Project Implementation
<p>REQUIREMENT 10: 10 CFR 50 APPENDIX B</p> <p>Design changes, including field changes, shall be subject to design control measures commensurate with those applied to the original design and be approved by the organization that performed the original design unless the applicant designates another responsible organization.</p> <p>NRC REVIEW PLAN SECTION 3.10</p> <p>Design changes, including field changes, are subject to the same design controls that were applicable to the original design. Such a configuration control system should be in place at the earliest practicable time. These changes should be analyzed to assure that change is required. Associated changes to procedures and training should be considered, and changes should be communicated to all affected groups or individuals.</p>	<p>For site characterization, the NRC has reworded this requirement to read as shown in Section 3.10 of the NRC Review Plan.</p> <p>The intent of this requirement will be met by implementation as stated. In addition, Supplement 3S-1, Section 5 of NQA-1-1986 will be implemented.</p> <p>NOTE: Configuration control is also addressed in Criterion 6.</p>



**BASALT QUALITY ASSURANCE
REQUIREMENTS DOCUMENT**

**U.S. DEPARTMENT OF ENERGY/
RICHLAND OPERATIONS**

**DOE/RL 88-1
COPY NO. 045**

The BQARD under Criterion 3, Design Control, establishes ten requirements which, together with the requirements stated above, define the intent of design control. Because a certain degree of overlap or relationship exists between some of the requirements, the ten requirements have been divided into the four groups listed below:

1. Requirement section
 2. Requirement section
 3. Requirement section
 4. Requirement section
- MANAGEMENT AND INTEGRATION PLAN**
for the
Basalt Waste Isolation Project

November 21, 1986
Revision 0
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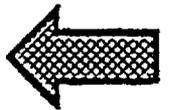
7.9.1 Scope of Design Control

Design control addresses the activities and products of the design process. Design control covers data collection and analysis, and broad-level systems analyses (such as performance assessment). Design control covers the acquisition and verification of data from literature searches, and the development of acceptance criteria for site characterization testing. Design control covers analyses such as those conducted (e.g., thermal, stress, accident) to support a design or its verification.

Design control covers the products of the design activity: construction specifications, drawings, design criteria, component performance requirements, and software.

Design control is applied from site characterization through completion of definitive design and construction.

Design control applies to all changes, including field changes, and requires the same level of control and review as was required for the original design activity. Design control requires the identification of items important to safety and graded QA.



7.9.2 Verification

Verification is the process of reviewing, confirming, or substantiating data, analysis, and hardware and software design by one or more methods to provide assurance that design items meet specified safety and performance criteria and that the site data and analyses accurately characterize the site.

The SEMP covers in significant detail what is required for verification and review on the BWIP. The following paragraphs, derived from the SEMP, are provided to show a complete picture of design control.

BASALT WASTE ISOLATION PROJECT

FY 1986 STOP WORK ORDER DATABASE

INCLUDES DIRECT-FUNDED ACTIVITIES

NUMBER OF ACTIVITIES (TASKS): 1,286

STOPPED ACTIVITIES: 555

EXEMPT ACTIVITIES BY CATEGORY:

CATEGORY	NUMBER OF ACTIVITIES
1. Data Gathering	73
2. Project Management Program Support	203
3. Personnel Safety and Maintenance	61
4. Administrative	218
5. SCP Preparation	49
6. Essential/Imprudent to Stop	127
TOTAL NUMBER OF EXEMPT ACTIVITIES	731

RESTART ACTIVITIES

RECOVERY APPROACH

- **DEVELOP MANAGEMENT AND TECHNICAL CONTROLS**
- **PERFORM GENERAL TRAINING**
 - **ORIENTATION**
 - **MANAGEMENT SYSTEMS TRAINING**
 - **SERVICES PERSONNEL TRAINING**
 - **MANDATORY READING**
- **PERFORM MANAGEMENT SYSTEMS ANALYSIS (APPRAISALS)**
- **SUBMIT RESTART READINESS REPORT TO DOE**

RESTART ACTIVITIES

ACCOMPLISHMENTS

COMPLETION

- REVIEW / CATEGORIZE 1,286 WORK PACKAGES 6/30/86
- RESTRUCTURE PROJECT ORGANIZATION (~700 PEOPLE) 6/6/86
- ESTABLISH DOCUMENT HIERARCHY (171 PROCEDURES; 142 PLANS)* 7/2/86
- DEVELOP AND RECEIVE APPROVAL OF 28 MANAGEMENT PLANS EST. 4/87
- DEVELOP AND RECEIVE APPROVAL FOR 93 MANAGEMENT PROCEDURES EST. 3/87
- COMPLETE TRAINING
 - ORIENTATION (~700 PEOPLE) 9/17/86
 - MANAGEMENT SYSTEM (~700 PEOPLE) 10/13/86
 - SERVICE PERSONNEL (~300 PEOPLE) 11/13/86
 - MANDATORY READING (~700 PEOPLE) 3/6/87
- SUBMIT RESTART READINESS REPORT 1/4/87

* 100 PROCEDURES AND 28 PLANS REQUIRED FOR RESTART

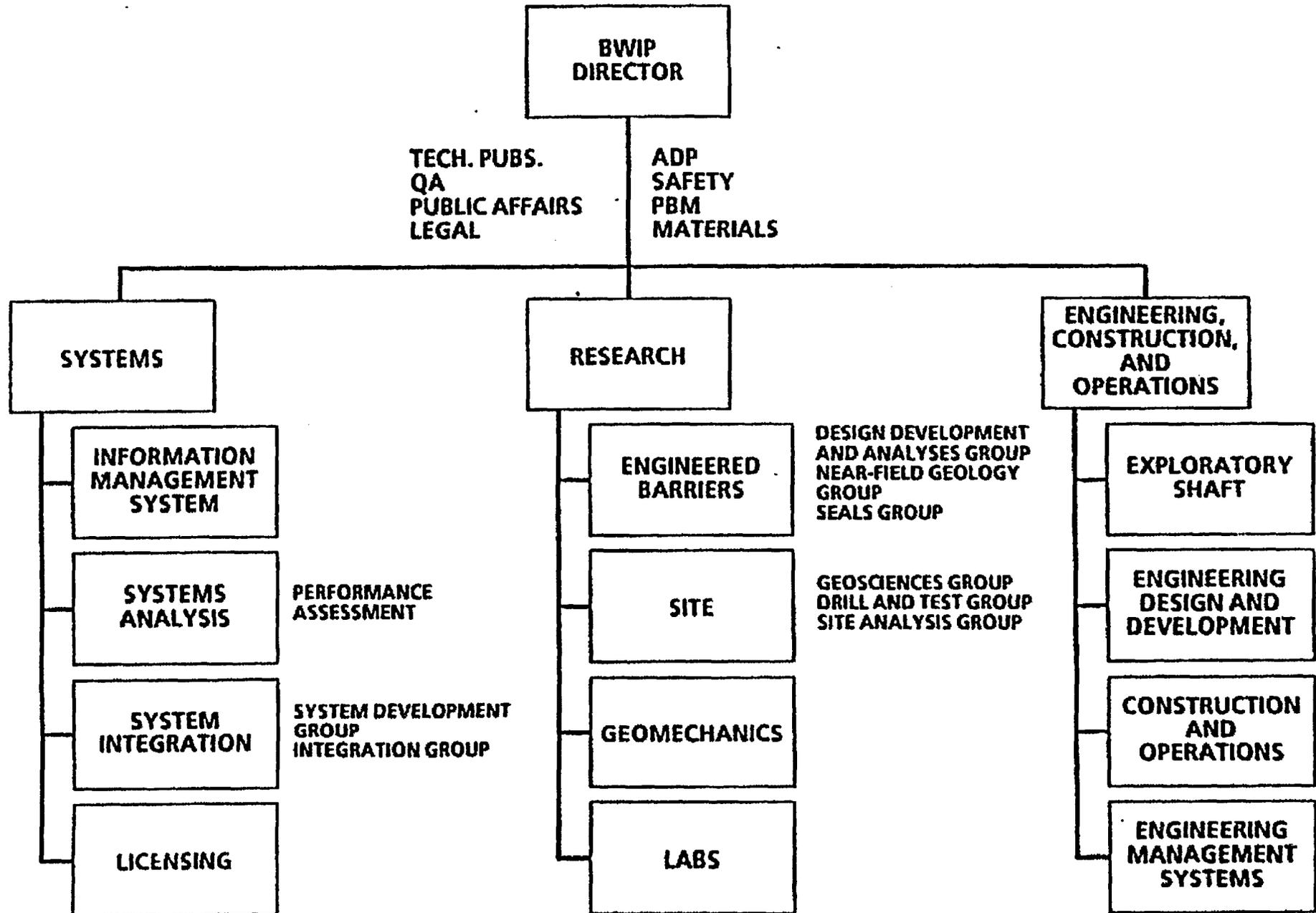
DEVELOPING MANAGEMENT AND TECHNICAL CONTROLS

PROJECT ORGANIZATION

- **ORGANIZATION RESTRUCTURED TO MEET INCREASES IN PROJECT SIZE, COMPLEXITY AND REQUIRED DISCIPLINE**
 - **MANAGEMENT AND INTEGRATION CREATED**
 - **SCIENCE AND ENGINEERING CREATED**
 - **FIELD OPERATIONS CONSOLIDATED**
 - **RESOURCE MANAGEMENT / ACQUISITION ORGANIZATIONS ESTABLISHED**
 - **INFORMATION MANAGEMENT CENTRALIZED**

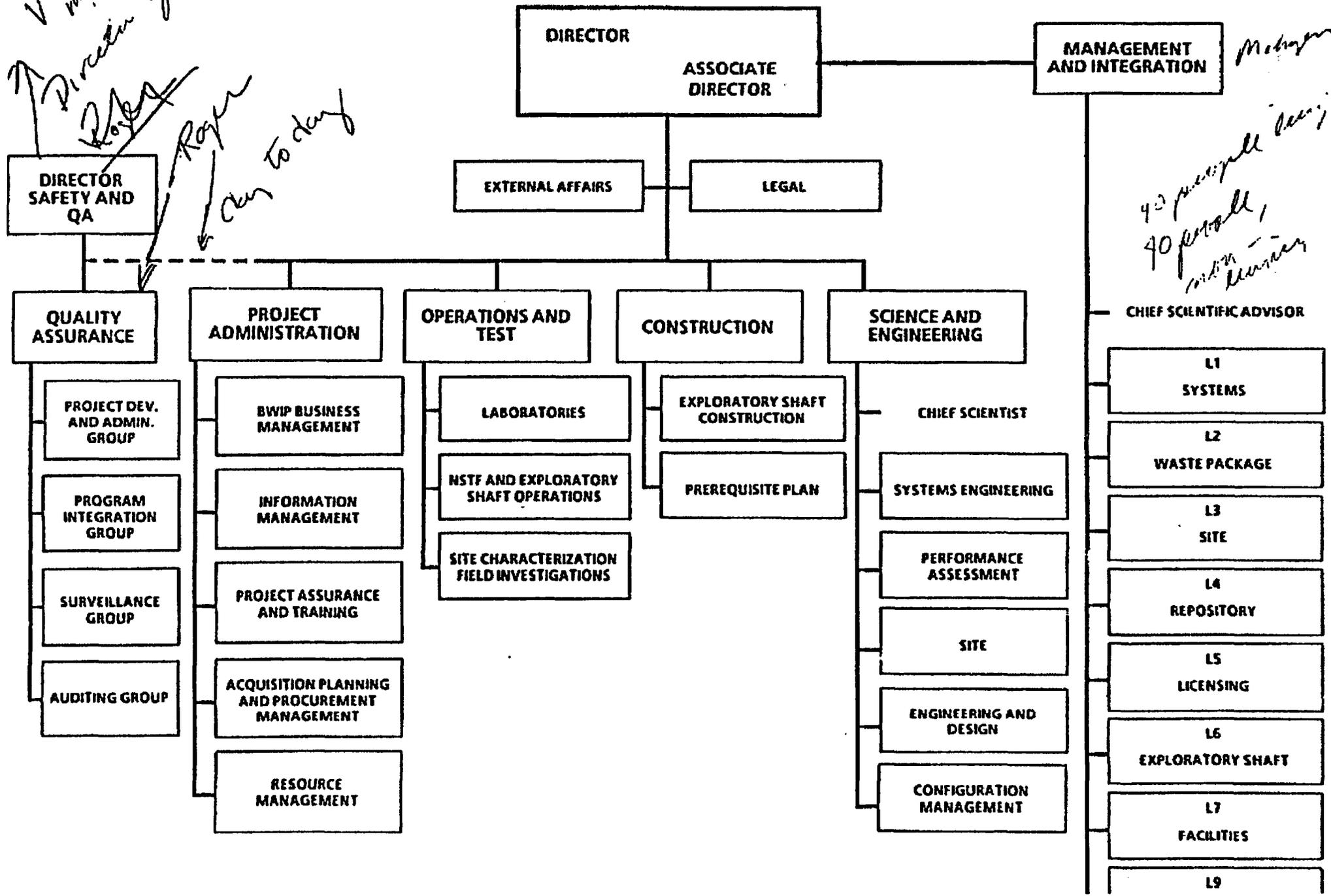
- **PROJECT STAFF AUGMENTED, KEY PERSONNEL BROUGHT IN TO FILL CRITICAL POSITIONS**
 - **CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVES NAMED**
 - **TECHNICAL INTEGRATION COORDINATORS NAMED**

BWIP ORGANIZATION AT CONCLUSION OF INVESTIGATION PHASE



BASALT WASTE ISOLATION PROJECT ORGANIZATION

*W. Bond
M. Hagan
Director
Rogers
Rogers
can to chief*

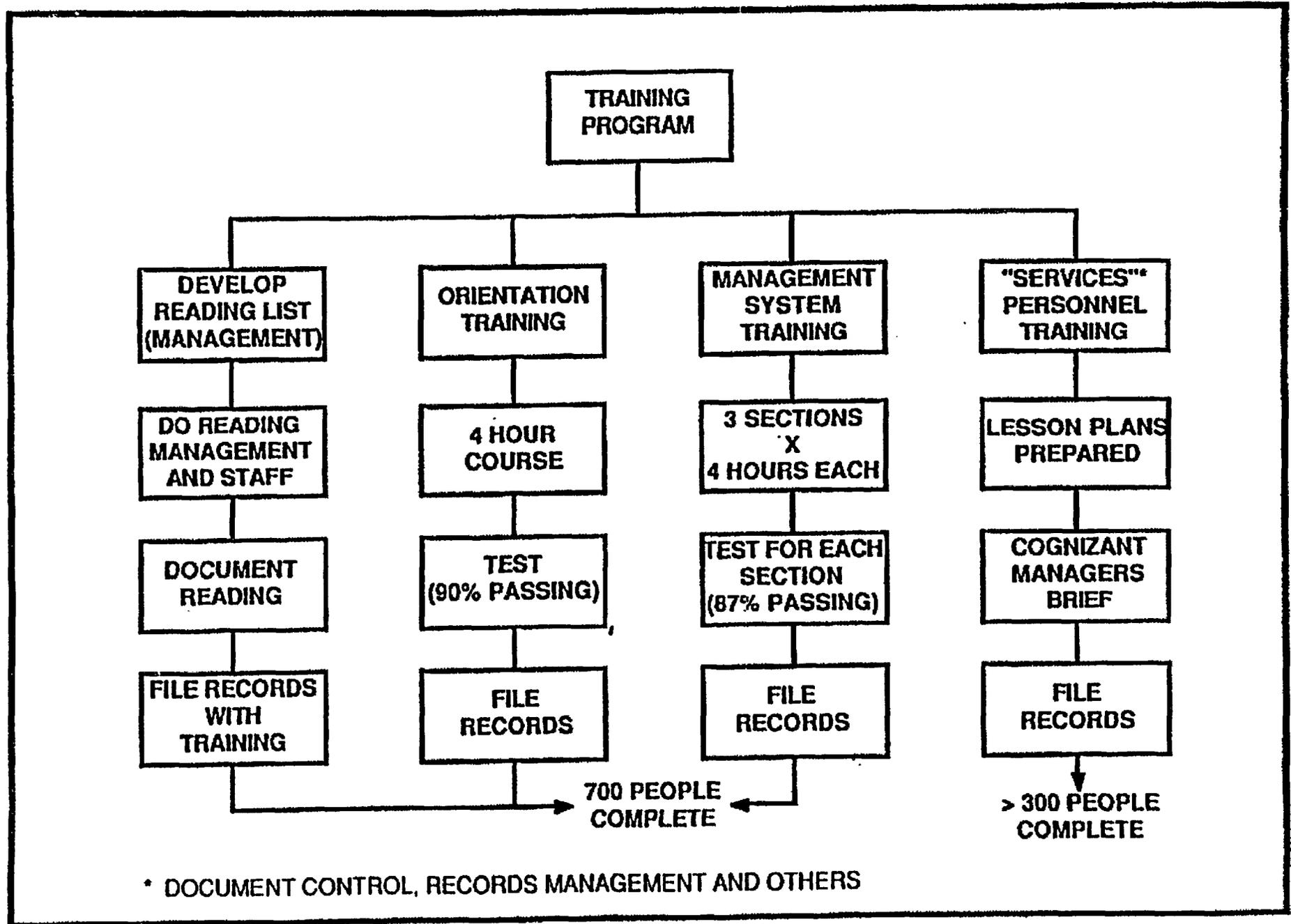


*40 people
40 people
min
Morgan*

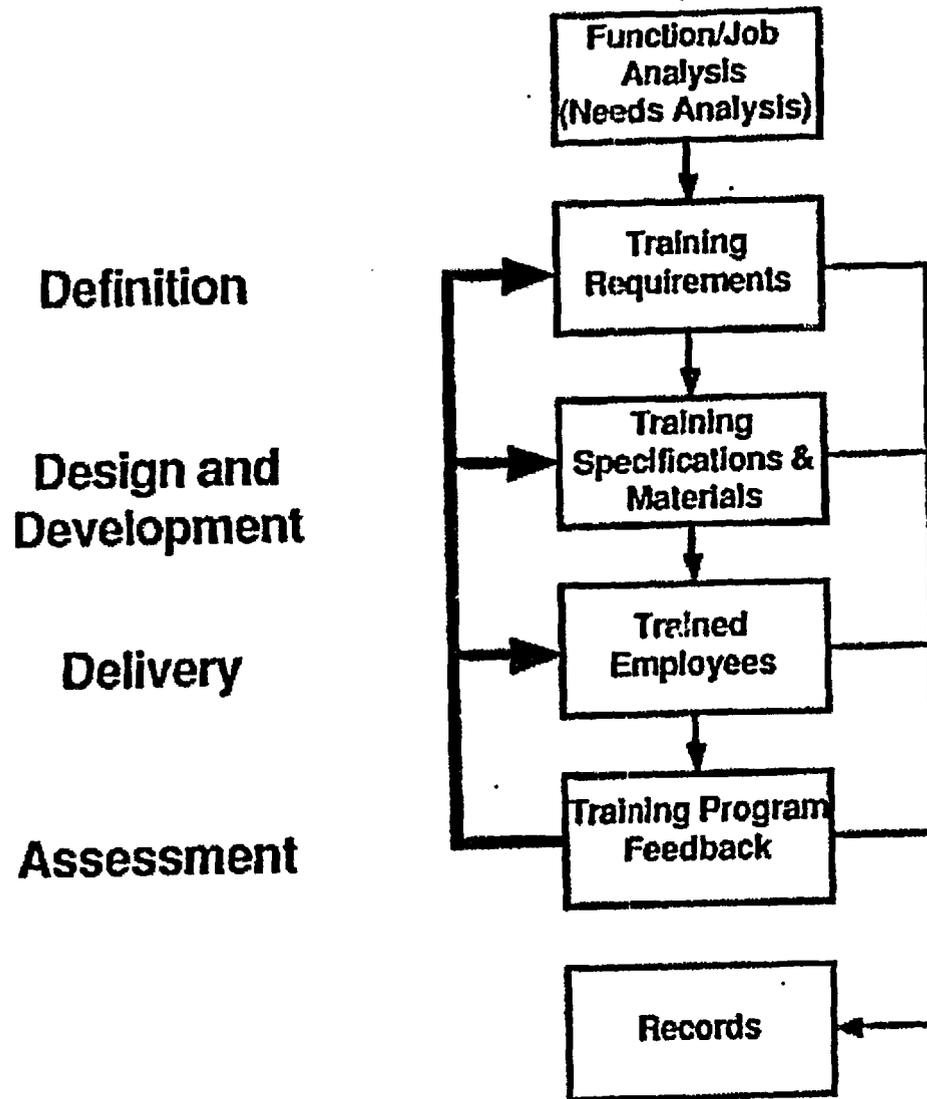
DEVELOPING MANAGEMENT AND TECHNICAL CONTROLS

TRAINING

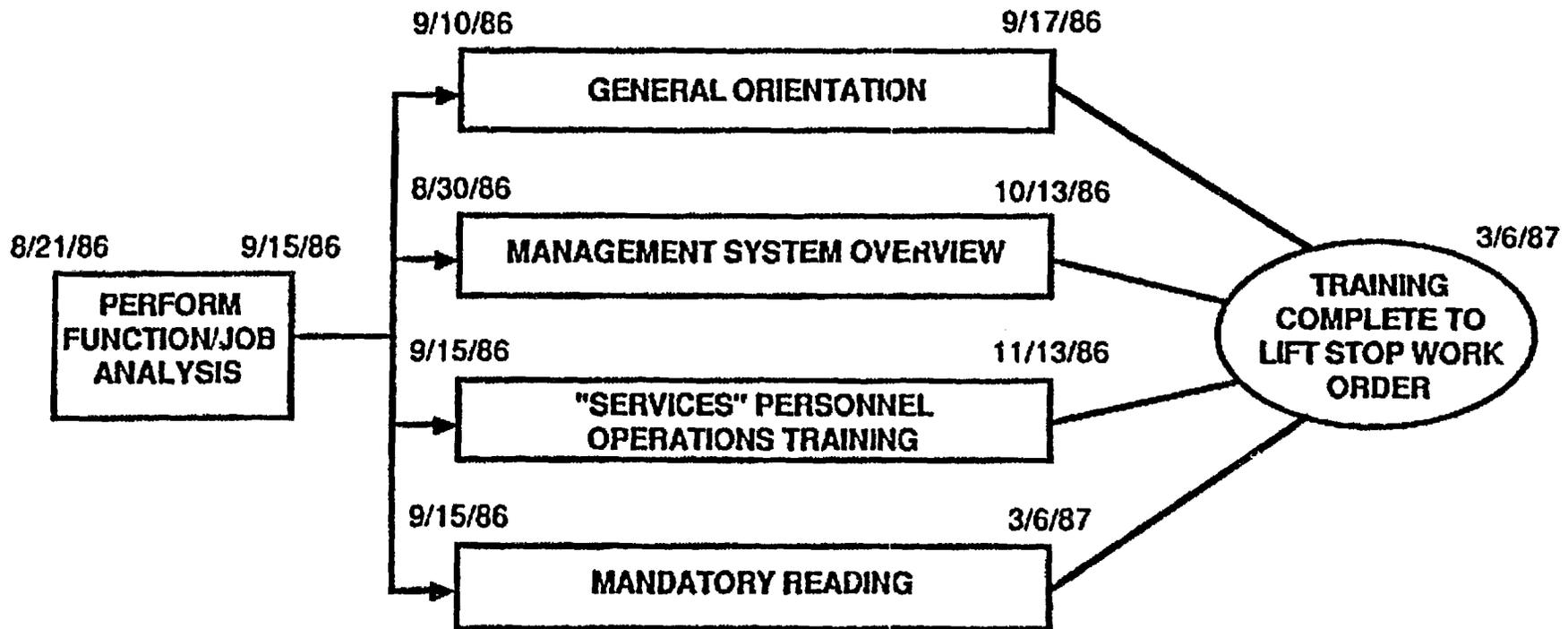
- | ● PROJECT - WIDE TRAINING ORGANIZATION DEVELOPED**
- EXPERIENCED STAFF HIRED**
- TRAINING PROGRAM BASED ON SYSTEMS APPROACH ESTABLISHED**
- TRAINING RECORDS SYSTEM DEVELOPED AND IMPLEMENTED**
- 15,000+ HOURS OF TRAINING DELIVERED**
- COMPLETE TRAINING CATALOG IN DEVELOPMENT**



SYSTEMATIC APPROACH TO TRAINING



STOP WORK ORDER RECOVERY TRAINING SCHEDULES



DEVELOPING MANAGEMENT AND TECHNICAL CONTROLS

QUALITY ASSURANCE

- NEW QUALITY PROGRAM MEETING NRC AND DOE REQUIREMENTS DEVELOPED
- BWIP QA STAFF INCREASED FROM 42 (MAY 1986) TO 65 (MARCH 1987)
- GRADED QA METHODOLOGY DEVELOPED
- MAJOR PROJECT PARTICIPANT QA PROGRAMS AND PROCEDURES DEVELOPED, REVIEWED AND APPROVED
- QUALITY CONCERNS PROGRAM ESTABLISHED -

DOE has similar procedure

*is inevitable
(at RL)
(not @ Washington)*

*click
SC on after
admission*

*On program
not done*

RESTART ACTIVITIES

RECOVERY APPROACH (CONT'D)

- **RESTART READINESS REPORT**
- **MANAGEMENT SYSTEM READINESS REVIEW BY DOE**

PARTIAL LIFT OF STOP WORK ORDER

- **WORK INITIATION SUBJECT TO DOE APPROVAL**
- **CONTINUE TRANSITION OF ONGOING WORK**
- **DOE AUDIT WORK ACTIVITIES**

STOP WORK ORDER LIFTED

- **WORK INITIATION SUBJECT TO BWIP PROCEDURES**

ROCKWELL ACTIONS
SUPPORTING DOE-RL RESTART READINESS REVIEW
 (AS OF 3/13/87)

<u>CK. LIST ITEM NO.</u>	<u>ACTIONEE</u>	<u>ACTION</u>	<u>COMMITMENT</u>	<u>ACTUAL</u>
1.5 - 2	L. PALMER / J. KIRKENDALL	<ul style="list-style-type: none"> ◦ Prepare and Issue Project Directive ◦ Notify Review Team that Records are Ready ◦ Establish Method for Maintaining Qualification Records for All BWIP Personnel 	3/13 3/6 2/25	ON SCHEDULE COMPLETE COMPLETE
1.1 - 1	J. KIRKENDALL	<ul style="list-style-type: none"> ◦ Complete and Issue Master Document List 	2/18	COMPLETE
1.4 - 1 / 1.8	R. RAMSGATE / R. JOHNSON	<ul style="list-style-type: none"> ◦ Upgrade Appendix B of MA-3 ◦ Provide Upgraded Appendix to Review Team 	4/17 4/17	ON SCHEDULE ON SCHEDULE
1.5 - 1	L. PALMER / J. KIRKENDALL	<ul style="list-style-type: none"> ◦ Modify Procedure 13 - 121, Para. 6.3.2, as Necessary to Reflect Maintenance of Controlled Personnel Roster 	3/13	
	A. HAWKINS / D. MAHAGIN	<ul style="list-style-type: none"> ◦ Provide Updated WBS Dictionary to Team 	3/15	
1.2 - 5	A. HAWKINS / D. MAHAGIN	<ul style="list-style-type: none"> ◦ Draft Letter for E. W. Higgins to Document DOE Authorizing Signatures 	DELETED	MAC Taking Action
1.1 - 5	J. KIRKENDALL / R. MAY	<ul style="list-style-type: none"> ◦ Recommend where to address Master Document List and modify prepare schedule to affected PMPM(s) 	3/30	

ROCKWELL ACTIONS
SUPPORTING DOE-RL RESTART READINESS REVIEW
 (AS OF 3/13/87)

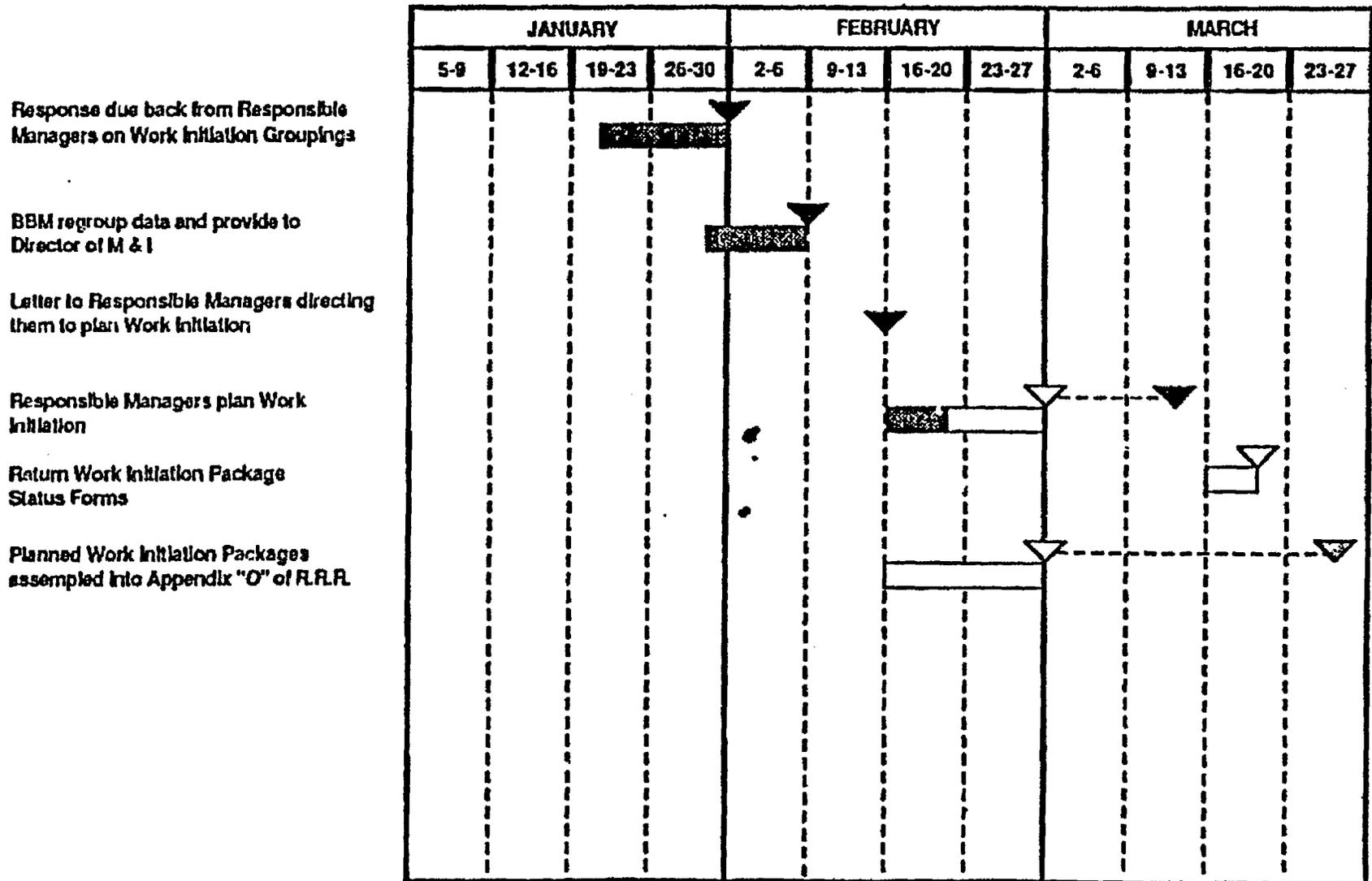
<u>CK. LIST ITEM NO.</u>	<u>ACTIONEE</u>	<u>ACTION</u>	<u>COMMITMENT</u>	<u>ACTUAL</u>
1.9 - 2	R. JOHNSON	◦ Provide Contact for Team; Provide Additional Data on NCR's		
1.10 - 2	R. JOHNSON	◦ Provide Audit Protocol Training, Including Proper Documentation (Issue letter)	3/14	
		◦ Revise Procedures to Clarify Deficiency Close-out Requirements (Complete, close with DOE-RL)	3/14	
1.10 - 5	R. JOHNSON	◦ Close with P. Saget on Root Causes and Trends Document Closure	3/13	
2.8	L. MURPHY / J. KIRKENDALL	◦ Modify PMPM 9 - 101 to be Consistent With WRHO Concerns BMSP per Discussion with J. Madsen and comment letter	3/30	
		◦ Close with J. Madsen on Changes	3/20	
	D. MAHAGIN	◦ Complete End Function and Master Project Schedules	3/10	
		◦ Obtain Required Signatures	3/31	
1.1 - 6	R. MAY / J. KIRKENDALL	◦ Modify Master Document List to Indicate documents in affect at date of list	3/20	

ROCKWELL ACTIONS
SUPPORTING DOE-RL RESTART READINESS REVIEW
 (AS OF 3/13/87)

<u>CK. LIST</u> <u>ITEM NO.</u>	<u>ACTIONEE</u>	<u>ACTION</u>	<u>COMMITMENT</u>	<u>ACTUAL</u>
1.9 - 3 / 1.10 - 6	R. JOHNSON	° Evaluate outstanding NCR's, audits and surveillance for requirement to disposition prior to partial lift of the SWO	TBD	
2.11	J. TRITZ / J. KIRKENDALL D. KELLEY R. MAY A. NOONAN	° Respond to concerns regarding Information Management Systems	TBD	

WORK INITIATION PACKAGE DEVELOPMENT SCHEDULE

(AS OF 3/13/87)



= Indicates Portion of Task Complete
 = Actual Completion
 = Target Completion
 = Forecast Completion

RESTART READINESS REPORT ACTION ITEM SUMMARY

SECTION	ACTION ITEMS TOTAL	REQUIRED FOR RESTART		
		TOTAL	COMPLETED	IN PROCESS
1.0 SUMMARY	11	3	0	3
2.0 MANAGEMENT SYSTEM	0	0	0	0
3.0 QUALITY ASSURANCE PROGRAM	13	2	1	1
4.0 TRAINING	3	0	0	0
5.0 APPRAISAL SUMMARY	15	9	6	3
6.0 RESTART OF WORK	5	2	0	2
TOTALS	47	16	7	9

3/12/87

DASALT WASTE ISOLATION PROJECT

SYSTEM APPRAISAL

ROGER JOHNSON

THE APPRAISAL PROCESS

- **DEFINITION**
- **OBJECTIVES**
- **APPRAISAL FLOW CHART**

DEFINITION

PROJECT MANAGEMENT CONTROL SYSTEM APPRAISAL

A technique used to evaluate the BWIP Integrating and Major Participating Contractor's Project Management Control Systems to determine if those systems are capable of being effectively implemented.

APPRAISAL OBJECTIVE # 1

To determine that a Quality Assurance Program and Project Management System have been developed and documented in accordance with the specified requirements, and that such programs/systems have the capability to provide a disciplined, systematic, and coordinated approach to Project Management of Site Characterization activities for the BWIP...

APPRAISAL OBJECTIVE # 1

(cont'd)

...to the extent necessary to:

- 1. Lift the General Stop Work Order**
- 2. Restart stopped work**
- 3. Transition ongoing work to the new Project Management Control Systems.**

APPRAISAL OBJECTIVE # 2

To verify by evaluation, examination, or interview techniques, the program or system's ability to be implemented efficiently and effectively.

THE PROJECT MANAGEMENT CONTROL SYSTEM APPRAISED

THE PROJECT MANAGEMENT CONTROL SYSTEM APPRAISED

Quality Systems

QA Program Control
Design Control
Procurement Control
Document Control
Verification Control
Test Control
Deficiency Control
Records Control

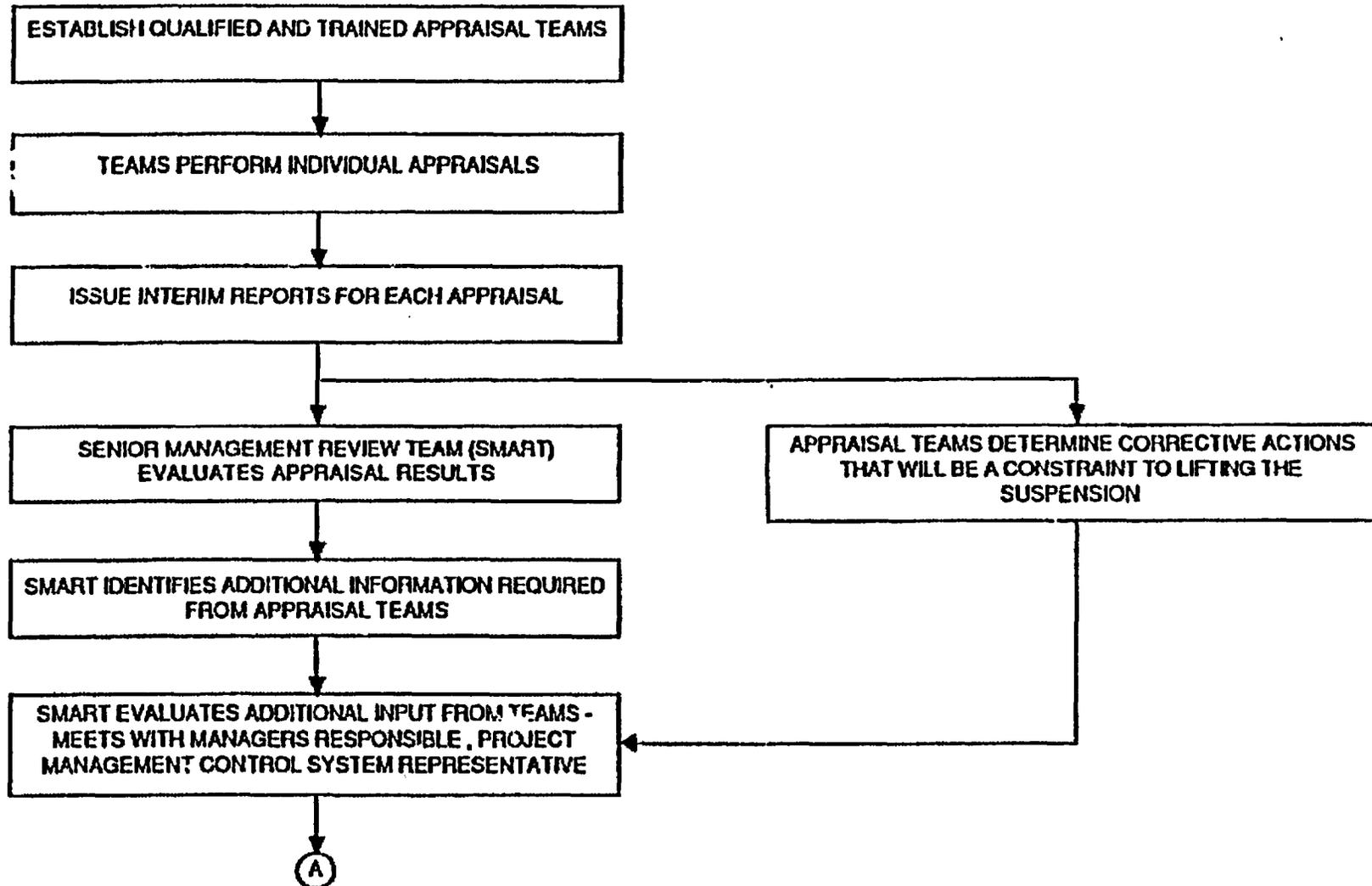
Administrative Systems

Cost/Schedule Control
Safety/Security Control
Correspondance Control
Actions Control
Contractor Interface Control
Resources Control

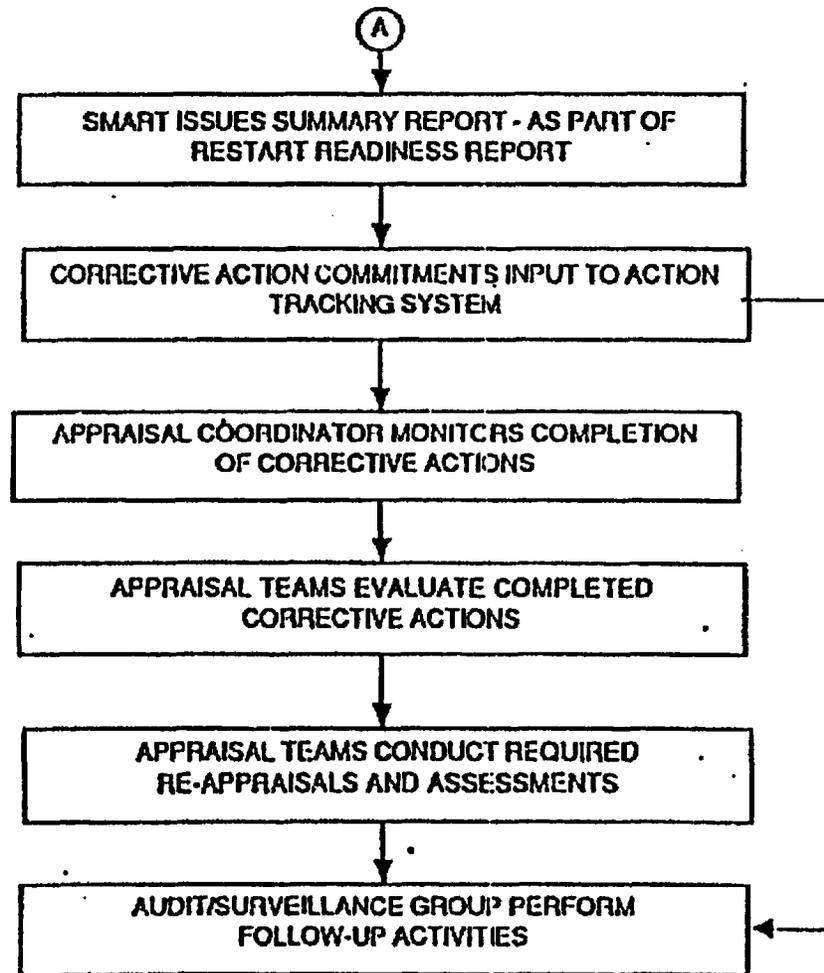
APPRAISAL TEAMS

- **3 To 4 Qualified Individuals**
- **Not Responsible For System Development/Implementation**
- **Many Were From Other Contractors**
- **Selected Because Of Their Expertise**

APPRAISAL PROCESS OVERVIEW



APPRAISAL PROCESS OVERVIEW (CONTINUED)



October 15, 1985

DESIGN CONTROL

REQUIREMENTS

- o System Engineering Management Plan
- o Project Management Plan
- 4.0 Work Plan
- 7.1.1 Technical Baseline
- 9.0 System Engineering Management
- 7.1.6 Configuration Management
- 7.1.5 Project Change Management

- o ECARD
- Criterion 3.0 Design Control
- Criterion 9.0 Special Processes

Special Processes

PURPOSE

To apply systems engineering management process to project technical activities, and conduct them in compliance with applicable project management and quality assurance requirements.

DESCRIPTION

Major elements of the system engineering/design control process are:

- o Site studies
- o Performance Assessment
- o Design Input
- o Design Analyses
- o Design Verification
- o Change Control
- o Interface Control
- o Documentation
- o Configuration Management

Design inputs are developed and provided by Rockwell to the AE. Design analyses performed by Rockwell are controlled through requirements imposed on analytical processes. AEs design process, analysis, design verification and related activities are controlled through technical reviews, CA audits and surveillances. Management of technical baseline, design changes, and interfaces is achieved in close coordination with cost/schedule and project integration groups. Close coordination

is also maintained with document control and records management activities for implementing configuration management.

QA MANAGEMENT CONTROL SYSTEM

II. Design Control
Rev. 0

COPY

Sub-Systems

1.0 Organization,
Rev. 0

2.0 Design Interface,
Rev. 0

3.0 Instr./Proc./Drawings,
Rev. 0

4.0 Indoc./Training,
Rev. 0

5.0 Document Control
Rev. 0

5.0 Records Control,
Rev. 0

7.0 Design Verification
Rev. 0

8.0 Deficiency Control
Rev. 0

9.0 Design Changes,
Rev. 0

10.0 Computer Program
Control, Rev. 0

11.0 Design Input,
Rev. 0

12.0 Design Process,
Rev. 0

The Appraisal Checklists developed for the identified subsystems have been determined adequate for their intended purpose and are approved.

Approved By: J. A. Rivera 9/9/85
Appraisal Coordinator Signature/Print Name/Date

ORIGINAL

Revision No. 0

BWIP-QA APPRAISAL CHECKLIST		PARTICIPANT: RHO-BWIP SCIENCE & ENGINEERING	DATE: 11/11/86
APPRAISAL NUMBER: RHO-RA-008		LEAD APPRAISER: J.L. RUND	PAGE 1 OF 21
CONTROL SYSTEM: II Design Control		APPRAISER(S): M.K. QUINN	
SUBSYSTEM: 1.0 Organization			
ITEM NO.	APPRAISAL QUESTIONS:	COMMENTS:	
1.1	Have the responsibilities and authorities of the design groups internal organizations and positions involved in the performance or verification of activities affecting quality been clearly identified?	1.1 PMPM 2-126 REV. 0 (DRAFT) DELINEATES "PRIMARY ACTIVITIES OF EACH SCIENCE & ENGINEERING FUNCTION". FIGURE 1 OF 2-126 SHOWS INTERFACES & DEFINES DESIGN CONTROLLING PROCEDURES. HOWEVER, ORG 1.1 REV. 0 STATES THAT DETAILED INTERFACES WITHIN SCIENCE & ENGINEERING ARE DEFINED IN THE "DEPARTMENT WORK PLAN". INTERVIEW HAS DISCLOSED THAT THERE WILL BE NO DEPARTMENT WORK PLAN GENERATED. SEE NLS DISCREPANCY REPORT # D-RHO-II-1.1 (INADEQUATE)	
1.2	Have the responsibilities and authorities of the various design groups noted on the organizational chart been described in writing?	1.2 ADEQUATELY ADDRESSED IN PMPM 2-126 REV. 0. (ADEQUATE)	
1.3	Do the design groups clearly understand their quality responsibilities?	1.3 ADEQUATELY ADDRESSED IN PMPM 2-126 REV. 0 AND ORG 1.1 REV. 0, INTERVIEW CONFIRMS. (ADEQUATE)	
1.4	How does senior management stay abreast of the various design groups problems, progress (schedule), etc.?	1.4 WEEKLY STAFF ACTIVITY REPORTS, WEEKLY STAFF MEETINGS, REVIEW AND SIGN-OFF ON ALL EXTERNAL DEPARTMENTAL CORRESPONDANCE, AND COVER COPY ON ALL EXTERNAL CORRESPONDANCE. (ADEQUATE)	
1.5	Do the personnel, including those used in peer reviews, outside the QA organization that perform verification activities have independence (from work being verified and also freedom to identify any problems)?	1.5 ADEQUATELY ADDRESSED IN DESIGN CONTROLLING PROCEDURES (REF: PMPM 2-126 REV. 0 FIGURE 1). (ADEQUATE)	
		 APPRAISER	DATE: 11/18/86

ORIGINAL

MANAGEMENT CONTROL SYSTEM DISCREPANCY REPORT

APPRAISAL No. RHO-PA-008 INDEX No. D-RHO-II-1.1
 RESPONSIBLE PARTICIPANT/ORGANIZATION: RHO-BWIP
 CONTROL SYSTEM: II - Design Control DISCREPANCY No. 0129

Subsystem Appraisal Checklist Element: 1.0 Organization, Item No. 1.1. Have the responsibilities and authorities of the design groups internal organizations and positions involved in the performance or verification of activities affecting quality been clearly identified?

Description of Discrepancy: Org. 1.1, Rev. 0, states that detailed interfaces within the Science and Engineering Department will be defined in the "Department Work Plan". Interview has disclosed that the stated work plan will not be generated.

DEFICIENCY CONCERN

RECOMMENDATION: Revise Org 1.1 to delete reference to the department work plan. Suggest reference to PMPM 2-126.

Appraiser: M. K. Quinn [Signature] 11/8/86 Lead Appraiser Approval: J. L. Ruud [Signature] 11/18/86
Print Name/Signature/Date Print Name/Signature/Date

Acknowledged By: G. H. Smith [Signature] 11-18-86 Response Commitment Date: 11-25-86
Print Name/Signature/Date

Action to Correct Condition (To be Completed by Responsible Participant/Organization):
 (Including Cause and Action to Prevent Recurrence, as Applicable)

Initiate Revision to Org. 1.1, Rev. 0 (Attachment 17 and 20) to delete the phrase, "Department Work Plan" and replace with "department group charters and implementing procedures."

Commitment Date for Completion: 12/8/86
 Response Prepared By: G. T. Harper [Signature] Title: MGR, ENV. & DES Date: 12/1/86
Print Name/Signature

Response Evaluation: ADEQUATE INADEQUATE
 Comments:
 Lead Appraiser: John Ruud [Signature] 12/8/86
Print Name/Signature/Date

Verification of Action Taken to Correct Condition: ADEQUATE INADEQUATE
 Comments:
 Appraiser: _____
Print Name/Signature/Date

CLOSED BY:
 LEAD APPRAISER: _____ DATE: _____
Print Name/Signature

APPRAISAL TEAM CONCLUSIONS

MANAGEMENT CONTROL SYSTEM	DISCREPANCIES					APPRAISAL TEAM		COMMENTS
	TOTAL	OPEN	CORRECTIVE ACTIONS COMPLETE (1-2/23/87)	CONSTRAINT TO LIFT STOP WORK ORDER	CONSTRAINT WITH CORRECTIVE ACTIONS (1-2/23/87)	RECOMMEND RESTART	RECOMMEND REAPPRAISAL	
PHL-PA-001 (QUALITY ASSURANCE) PHL-PA-001A (ADMINISTRATIVE)	20 0	5 0	0 0	0 0	0 0	YES	NO	NOT APPLICABLE.
WIK-PA-002 (QUALITY ASSURANCE) WIK-PA-002A (ADMINISTRATIVE)	48 3	15 3	1 0	0 0	0 0	SEE COMMENTS	NO	UPON SATISFACTORY COMPLETION OF CORRECTIVE ACTION FOLLOW-UP AND CLOSURE, ADDITIONALLY, DESIGN CONTROL AND RECORD MGMT CONTROL SYSTEMS SHOULD BE MONITORED BY THE AUDIT/SURVEILLANCE PROGRAM.
MK-PA-003 (QUALITY ASSURANCE) MK-PA-003A (ADMINISTRATIVE)	0 3	0 3	0 0	0 0	0 0	YES	NO	NOT APPLICABLE.
KEPB-PA-004 (QUALITY ASSURANCE) KEPB-PA-004A (ADMINISTRATIVE)	23 1	2 0	0 0	0 0	0 0	SEE COMMENTS	NO	UPON SATISFACTORY COMPLETION OF CORRECTIVE ACTIONS.
BCSR-PA-005 (QUALITY ASSURANCE) BCSR-PA-005A (ADMINISTRATIVE)	47 0	7 0	0 0	42 0	0 0	NO	YES	NOT APPLICABLE.
DOCUMENT/RECORDS RHO-PA-006	27	15	6	11	0	SEE COMMENTS	NO	UPON SATISFACTORY COMPLETION OF CORRECTIVE ACTIONS.
QUALITY ASSURANCE RHO-PA-007	18	10	0	8	0	SEE COMMENTS	NO	UPON SATISFACTORY COMPLETION OF CORRECTIVE ACTIONS.
DESIGN RHO-PA-008	32	32	4	28	0	NO	YES	NOT APPLICABLE.
PROCUREMENT RHO-PA-009	10	10	0	10	0	NO	YES	NOT APPLICABLE.

APPRAISAL TEAM CONCLUSIONS (CONTINUED)

MANAGEMENT CONTROL SYSTEM	DISCREPANCIES					APPRAISAL TEAM		COMMENTS
	TOTAL	OPEN	CORRECTIVE ACTIONS COMPLETE (1-2/28/87)	CONSTRAIN. TO LIFT STOP WORK ORDER	CONSTRAINT WITH CORRECTIVE ACTIONS (1-2/28/87)	RECOMMEND RESTART	RECOMMEND REAPPRAISAL	
VERIFICATION RHIO-RA-010	8	0	1	0	0	SEE COMMENTS	NO	UPON SATISFACTORY COMPLETION OF CORRECTIVE ACTIONS, PROGRAM TO BE MONITORED BY QUALITY ASSURANCE AUDIT/SURVEILLANCE PROGRAM.
EFFICIENCY RHIO-RA-011	14	4	0	0	0	SEE COMMENTS	NO	UPON SATISFACTORY COMPLETION OF CORRECTIVE ACTIONS, PROGRAM TO BE MONITORED BY QUALITY ASSURANCE AUDIT/SURVEILLANCE PROGRAM.
TEST RHIO-RA-012	4	2	0	3	0	SEE COMMENTS	NO	UPON SATISFACTORY COMPLETION OF CORRECTIVE ACTIONS, PROGRAM TO BE MONITORED BY QUALITY ASSURANCE AUDIT/SURVEILLANCE PROGRAM.
COST/SCHEDULE RHIO-RA-013	16	5	0	4	0	SEE COMMENTS	NO	UPON SATISFACTORY DISPOSITION OF CORRECTIVE ACTIONS A, C, K, L.
SAFETY RHIO-RA-014	7	2	0	1	0	SEE COMMENTS	NO	UPON SATISFACTORY COMPLETION OF CORRECTIVE ACTIONS.
SECURITY RHIO-RA-015	8	8	1	0	0	YES	NO	UPON SATISFACTORY COMPLETION OF CORRECTIVE ACTIONS.
CORRESPONDENCE RHIO-RA-016	3	2	0	0	0	YES	NO	NOT APPLICABLE.
ACTION RHIO-RA-017	1	0	0	0	0	YES	NO	NOT APPLICABLE.
CONTRACTOR INTERFACE RHIO-RA-018	11	8	0	4	0	YES	NO	NOT APPLICABLE.
RESOURCE RHIO-RA-019	3	3	0	1	0	SEE COMMENTS	NO	UPON SATISFACTORY COMPLETION OF CORRECTIVE ACTIONS.
PMP/SEMP RHIO-RA-020	18	16	0	4	3	SEE COMMENTS	YES	UPON SATISFACTORY COMPLETION OF CORRECTIVE ACTIONS PLUS EVALUATION OF IEMP (INCLUDING ANNEXES) AND SAFETY PLAN DOCUMENTS.

DOCUMENT CONTROL PLAN

- **RESPONSIBILITIES**
- **DOCUMENT CONTROL ACTIVITIES / ELEMENTS**
 - **Receipt Control**
 - **Controlled Document List**
 - **Process Control**
 - **Distribution Lists**
 - **Transmittals / Receipt Acknowledgements**
 - **Copyholders Numbers**
 - **Reproduction / Files**
 - **Stamping Requirements**
 - **Checking / Assessment**
 - **Distribution And Update Control**
 - **Physical Update**
 - **Transmittal / Receipt Acknowledgement Tracking**
 - **Correspondance Control**
 - **Commitment / Action Tracking**
 - **Satellite Document Control**
 - **Document Control Procedures / Instructions**
 - **Data Entry**

DOCUMENT CONTROL PLAN (CONT'D)

- **TRAINING OF DOCUMENT CONTROL PERSONNEL**
- **GENERAL REQUIREMENTS**
 - **Integrated (Common) Data Base**
 - **Common Transmittal Form**
 - **Document Numbering**
 - **Copy Requirements**
 - **Automated Transmittal System**
 - **Master Submittal Lists**
 - **Control Of Original Documents**
 - **Interim Storage Of Documents**
 - **Document Modification Process**
 - **Document Type / Approval Matrix**

BWIP QUALITY ASSURANCE PROGRAM REQUIREMENTS MANUAL

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A		Table of Contents	2	July 1986
B		Policy Statement	2	June 1986
C		Program Requirements		
	1.0	Organization	2	July 1986
	2.0	Quality Assurance Program	2	July 1986
	3.0	Design Control	2	July 1986
	4.0	Procurement Document Control	2	July 1986
	5.0	Plans, Instructions, Procedures, and Drawings	2	July 1986
	6.0	Document Control	2	July 1986
	7.0	Control of Purchased Items and Services	2	July 1986
	8.0	Identification and Control of Items	2	July 1986
	9.0	Control of Processes	2	July 1986
	10.1	Inspection	2	July 1986
	10.2	Surveillance	2	July 1986
	10.3	Training, Qualification, and Certification of Test and Inspection Personnel	2	July 1986
	10.4	Training, Qualification, and Certification of Nondestructive Examination Personnel	2	July 1986
	11.1	Construction Test Control	2	July 1986
	11.2	Data Collection Test Control	2	July 1986
	12.0	Control of Measuring and Test Equipment	2	July 1986

BWIP QUALITY ASSURANCE PROGRAM REQUIREMENTS MANUAL

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	13.0	Handling, Storage, Packaging, Preservation, and Shipping	2	July 1986
	14.0	Inspection, Test, and Operating Status	2	July 1986
	15.0	Control of Nonconforming Items	2	July 1986
	16.0	Corrective Action	2	July 1986
	17.0	Quality Assurance Records	2	July 1986
	18.1	Audits	2	July 1986
	18.2	Training, Qualification, and Certification of Auditors and Lead Auditors	2	July 1986
D		Responsibilities		
	1.0	Organization	2	July 1986
	2.0	Quality Assurance Program	2	July 1986
	3.0	Design Control	2	July 1986
	4.0	Procurement Document Control	2	July 1986
	5.0	Plans, Instructions, Procedures, and Drawings	2	July 1986
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BWIP QUALITY ASSURANCE PROGRAM REQUIREMENTS MANUAL

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	10.4	Training, Qualification, and Certification of Nondestructive Examination Personnel	2	July 1986
	11.1	Construction Test Control	2	July 1986
	11.2	Data Collection Test Control	2	July 1986
	12.0	Control of Measuring Test Equipment	2	July 1986
	13.0	Handling, Storage, Packaging, Preservation, and Shipping	2	July 1986
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	18.1	Audits	2	July 1986
	18.2	Training, Qualification, and Certification of Auditors and Lead Auditors	2	July 1986
E		Manual Control	2	June 1986
F		Graded Quality Assurance Program	2	July 1986
Appendix A		Glossary	2	June 1986
Appendix B		Requirements and Implementing Procedures Index	2	July 1986

BWIP MANAGEMENT AND INTEGRATION PLAN
SD-BWI-PMP-006 REV C

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BWIP MANAGEMENT AND INTEGRATION PLAN
SD-BWI-PMP-006 REV 0

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- II. Configuration Management Plan
- III. Document Control Plan
- IV. Records Management Plan
- V. Qualification and Training System Plan
- VI. Test Control Plan

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BUSINESS MANAGEMENT SYSTEM PLAN

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BUSINESS MANAGEMENT SYSTEM PLAN

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CONFIGURATION MANAGEMENT PLAN

SD-BWI-CM-001, Rev.2

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SMART EVALUATION

**Smart Evaluation Of The Appraisal Team Conclusions Were Based
On:**

- **Interim reports completed by the Appraisal Team**
- **Identified constraints to lifting the Stop Work Order**
- **Review of all discrepancies with corrective action
implementation extending beyuond February 28, 1987**
- **Discussions with Appraisal and Management System
personnel**

SMART EVALUATION

The evaluation by SMART concluded with the Management Control Systems being categorized as ready for restart, or requiring assessment or appraisal. These three categories are defined below. The corresponding number of Management Control Systems in each category is also indicated.

- Restart – capable of supporting Project Activities 21**
- Assessment – A partial evaluation of the Management Control Systems during verification of corrective action measures to determine that the new and/or revised plans/procedures are capable of being effectively implemented within the overall Management System 2**
- Reappraisal – A technique used to perform a complete reevaluation of the Management Control Systems to determine if those systems, as revised, are capable of being effectively implemented 2**

APPRAISAL SUMMARY STATUS

Number of Appraisals Conducted	25
Total Discrepancies	333
Constraints to Lift Suspension	119

APPRAISAL FOLLOW-UP

Appraisal follow-up activities will include as a minimum the following:

- **Input discrepancies into BWIP Action Tracking System**
- **Appraisal Team personnel to verify satisfactory implementation of corrective action commitments**
- **Appraisal Team close discrepancies upon completion of corrective actions**
- **BWIP Quality Assurance to develop surveillance and/or audit schedule for identified Management Control System Program weaknesses**

APPRAISAL SUMMARY

MANAGEMENT CONTROL SYSTEM	DISCREPANCIES			
	TOTAL	CLOSED	CONSTRAINT TO LIFT STOP WORK ORDER	
			TOTAL	CLOSED
PNL-RA-001 (QUALITY ASSURANCE)	29	29	0	0
PNL-RA-001A (ADMINISTRATIVE)	0	0	0	0
WHC-RA-002 (QUALITY ASSURANCE)	40	26	0	0
WHC-RA-002A (ADMINISTRATIVE)	3	0	0	0
MK-RA-003 (QUALITY ASSURANCE)	9	8	0	0
MK-RA-003A (ADMINISTRATIVE)	3	1	0	0
KE/PB-RA-004 (QUALITY ASSURANCE)	23	21	0	0
KE/PB-RA-004A (ADMINISTRATIVE)	1	1	0	0
BCSR-RA-005 (QUALITY ASSURANCE)	47	46	42	41
BCSR-RA-005A (ADMINISTRATIVE)	0	0	0	0
DOCUMENT/RECORDS RHO-RA-006	27	18	10	7
QUALITY ASSURANCE RHO-RA-007	16	9	6	3
DESIGN RHO-RA-008	32	8	21	5
PROCUREMENT RHO-RA-009	19	18	15	14

MANAGEMENT CONTROL SYSTEM	DISCREPANCIES			
	TOTAL	CLOSED	CONSTRAINT TO LIFT STOP WORK ORDER	
			TOTAL	CLOSED
VERIFICATION RHO-RA-010	8	4	0	0
DEFICIENCY RHO-RA-011	15	12	6	5
TEST RHO-RA-012	4	3	3	2
COST/SCHEDULE RHO-RA-013	10	7	4	4
SAFETY RHO-RA-014	2	0	1	0
SECURITY RHO-RA-015	5	2	2	2
CORRESPONDENCE RHO-RA-016	3	2	0	0
ACTION RHO-RA-017	1	1	0	0
CONTRACTOR INTERFACE RHO-RA-018	11	5	4	0
RESOURCE RHO-RA-019	3	2	1	1
PMP/SEMP RHO-RA-020	19	4	4	0
TOTALS	333	230	119	81

**DCE-RL READINESS REVIEW BOARD
PROCESS, ACTIONS AND STATUS**

LEE OLSON

READINESS REVIEW PROCESS SELECTED FOR DOE REVIEW OF RHO SWO/RESTART REQUEST

- **DEFINED DISCIPLINED PROCESS FOR REVIEW WITH PROCEDURES**
- **FOCUSES RESOURCES FOR REVIEW**

READINESS REVIEW PROCESS

- **DEFINED BY READINESS REVIEW PROCEDURE, PMD NO. 19.11 REV. 1**
- **REQUIRES**
 - **PREPARATION OF READINESS REVIEW PLAN**
 - **REVIEW TEAM WITH TASKS CLEARLY DEFINED**
 - **READINESS REVIEW IMPLEMENTING DOCUMENTS - PLANS, PROCEDURES, ETC.**
 - **CHECKLISTS WITH SPECIFIC REVIEW QUESTIONS**
 - **DOCUMENTATION TO SUPPORT RECOMMENDATION**
 - **"HOLD POINTS" PRIOR TO PROCEEDING TO NEXT PHASE**
- **SWO READINESS REVIEW CONTROLS**
 - **READINESS REVIEW PLAN, PMG NO. 19.11-RRP-01P REV.0**
 - **READINESS REVIEW INSTRUCTION, PMG NO. 19.11-RRI-01I REV.0**
 - **READINESS REVIEW CHECKLIST INSTRUCTION, PMG NO. 19.11-RRI-03I, REV.0**
 - **READINESS REVIEW FINAL REPORT FORMAT INSTRUCTION,
PMG NO. 19.11-RRI-02I REV.0**

READINESS REVIEW BOARD

- **ESTABLISHED JULY 2, 1986**
- **MEMBERSHIP: O.L. OLSON, CHAIRMAN**

**R.P. SAGET
E.W. HIGGINS
R.A. HOLTEN
J.E. MECCA
D.H. DAHLEM**

J.J. KEATING

- **TRAINING COMPLETED RELATIVE TO READINESS REVIEW PROCEDURES AND INSTRUCTIONS**
- **MEETINGS APPROXIMATELY WEEKLY - MEETING MINUTES PROVIDE RECORD**

READINESS REVIEW BOARD (CONT)

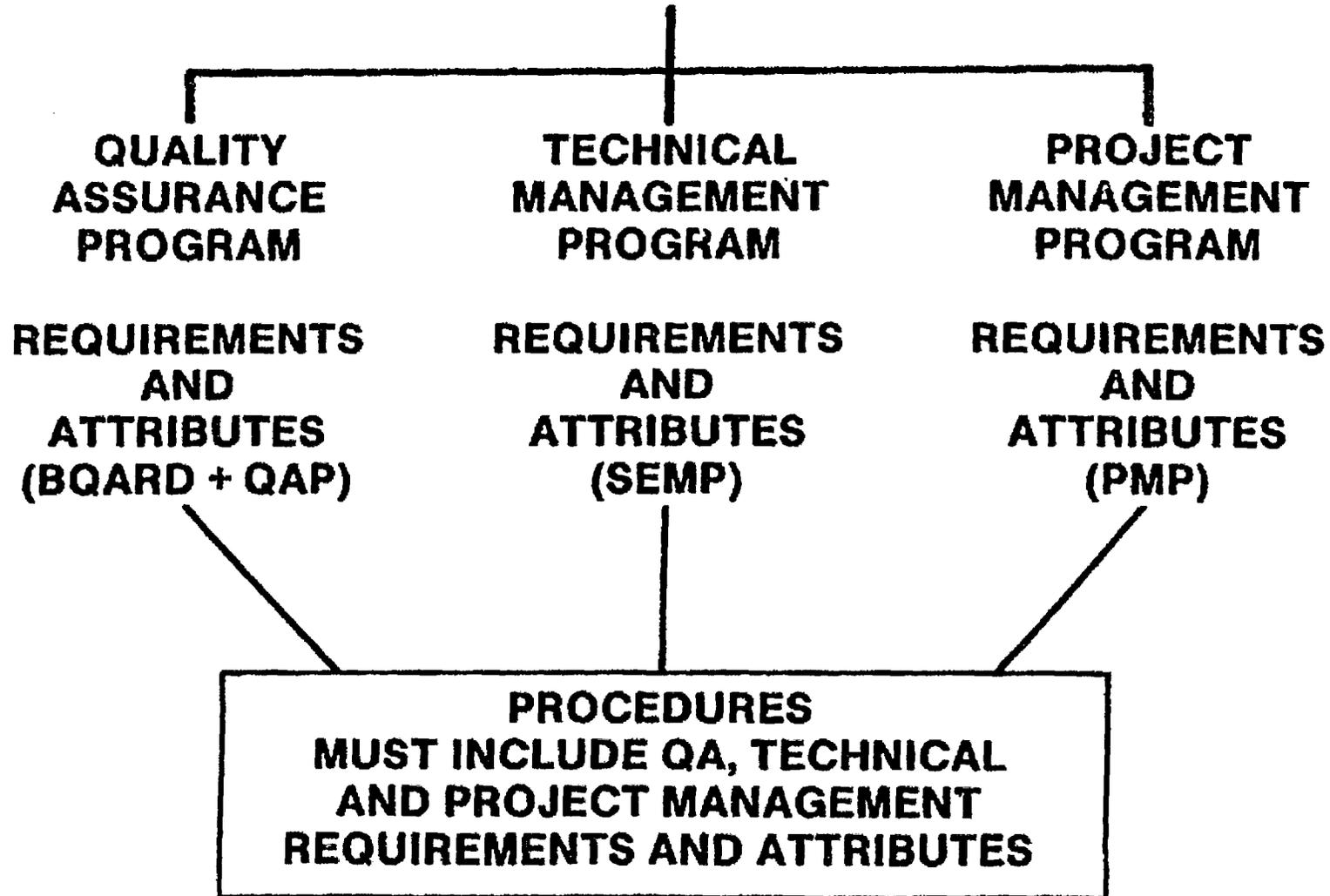
- **MAJOR ACTIONS**

- **ESTABLISHED READINESS REVIEW TEAMS (RRT) FOR**
 - **GENERAL RESTART**
 - **DIRECT FUNDED CONTRACTOR STOP WORK ASSESSMENT**
 - **EXPEDITED SPECIAL CASE FOR DC 24/25**
 - **EXPEDITED SPECIAL CASE FOR ES DESIGN BASIS STUDY**
- **APPROVED CHECKLISTS FOR RRT ACTIONS**
- **RECOMMENDED CONTINUED WORK AT THE DIRECT FUNDED CONTRACTORS**
- **RECOMMENDED RESTART OF THE ES DESIGN BASIS STUDY**
- **CHAIRMAN ESTABLISHED INDEPENDENT MANAGEMENT REVIEW TEAM AND APPROVED CHECKLIST**
- **CONTINUES TO REVIEW/DIRECT READINESS REVIEW TEAM ACTIVITIES**

READINESS REVIEW TEAM MAKE-UP

- **APPOINT A TEAM LEAD, BY DISCIPLINE, THAT IS MOST KNOWLEDGEABLE OF THE SUBJECT MATTER**
- **APPOINT TEAM MEMBERS, AS APPROPRIATE, FROM:**
 - **OFFICE OF ASSISTANT MANAGER FOR COMMERCIAL NUCLEAR WASTE**
 - **QUALITY ASSURANCE DIVISION**
 - **BASALT WASTE ISOLATION DIVISION**
 - **ENGINEERING/CONSTRUCTION**
 - **GEOSCIENCE**
 - **LICENSING/ENVIRONMENTAL/HEALTH SAFETY**
 - **MATRIX SUPPORT ORGANIZATION**
 - **SUPPORT SERVICE CONTRACTOR**
- **APPOINTMENT OF TEAM MEMBERS ARE INCREASED/DECREASED BASED ON WORK LOAD AND SCOPE OF THE TASK, BY DISCIPLINE**
 - **TECHNICAL**
 - **QUALITY ASSURANCE**
 - **BUSINESS MANAGEMENT**

EVALUATION OF READINESS FOR RESTART



EVALUATION PLAN

1. **OBTAIN BASE LIST OF DOCUMENTS WHICH IMPLEMENT THE PROGRAM**
2. **DETERMINE THAT IMPLEMENTING DOCUMENTS HAVE PROPER APPROVALS**
3. **DETERMINE THAT IMPLEMENTING DOCUMENTS HAVE BEEN RELEASED FOR PROJECT USE**
4. **EVALUATE PROGRAM AGAINST SOURCE DOCUMENT REQUIREMENTS**
 - **TRACE IMPLEMENTING DOCUMENT REQUIREMENTS TO SOURCE DOCUMENTS**
 - **TRACE SOURCE DOCUMENT REQUIREMENTS TO IMPLEMENTING DOCUMENTS**
5. **DETERMINE THAT PROJECT PERSONNEL HAVE BEEN ADEQUATELY TRAINED AND ARE QUALIFIED OR CERTIFIED AS APPROPRIATE**
6. **DETERMINE THAT MANAGEMENT SYSTEMS HAVE BEEN ESTABLISHED**
7. **DETERMINE THAT DISCREPANT ITEMS HAVE BEEN SATISFACTORILY RESOLVED AND DOCUMENTED**
8. **DETERMINE THAT ROCKWELL HAS PERFORMED AN APPRAISAL OF OTHER MPPs AND RESULTS ARE SATISFACTORY**

RESTART CRITERIA

1.0 GENERIC QUALITY ASSURANCE START/RESTART CRITERIA

1.1 THOSE GENERIC QUALITY ASSURANCE DOCUMENTS REQUIRED FOR RESTART AS IDENTIFIED IN THE MASTER LIST OF BASALT PROJECT LEVEL AND PARTICIPANT LEVEL DOCUMENTS MUST BE RELEASED FOR PROJECT USE.

1.2 THOSE GENERIC QUALITY ASSURANCE DOCUMENTS REQUIRED FOR RESTART, AS IDENTIFIED IN THE MASTER LIST OF BASALT PROJECT LEVEL AND PARTICIPANT LEVEL DOCUMENTS MUST BE APPROVED BY DOE-RL BWI WHERE APPROVAL IS REQUIRED.

1.3 A REQUIREMENTS AND IMPLEMENTING PROCEDURES INDEX TO BE PROVIDED BY ROCKWELL WHICH IDENTIFIES SOURCE REQUIREMENT AND IMPLEMENTING PROCEDURES AND IS AVAILABLE FOR BWIP USE.

2.0 TECHNICAL AND PROJECT MANAGEMENT START/RESTART CRITERIA

2.1 THOSE PROJECT MANAGEMENT DOCUMENTS REQUIRED FOR RESTART, AS IDENTIFIED IN THE MASTER LIST OF BASALT PROJECT LEVEL AND PARTICIPANT LEVEL DOCUMENTS MUST BE RELEASED FOR PROJECT USE.

2.2 THOSE PROJECT MANAGEMENT DOCUMENTS REQUIRED FOR RESTART AS IDENTIFIED IN THE MASTER LIST OF BASALT PROJECT LEVEL AND PARTICIPANT LEVEL DOCUMENTS MUST HAVE BEEN APPROVED BY DOE-RL BWI WHERE APPROVAL IS REQUIRED.

2.3 THE DOCUMENTS IDENTIFIED IN ITEM 2.1, i.e., CHARTERS, PLANS, MANUALS AND PROCEDURES MUST INCORPORATE THE APPLICABLE REQUIREMENTS OF PP, PMP, SEMP AND OTHER APPLICABLE UPPER LEVEL REQUIREMENTS DOCUMENTS.

RESTART CRITERIA (CONT)

- | | |
|---|---|
| <p>1.4 THE DOUCMENTS IDENTIFIED IN ITEM 1.1, i.e., CHARTERS, PLANS, MANUALS AND PROCEDURES MUST INCORPORATE THE APPROPRIATE REQUIREMENTS OF THE BQARD, REV. 1.</p> | <p>2.4 A REQUIREMENTS AND IMPLEMENTING PROCEDURES INDEX TO BE PROVIDED BY ROCKWELL, WHICH IDENTIFIES SOURCE, REQUIREMENT, AND IMPLEMENTING PROCEDURES MUST BE AVAILABLE FOR USE.</p> |
| <p>1.5 PERSONNEL MUST BE QUALIFIED, AS APPROPRIATE, TO PERFORM SPECIFIC TECHNICAL TASKS.</p> | <p>2.5 THE PROJECT ORGANIZATION MUST BE DEFINED THAT WILL IMPLEMENT THE PROJECT REQUIREMENTS. A PLAN TO FILL ANY VACANT KEY POSITIONS MUST BE DEVELOPED.</p> |
| <p>1.6 TRAINING MUST HAVE BEEN PERFORMED AND DOCUMENTED, IN ACCORDANCE WITH CURRENT REVISION OF THE APPLICABLE DOCUMENTS.</p> | <p>2.6 PERSONNEL MUST BE QUALIFIED, AS APPROPRIATE, TO PERFORM SPECIFIC TECHNICAL TASKS.</p> |
| <p>1.7 AN IMPLEMENTATION PLAN WHICH IDENTIFIES REQUIRED RESOURCES MUST BE PROVIDED. ADDITIONAL RESOURCES NEEDED TO EFFECTIVELY IMPLEMENT PROCEDURAL REQUIREMENTS MUST BE IDENTIFIED.</p> | <p>2.7 TRAINING MUST HAVE BEEN PERFORMED AND DOCUMENTED, IN ACCORDANCE WITH CURRENT REVISION OF THE APPLICABLE DOCUMENTS.</p> |

RESTART CRITERIA (CONT)

- 1.8 CHARTERS, PLANS, MANUALS AND PROCEDURES MUST BE EVALUATED FOR CONSISTENCY WITH THE BWIP QUALITY ASSURANCE PLAN, REV. 1. WHERE DEVIATIONS OCCUR, ROCKWELL SHALL IDENTIFY THESE DEVIATIONS AND PROVIDE RECOMMENDATIONS AND SCHEDULE FOR RESOLUTION.**
- 1.9 OPEN NCRs MUST BE DISPOSITIONED.**
- 1.10 CARs, AUDIT AND SURVEILLANCE FINDINGS, ETC., MUST BE CLOSED AND DOCUMENTED. SPECIAL CASES MUST BE IDENTIFIED ALONG WITH THE IMPACT ON PREVIOUSLY COMPLETED WORK.**
- 2.8 PROJECT LOGICS AND SCHEDULES MUST HAVE BEEN DEVELOPED AND APPROVED BY CONTRACTOR PERSONNEL IN ACCORDANCE WITH THEIR PROCEDURES AND RELEASED FOR PROJECT USE.**
- 2.9 THE PROJECT LOGICS AND SCHEDULES OF ITEM 2.8 MUST HAVE BEEN APPROVED TO LEVEL 2 BY DOE-BWI**
- 2.10 AN IMPLEMENTATION PLAN WHICH IDENTIFIES REQUIRED RESOURCES MUST BE PROVIDED. ADDITIONAL RESOURCES NEEDED TO EFFECTIVELY IMPLEMENT PROCEDURAL REQUIREMENTS MUST BE IDENTIFIED.**

RESTART CRITERIA (CONT)

1.11 ROCKWELL MUST HAVE PERFORMED AN APPRAISAL OF THE OTHER MPPs (PNL, WHC, KE/PB, M-K, AND BCSR).

2.11 INFORMATION MANAGEMENT SYSTEMS TO SUPPORT THE WORK MUST BE IDENTIFIED AND IN PLACE.

2.12 A PROJECT HIERARCHY OF DOCUMENTS MUST BE ESTABLISHED AND RELEASED FOR PROJECT USE.

2.13 THE TECHNICAL PLANS PROVIDED FOR IN THE HIERARCHY MUST BE REFERENCED IN THE APPROPRIATE ELEMENTS OF THE WBS DICTIONARY.

2.14 CHARTERS, PLANS, MANUALS AND PROCEDURES MUST BE EVALUATED FOR CONSISTENCY WITH THE BWIP QUALITY ASSURANCE PLAN, REV. 1. WHERE DEVIATIONS OCCUR, ROCKWELL SHALL IDENTIFY THESE DEVIATIONS AND PROVIDE RECOMMENDATIONS AND SCHEDULE FOR RESOLUTION.

1.0 GENERIC QUALITY ASSURANCE START/RESTART CRITERIA

1.1 THOSE GENERIC QUALITY ASSURANCE DOCUMENTS REQUIRED FOR RESTART AS IDENTIFIED IN THE MASTER LIST OF BASALT PROJECT LEVEL AND PARTICIPANT LEVEL DOCUMENTS MUST BE RELEASED FOR PROJECT USE

QUESTIONS:

- a) **IS A MASTER LIST OF BWI PROJECT LEVEL AND PARTICIPANT LEVEL DOCUMENTS PROVIDED:**
- b) **DOES THE LIST INCLUDE THE QA DOCUMENTS WHICH ARE IDENTIFIED AS REQUIRED FOR RESTART?**
- c) **IS THE MASTER LIST IDENTIFIED AS A CONTROLLED DOCUMENT?**
- d) **DOES THE MASTER LIST INDICATE THAT THE QA DOCUMENTS HAVE BEEN "RELEASED FOR PROJECT USE"?**
- e) **IS EVIDENCE PROVIDED THAT DOCUMENTS HAVE BEEN RELEASED THROUGH "DOCUMENT CONTROL"?**
- f) **DOES THE LIST CONTAIN PARTICIPANT LEVEL QA DOCUMENTS "REQUIRED FOR RESTART" AS WELL AS ROCKWELL DOCUMENTS?**

ANALYSIS TECHNIQUES

I 100% REVIEW

- **SUBJECT POPULATION WAS IDENTIFIED**
- **EACH ITEM WAS REVIEWED**

II SAMPLING

- **SUBJECT POPULATION WAS IDENTIFIED**
- **SAMPLE SIZE FOR 95% CONFIDENCE LEVEL WAS DETERMINED (MIL STD 105D)**
- **RANDOM NUMBER TABLE USED TO SELECT SAMPLE**
- **SAMPLE WAS REVIEWED**

TEAM MEMBER SELECTION

- I RRB IDENTIFIED TEAM LEADER**
- II COGNIZANT BRANCH CHIEFS REQUESTED TO PROVIDE TEAM MEMBERS**
- III CANDIDATES WERE REVIEWED**
TEAM MEMBERS WERE SELECTED BASED ON:
 - EXPERIENCE AND ABILITY IN ASSIGNED AREA**
 - KNOWLEDGE AND EXPERIENCE IN AUDIT AND ASSESSMENT PROCESSES**
 - INDEPENDENCE FROM DIRECT RESPONSIBILITY FOR ASSIGNED AREA**
- IV TEAM MEMBERS WERE TRAINED IN READINESS REVIEW PLAN AND PROCEDURES**

GENERAL RESTART READINESS TEAM

<u>TEAM</u>	<u>CHECKLIST AREAS</u>	<u>TEAM MEMBERS</u>	<u>1 YRS EXP</u>	<u>2 YRS QA</u>	<u>3 LD AUD</u>	<u>4 AUD TRN</u>
LEAD DEPUTY		E.H. PETRIE	35	10	Y	Y
		R.H. HOE	40+	0	N	Y
1	DOCUMENTS, PLANS PROCEDURES	T.J. MARCELLA	31	31	Y	Y
		J.A. BOHN	12	7	N	Y
2	QUALIFICATION & TRAINING	J.J. KRUPAR	16	3	N	Y
		B.R. MORRISON	20	18	N	Y
		R.D. JONES	15	6	Y	Y
3	PROJECT LOGIC & SCHEDULE	J.L. MADSEN	30	0	N	N
4	QUALITY ASSURANCE DEFICIENCIES	H.B. LITZ	40+	19	Y	Y
		J.M. NORRIS	51	36	Y	Y
		W.A. HEDZIK	24	17	Y	Y

GENERAL RESTART READINESS TEAM: (CONT)

<u>TEAM</u>	<u>CHECKLIST AREAS</u>	<u>TEAM MEMBERS</u>	<u>1 YRS EXP</u>	<u>2 YRS QA</u>	<u>3 LD AUD</u>	<u>4 AUD TRN</u>
5	QUALITY ASSURANCE AWARENESS	J.E. OWENS	44	10	N	Y
		W.G. ALEXANDER	35	5	N	Y
		W.W. DEHN	40+	0	N	N
		J.C. MATTIMOE	17	15	Y	Y
		A.L. PENCHANSKY	25	1	N	Y
6	PROJECT PARTICIPANT ASSESSMENT	B.R. MORRISON *	20	18	N	Y
		R.D. JONES *	15	6	Y	Y
7	MANAGEMENT INFORMATION SYSTEMS	R.D. CRISP	13	10	Y	Y
		W.G. ALEXANDER *	35	5	N	Y
		J.C. MATTIMOE *	17	15	Y	Y
		A.L. PENCHANSKY *	25	1	N	Y
8	PROJECT TECHNICAL WORK PLANS	M.J. FURMAN	16	2	N	N
			<hr/>	<hr/>		
			504	190		

* DUAL ASSIGNMENTS

MANHOURS

- **MANHOURS EXPENDED TO DATE** ~ **3800**
- **MANHOURS ANTICIPATED TO END OF APRIL** ~ **2200**
- TOTAL MANHOURS** ~ **6000**

STATUS

- **POTENTIAL RESTART ISSUES** 45
- **MOST SIGNIFICANT ITEMS** 2
- **ACTIONS - RESOLUTION PROPOSED** 1
- **ACTIONS - RESOLVED** 11

EXAMPLES OF CONCERNS I

CHECKLIST ITEM	DESCRIPTION
1.4	DOCUMENTS IDENTIFIED IN CHECKLIST ITEM 1.1 MUST INCORPORATE APPROPRIATE REQUIREMENTS OF THE BQARD, REV 1
POTENTIAL RESTART ISSUE	
1.4-1	THE TEAM EVALUATED APPENDIX B OF THE RESTART READINESS REPORT AND DETERMINED THAT THE BQARD REQUIREMENTS MATRIX WAS INCOMPLETE, AND, IN SOME CASES, INCORRECT
STATUS	ROCKWELL IS PREPARING A DOCUMENTED EVALUATION OF BQARD AND QA PLAN REQUIREMENTS WITH RESPECT TO ADEQUACY OF THEIR INCLUSION IN SUBJECT DOCUMENTS. SCHEDULED COMPLETION DATE - APRIL 17, 1987

EXAMPLES OF CONCERNS II

CHECKLIST ITEM	DESCRIPTION
1.5	PERSONNEL MUST BE QUALIFIED AS REQUIRED BY ROCKWELL PROCEDURES
POTENTIAL RESTART ISSUE	
1.5-2	ROCKWELL HAS NOT PREPARED RECORDS WHICH ARE PLANNED TO PROVIDE AN AUDITABLE RECORD OF PERSONNEL QUALIFICATIONS <ul style="list-style-type: none">• JOB TASK ANALYSIS• POSITION DESCRIPTION• TRAINING REQUIREMENTS MATRIX
STATUS	
<ul style="list-style-type: none">• ROCKWELL HAS PROVIDED TRAINING MATRICES AND RECORDS• ON AN INTERIM BASIS ROCKWELL WILL MAKE PORTIONS OF PERSONNEL DEPARTMENT RECORDS AVAILABLE TO THE AUDIT TEAM• ROCKWELL WILL DOCUMENT INTERIM MEASURES PRIOR TO FULL PROCEDURAL COMPLIANCE	

CONCERNS - STATUS AND CONTROL

<u>ITEM</u>	<u>ACTIVITY</u>	<u>FREQUENCY</u>
1.	TEAMS MEET WITH ROCKWELL COGNIZANT INDIVIDUALS	AS REQUIRED
2.	TEAM LEADER AND DEPUTY REVIEW STATUS AND CONCERNS WITH TEAMS	TWICE WEEKLY
3.	TEAM LEADER AND DEPUTY MEET WITH ROCKWELL COUNTERPARTS	WEEKLY
4.	TEAM LEADER PREPARES/UPDATES STATUS REPORT	WEEKLY
5.	DOE/RL AND ROCKWELL READINESS REVIEW RESTART MEETING <ul style="list-style-type: none"> • DIRECTOR AND TEAM LEADER ACTION ITEMS IDENTIFIED • WEEKLY STATUS REPORT PRESENTED AND DISCUSSED 	WEEKLY
6.	READINESS REVIEW BOARD MEETING <ul style="list-style-type: none"> • TEAM LEADER PRESENTS STATUS OF TEAM AND ROCKWELL'S RESTART ACTIVITIES 	WEEKLY
7.	RESTART TEAM AND ROCKWELL WORK ON RESOLUTION OF OUTSTANDING CONCERNS	CONTINUING

INDEPENDENT MANAGEMENT REVIEW TEAM

- **OBJECTIVES**
- **SCOPE**
- **TEAM MEMBERS**

J.M. AMARAL

OBJECTIVES

- **CONDUCT AN INDEPENDENT MANAGEMENT REVIEW**
 - **EVALUATE ROCKWELL MANAGEMENT STRUCTURE AND ASSOCIATED OPERATIONAL PROCESSES**
 - **EVALUATE MANAGEMENT EFFECTIVENESS OF ROCKWELL BWIP ORGANIZATIONS**
 - **EVALUATE ROCKWELL BWIP MANAGEMENT COMMITMENT TO QUALITY ASSURANCE**
 - **EVALUATE ROCKWELL EFFECTIVENESS IN INTERFACING WITH MAJOR PARTICIPANTS**

SCOPE

- **ASSEMBLE A HIGH-LEVEL MANAGEMENT TEAM**
- **COMPLETE REQUIRED TRAINING**
- **DEVELOP INSTRUCTION FOR PERFORMING ASSESSMENT**
- **REVIEW ROCKWELL'S RESTART READINESS REPORT (1-4-87)**
- **DEVELOP A CRITERIA CHECKLIST TO BE USED DURING THE ASSESSMENT**
- **CONDUCT AN INDEPENDENT MANAGEMENT ASSESSMENT OF ROCKWELL**
 - **PROJECT MANAGEMENT**
 - **PROJECT ADMINISTRATION**
 - **MANAGEMENT INTEGRATION**
 - **OPERATIONS AND TEST**
 - **QUALITY ASSURANCE**
 - **CONSTRUCTION**
 - **SCIENCE AND ENGINEERING**
- **PERFORM AN ASSESSMENT OF THE AMC GENERAL RESTART READINESS REVIEW**
- **ISSUE THE FINAL REPORT**

TEAM MEMBERS

J.M. AMARAL, P.E. - CHAIRPERSON

- **30 YEARS EXPERIENCE**
- **MANAGER - WESTERN DEPARTMENT Q.A. (MAC)**
- **BECHTEL POWER CORPORATE MANAGER OF Q.A.**

D.G. HUBBARD, P.E. - TEAM LEAD

- **22 YEARS EXPERIENCE**
- **MANAGER, MANAGEMENT SYSTEMS CONSULTING (MAC)**
- **TECHNICAL MANAGER, PROJECT CONTROLS (MAC)**

L.E. ZWISSLER, P.E.

- **40 YEARS EXPERIENCE IN Q.A.**
- **STAFF CONSULTANT Q.A. (MAC)**
- **ARGONNE NATIONAL LABORATORY Q.A. DIVISION DIRECTOR**

C.H. BARNES, JR., P.E.

- **35 YEARS EXPERIENCE Q.A.**
- **SENIOR CONSULTANT Q.A. (MAC)**
- **R.M. PARSONS CO., SENIOR MANAGER Q.A.**

TEAM MEMBERS

R.B. HANSEN

- **24 YEARS EXPERIENCE**
- **VICE PRESIDENT, INFORMATION MANAGEMENT DIVISION (MAC)**
- **WPPSS ADMINISTRATIVE PLANNING SPECIALIST**

L.D. SORENSEN

- **24 YEARS EXPERIENCE**
- **STAFF CONSULTANT PROJECT AND PROGRAM MANAGEMENT (MAC)**
- **G.E. MANAGER, PROJECT MANAGEMENT SYSTEMS**

S.R. HOLGUIN, P.E.

- **20 YEARS EXPERIENCE**
- **CONSULTANT ENGINEERING AND PLANT MODIFICATIONS (MAC)**
- **GIBBS & HILL, PLANT DESIGN CHIEF**

**INDEPENDENT MANAGEMENT REVIEW TEAM
GENERAL RESTART**

- **METHODOLOGY**
- **STATUS OF INTERVIEWS**
 - **ROCKWELL**
 - **MAJOR PARTICIPANTS**
- **OVERVIEW GENERAL RESTART TEAM'S DRAFT REPORT**
- **WRITTEN REPORT**

D.G. HUBBARD

METHODOLOGY

- **MANAGEMENT DIAGNOSTIC**
- **ASSESSMENT TECHNIQUES**
- **CONFIDENTIALITY OF INTERVIEWS**
- **FACT FINDING**
- **ROOT CAUSES**

STATUS OF INTERVIEWS

- **DEVELOPMENT OF CRITERIA CHECKLIST**
- **DEVELOPMENT OF DETAILED QUESTIONS**
- **ROCKWELL MANAGEMENT**
- **MAJOR PARTICIPANTS**

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INDEPENDENT MANAGEMENT REVIEW TEAM (IMRT) CRITERIA CHECKLIST PMG 19.11 RRI 04I

SIGNATURE: _____ DATE: FEBRUARY 18, 1987
REV. NO.: F

ASSIGNED TO	NO.	ACTION REQUIRED/ (ACCEPTANCE CRITERIA)	<u>DETERMINATION</u>			SIGN-OFF	DATE	REMARKS
			SAT.	UNSAT.	PL.			
	I	GENERAL MANAGEMENT AND PROCESSES						
	I.1	ORGANIZATION AND STAFFING: THE CURRENT ROCKWELL ORGANIZATION MUST BE EFFECTIVELY STRUCTURED AND SUFFICIENTLY STAFFED WITH QUALIFIED PERSONNEL TO RESTART PROJECT WORK AND TO MANAGE THE PROJECT AFTER RESTART						

**INDEPENDENT MANAGEMENT REVIEW TEAM
CRITERIA QUESTIONS
PMG 19.11 RRI-04I**

SIGNATURE: _____ DATES: FEBRUARY 17, 1987
REV. NO.: F

NO.	CHECKLIST/QUESTIONS
I	GENERAL MANAGEMENT AND PROCESSES
I.1	ORGANIZATION AND STAFFING (SEE PMPM ORG. 1.1 OF MA-17, ALSO RRR PARAGRAPH 2.3 ON P. 2-11)
I.1.A	STRUCTURE
I.1.A.1	WHAT IS THE STRUCTURE OF THE TOTAL ROCKWELL BWIP ORGANIZATION (OR APPROPRIATE LARGER ROCKWELL ORGANIZATIONAL UNIT)? ARE ORGANIZATIONAL CHARTS, CHARTERS, ROLES, DUTIES, AUTHORITIES, RESPONSIBILITIES, POSITION DESCRIPTIONS, AND EXTERNAL INTERFACES CLEARLY ESTABLISHED AND FORMALLY DOCUMENTED? WHAT ARE THESE DOCUMENTS?
I.1.A.2	WHAT IS IT ABOUT THE ROCKWELL BWIP ORGANIZATION THAT CONTRIBUTES TO YOUR EFFECTIVENESS ON THE JOB? WHAT ORGANIZATIONAL FACTORS HINDER YOUR PERFORMANCE? WHAT MAKES IT WORTHWHILE TO WORK FOR THIS ORGANIZATION?
I.1.A.3	HOW IS YOUR WORK UNIT ORGANIZED AND HOW DOES IT FIT INTO THE TOTAL ORGANIZATION?
I.1.A.4	ARE ALL REQUIRED FUNCTIONS AND DISCIPLINES COVERED? ARE RELATIONSHIPS TO THE REST OF ROCKWELL DEFINED AND DOCUMENTED?
I.1.A.5	IS THE QA ORGANIZATION SUFFICIENTLY INDEPENDENT AND DOES IT HAVE AUTHORITY TO DISCHARGE ITS DUTIES AND RESPONSIBILITIES?
I.1.A.6	WHAT ARE THE KEY INFORMAL GROUPS THAT MAKE THINGS HAPPEN IN THE ORGANIZATION?
I.1.A.7	IS THIS STRUCTURE SUITABLE FOR LONG-TERM PROJECT OPERATION?

OVERVIEW GENERAL RESTART TEAM'S DRAFT REPORT

- **REVIEW OF DRAFT REPORT**
- **ANALYZE THE GENERAL RESTART TEAM'S CONCLUSIONS**
- **RESOLUTION/CONCURRENCE OF ISSUES**

WRITTEN REPORT

- DATA CONSOLIDATION
- ANALYZE THE DATA
- GRADING SYSTEM
 - CRITERIA FOR JUDGEMENT (REF SLIDES 5A)
- ANALYZE THE CONCLUSIONS
- OBJECTIVE EVIDENCE TO SUPPORT JUDGEMENT/CONCLUSIONS
- ISSUE REPORT

GRADING SYSTEM

<u>GRADE</u>	<u>CRITERIA FOR JUDGEMENT</u>
"1"	INDICATES THAT PERFORMANCE IS <i>UNSATISFACTORY</i> (LITTLE OR NO EFFORT HAS BEEN MADE IN THIS AREA).
"2"	INDICATES THAT PERFORMANCE IS <i>LESS THAN ADEQUATE</i> (SOME EFFORTS HAVE BEEN MADE IN THIS AREA, HOWEVER, PERFORMANCE IS INADEQUATE), AND SOME IMMEDIATE CORRECTIVE ACTION IS REQUIRED. AREAS OF ADEQUATE OR BETTER PERFORMANCE ARE OFFSET SIGNIFICANTLY BY POOR PERFORMANCE IN OTHER AREAS.
"3"	INDICATES THAT PERFORMANCE IS <i>SATISFACTORY</i> (APPLICABLE ELEMENTS HAVE BEEN DEVELOPED, DOCUMENTED AND EFFECTIVELY IMPLEMENTED). AREAS REQUIRING IMPROVEMENT ARE APPROXIMATELY OFFSET BY BETTER PERFORMANCE IN OTHER AREAS.
"4"	INDICATES THAT PERFORMANCE IS <i>HIGHLY SATISFACTORY</i> (MORE THAN MINIMAL EFFORTS HAVE BEEN MADE IN THIS AREA, AND THIS AREA HAS DESIRABLE QUALITIES WITH ONLY A FEW MINOR AREAS REQUIRING IMPROVEMENT).
"5"	INDICATES THAT PERFORMANCE IS <i>OUTSTANDING</i> . THERE ARE NO SIGNIFICANT AREAS OF POOR PERFORMANCE AND THERE ARE FACTORS INDICATING CREATIVITY, INGENUITY, INITIATIVE AND/OR EXCELLENT PERFORMANCE.

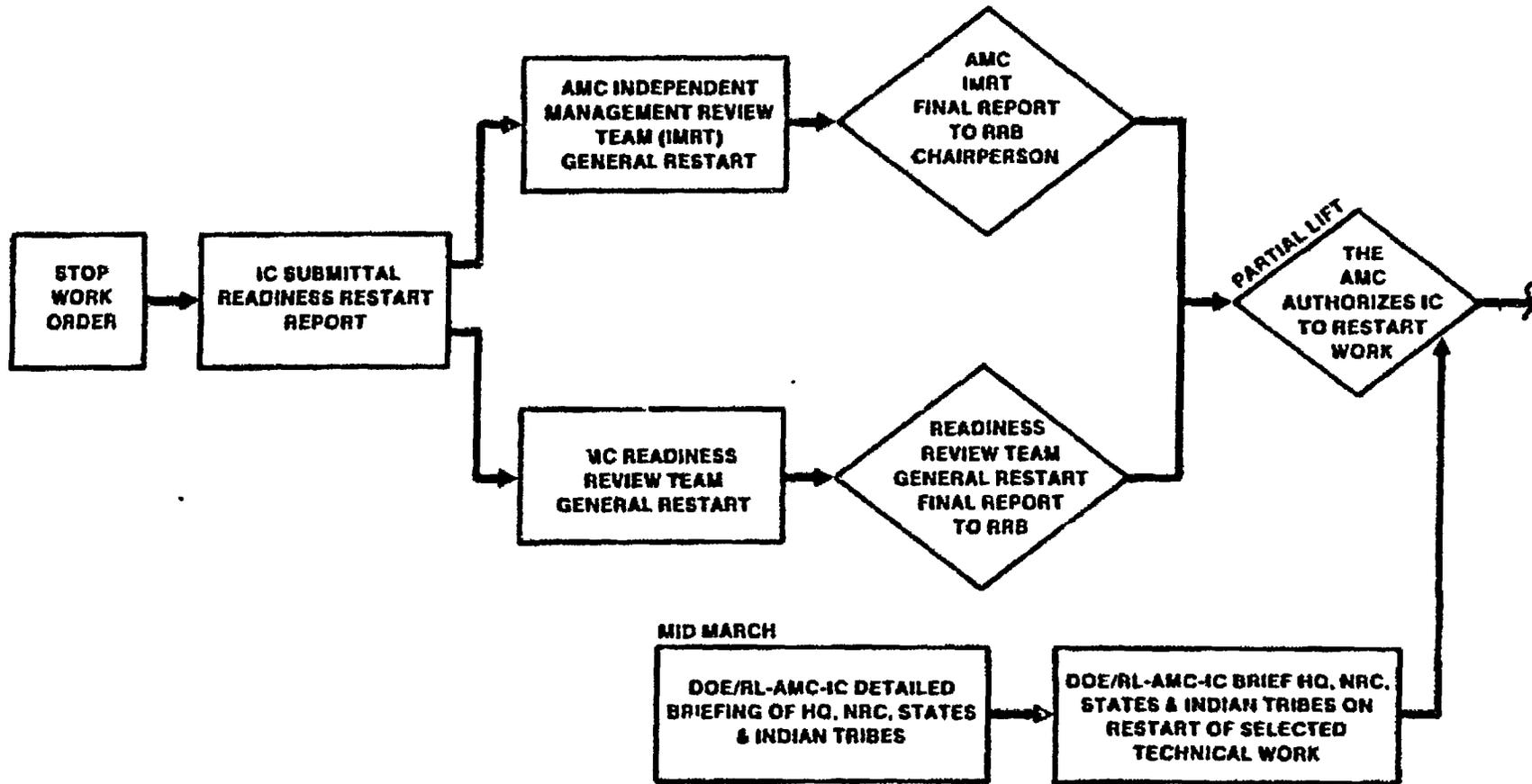
**SUMMARY, FUTURE ACTIONS
AND CLOSURE**

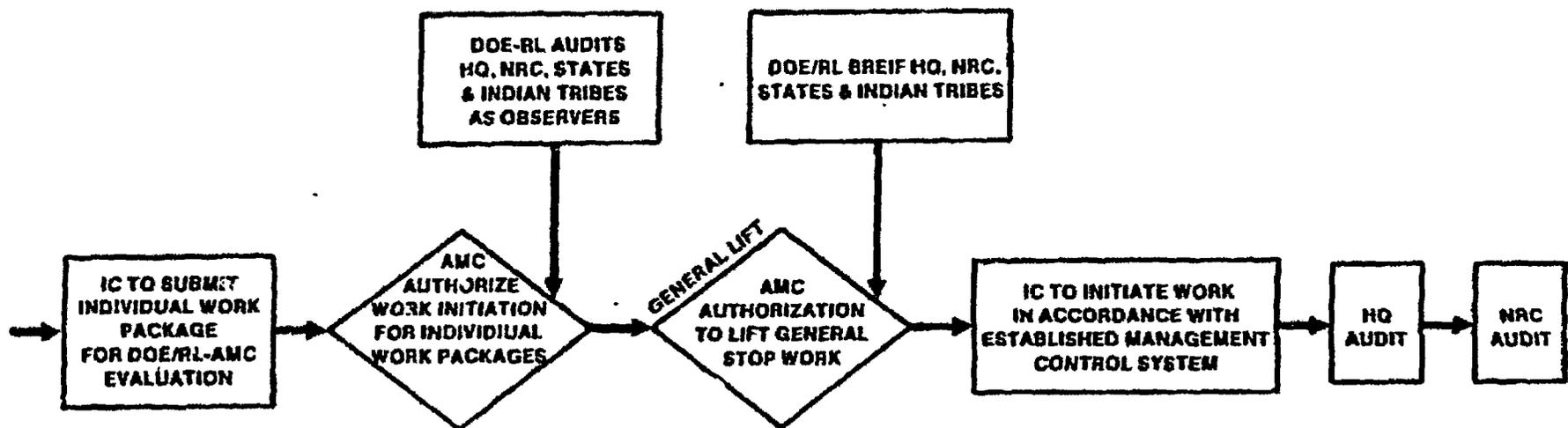
LEE OLSON

SIGNIFICANT ITEMS REQUIRING COMPLETION FOR PARTIAL LIFT OF SWO

- **COMPLETION OF OUTSTANDING PLANS AND PROCEDURES**
- **RHO RESOLVE RESTART OPEN ITEMS AND RRT ISSUES**
- **RRT COMPLETE ASSESSMENT, REPORT AND RECOMMENDATIONS TO RRB**
- **IMRT COMPLETE ASSESSMENT, REPORT AND RECOMMENDATIONS TO RRB CHAIRMAN**
- **RRB CHAIRMAN RECOMMENDATION TO ASSISTANT MANAGER FOR COMMERCIAL NUCLEAR WASTE (AMC)**
- **BRIEFING FOR ORCWM, NRC, STATES AND AFFECTED INDIAN TRIBES**

**OFFICE OF ASSISTANT MANAGER FOR COMMERCIAL NUCLEAR WASTE
 BASALT WASTE ISOLATION PROJECT
 FLOW CHART
 STOP WORK ORDER BSWO-86-004
 GENERAL RESTART PROGRAM**





LEGEND:
 IC - INTEGRATING CONTRACTOR
 AMC - OFFICE OF ASSISTANT MANAGER FOR COMMERCIAL NUCLEAR WASTE
 RRB - READINESS REVIEW BOARD

DOCUMENTS AVAILABLE TODAY

- **RHO'S RESTART READINESS REPORT WITH SUPPLEMENT**
- **RHO'S APPROVED AND ISSUED PROCEDURES - UNCONTROLLED COPY
PMPM - (MA-17)**
- **RHO'S QUALITY ASSURANCE PLAN - (MA-3)**
- **DOE-RL'S READINESS PROCEDURE, PLANS, AND INSTRUCTIONS**
- **DOE-RL'S GENERAL RESTART PROGRAM PLAN**
- **DOF-RL'S READINESS REVIEW TEAM RESTART CRITERIA**
- **DOE-RL'S INDEPENDENT MANAGEMENT REVIEW TEAM CRITERIA**
- **DOE-RL'S READINESS REVIEW TEAM'S STATUS REPORT**
- **CHRONOLOGICAL LIST OF RESTART READINESS CORRESPONDENCE**
- **GENERAL RESTART TEAM DETAILED QUESTION USED TO SUPPORT
CRITERIA**
- **INDEPENDENT MANAGEMENT REVIEW TEAM DETAILED QUESTIONS USED
TO SUPPORT CRITERIA**

- **DOCUMENTS DISCUSSED ARE AVAILABLE FOR INSPECTION AND WILL BE PROVIDED, AS REQUESTED**
- **COMMENTS SUBMITTED WILL BE ANSWERED AND CONSIDERED DURING RESTART AND IN REVISING PROJECT DOCUMENTS**

IN CONCLUSION

- **RHO RESTART EFFORTS AND DOE-RL REVIEWS ARE EXTENSIVE AND COMPREHENSIVE**
- **WE BELIEVE RESTART UNDER THIS PROGRAM WILL PERMIT US TO ACHIEVE OUR OBJECTIVES OF AN EFFECTIVE MANAGEMENT CONTROL SYSTEM AND TO SUSTAIN INDEPENDENT REVIEWS OR AUDITS BY OCRWM AND THE NRC**