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# Department of Energy

Richland Operations Office

P.O. Box 550

WM DOCKET CONTROL CENTER

Richland, Washington 99352

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Dr. Robert J. Wright  
Repository Projects Branch  
Division of Waste Management  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Dr. Wright:

DOE/NRC QUALITY ASSURANCE (QA) MEETING, DECEMBER 10-12, 1984

Transmitted for your use and information in preparing for the upcoming QA meeting are the following:

- o An agenda for the two and one-half day meeting (and tour).
- o The DOE Basalt Waste Isolation Project (BWIP) Office - Quality Assurance Plan. This document describes the QA program of the Project Office.
- o A checklist analysis of the Project Office QA Plan against the NRC Review Plan requirements.
- o Example Project Management Procedures which implement commitments made in the QA Plan. The "Project Management Procedure Development" procedure has been approved and issued. The procedure on "Verification Planning" is under review and is in draft at this time.
- o The QA Plan for the BWIP Technical Manager, Rockwell Hanford Operations (RHO-QA-PL-3, Rev. 1L). This document describes the Rockwell BWIP QA program.
- o A checklist analysis of the Rockwell QA program against the NRC Review Plan requirements.
- o The Rockwell QA Program Manual for the BWIP (RHO-BW-MA-14). This manual contains the procedures necessary to implement the commitments established in the Rockwell QA Plan.

WM Record File  
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WM Project 10  
 Docket No. \_\_\_\_\_  
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Dr. Robert J. Wright

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- o A drawing depicting the "BWIP Hierarchy of Project Activities and Documentation". This drawing graphically summarizes a comprehensive management structure derived from systems engineering management principles and practices. We will be devoting considerable time during the meeting to this area, as we believe it to be the key to an effective QA program throughout the BWIP.

If you have any questions regarding this transmittal, please call Mr. Gary Bracken on 509-376-6579.

Very truly yours,



O. L. Olson, Project Manager  
Basalt Waste Isolation Project Manager

SQA:GJB

Enclosures

cc: F. R. Cook, NRC-OR

AGENDA

DOE/NRC QUALITY ASSURANCE MEETING  
BASALT WASTE ISOLATION PROJECT  
December 10-12, 1984

Location: Supply System Auditorium  
3040 George Washington Way  
Richland, Washington

December 10, 1984

8:00 a.m.	DOE INTRODUCTION AND WELCOME Introduce DOE/Contractor Staffs Discuss goals for meeting Highlight agenda for workshop	O. L. Olson
8:15 a.m.	NRC INTRODUCTION AND DISCUSSION Introduce Staff Discuss goals for meeting Present review plan background Discuss NRC QA organization and responsibilities	J. Kennedy
9:15 a.m.	OVERVIEW - BWIP QUALITY ASSURANCE Project QA Philosophy Organization Responsibilities Project Management systems and controls QA program development QA program assessment Issues and major actions Implementation (15 minute break when appropriate)	O. L. Olson G. J. Bracken
12:00 Noon	LUNCH	
1:00 p.m.	OVERVIEW - ROCKWELL QUALITY ASSURANCE PROGRAM FOR BWIP Organization Rockwell Responsibilities as BWIP Technical Manager Current QA/Management Systems Issues and Major Actions QA/Management Systems Development Challenges Ahead	E. B. Ash



**BASALT WASTE ISOLATION PROJECT OFFICE  
QUALITY ASSURANCE PLAN**

PAGE **i** OF **ii**

REVISION

EFFECTIVE

SUMMARY

This Quality Assurance Plan describes the Basalt Waste Isolation Project Office's Quality Assurance Program which applies to siting and site characterization activities. The responsibilities, authorities and actions on the part of the Project Office and the supporting DOE-RL staff define a program whose implementation by appropriate Project Management Procedures satisfies applicable DOE and NRC quality assurance requirements. Compliance to the requirements identified in this Quality Assurance Plan and the associated implementing procedures by all DOE-RL staff performing Basalt Waste Isolation Project related activities is mandatory.

PREPARED BY *Gary F. Bracken*  
Quality Assurance Licensing  
Coordinator

APPROVED *O.P. Olson*  
Project Manager, Basalt Waste  
Isolation Project Office  
DOE-RL

APPROVED *Donald E. Latta*  
Director, Safety and  
Quality Assurance Division  
DOE-RL

7-15074

CHECKLIST  
NRC REVIEW PLAN  
QA PROGRAMS FOR SITE CHARACTERIZATION OF HIGH LEVEL NUCLEAR WASTE REPOSITORIES  
(Dated June 1984)

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CRITERIA

RESPONSE

DOE BASALT WASTE ISOLATION PROJECT OFFICE  
QUALITY ASSURANCE PROGRAM

- |  |  |
|--|--|
| 1. The organization elements responsible for the QA program are acceptable if:   |  |
| 1.1 The responsibility for the overall program is retained and exercised by the DOE at a level which is commensurate with the level of the DOE official who will submit the license application. While the line organization is responsible for performing quality affecting activities properly, the QA organization shall verify the proper performance of work through implementation of appropriate QA controls. | Responsibility in the field clearly retained by DOE through Field and Project Office Managers, and in HQ by the Director, Office of Civilian Radioactive Waste Management and Associate Director, Office of Geologic Repositories. Both DOE line and QA organizations are involved in verifying the proper performance of work as described in the QA Plan.          |
| 1.2 DOE describes major delegation of work involved in establishing and implementing the QA program or any part thereof to other organizations.  | Accomplished through Figure IV, Appendix I, and discussion on page 7 of the QA Plan text.  |
| 1.3 DOE describes how responsibility is exercised for the overall QA program. The extent of management responsibility and authority from DOE Headquarters and the field office should be addressed.  | Description of responsibilities begins on page 1 of the QA Plan. Focus is on the implementing responsibilities of the Project Manager and the independent SQA organization.  |
| 1.4 DOE evaluates the performance of work delegated to other organizations. This shall include audits of the prime contractor's QA program and audits of representative subcontractors, consultants, vendors, and laboratories furnishing equipment or services to the prime contractor or DOE. The frequency and method of evaluation should be specified.  | (See pages 9, 11, & 13) DOE performs audits and surveillances of BWIP suppliers. The frequency for these activities is determined through preparation (and semiannual update) of an annual Verification Plan. DOE also formally evaluates performance of the Technical Manager every six months against predetermined performance criteria and evaluation standards. |
| 1.5 Qualified individual(s) or organization element(s) are identified within DOE's organization as responsible for the quality of the delegated work prior to initiation of activities.  | Responsibility for performance of quality work rests with Project Office.  |



**BASALT WASTE ISOLATION PROJECT OFFICE  
PROJECT MANAGEMENT PROCEDURE**

PMP NO. 1.1  
 REVISION 0  
 EFFECTIVE 11/21/84  
 ISSUED BY SQA/QAB

TITLE  
 PROJECT MANAGEMENT PROCEDURE DEVELOPMENT

PAGE 1 OF 9

BWIP APPROVAL  
*R. P. Paget for D.L. O'Brien*

SQA APPROVAL  
*Donald E. Taylor*

AUTHOR  
 J. L. Rast

1.0 PURPOSE

To provide instructions for the preparation, review, approval and revision of Project Management Procedures (PMP's) issued in connection with activities performed by or for the Basalt Waste Isolation Project Office (Project Office) and to assure that they are developed in a uniform, efficient and practical manner consistent with the Project Office QA Plan.

2.0 APPLICABILITY

This procedure shall be utilized by all Department of Energy - Richland Operations Office (RL) personnel involved in the development, approval, issuance and revision of Project Office PMP's.

3.0 REFERENCES

- 3.1 PMP 3.1, Document Control
- 3.2 PMP 7.1, Training
- 3.3 PMP 8.1, Quality Assurance Records
- 3.4 ANSI/ASME Quality Assurance Program Requirements for Nuclear NQA-1, Facilities

4.0 GENERAL

4.1 Definitions

- 4.1.1 QAPI - Quality Assurance Plan Index. An index of project procedures used to implement the applicable requirements of standard ANSI/ASME NQA-1. The QAPI is contained in Section II of the Project Office QA Manual.
- 4.1.2 QA Licensing Coordinator - Representative from the SQA Division, QA Branch, assigned to provide consultation and assistance to the BWIP concerning QA matters.
- 4.1.3 PMP - Project Management Procedures - The procedures developed for the Project Office which prescribe methods of performing project activities.
- 4.1.4 DCC-Document Control Coordinator - Project Office function, as defined in reference 3.1, responsible for issuance, distribution and control of PMP's.

TS/MS/C



**BASALT WASTE ISOLATION PROJECT OFFICE  
PROJECT MANAGEMENT PROCEDURE**

PMP NO. 2.1

REVISION 0

EFFECTIVE

ISSUED BY SQA

TITLE

VERIFICATION PLANNING

PAGE 1 OF 6

BWIPO APPROVAL

SOA APPROVAL

AUTHOR

G. J. Bracken

1.0 PURPOSE

To provide instructions for preparing an annual plan and schedule for conducting activities that verify the adequacy and effectiveness of the BWIP QA Program.

2.0 APPLICABILITY

This procedure applies to surveillance and audits of internal and external activities carried out for and by the Basalt Waste Isolation Project Office.

3.0 REFERENCES

3.1 Basalt Waste Isolation Project Office Quality Assurance Plan

3.2 PMP 2.5 Surveillance

3.3 PMP 2.3 Internal Audits

3.4 PMP 2.4 External Audits

3.5 PMP 8.1 Quality Assurance Records

4.0 GENERAL

4.1 Definitions

4.1.1 Audit - A planned and documented activity performed to determine by investigation, examination, or evaluation of objective evidence the adequacy of and compliance with established procedures, instructions, drawings, and other applicable documents, and the effectiveness of implementation.

4.1.2 Surveillance - The act of monitoring or observing to verify whether an item or activity conforms to specified requirements.

4.1.3 Verification - The act of reviewing, inspecting, testing, checking, auditing or otherwise determining and documenting whether items, processes, services, or documents conform to specified requirements.

TSPRC

QUALITY ASSURANCE PROGRAM PLAN  
BASALT WASTE ISOLATION PROJECT

M. Nicol

Basalt Waste Isolation Project  
Quality Assurance

March 1983

Prepared for the United States  
Department of Energy under  
Contract DE-AC06-77RL010130

Rockwell International  
Rockwell Hanford Operations  
Energy Systems Group  
Richland, WA 99352

TRC01R

CHECKLIST  
NRC REVIEW PLAN  
QA PROGRAMS FOR SITE CHARACTERIZATION OF HIGH LEVEL NUCLEAR WASTE REPOSITORIES  
(Dated June 1984)

ROCKWELL BASALT WASTE ISOLATION PROJECT  
QUALITY ASSURANCE PROGRAM

CRITERIA

RESPONSE

1. The organization elements responsible for the QA program are acceptable if:
  - 1.1 The responsibility for the overall program is retained and exercised by the DOE at a level which is commensurate with the level of the DOE official who will submit the license application. While the line organization is responsible for performing quality affecting activities properly, the QA organization shall verify the proper performance of work through implementation of appropriate QA controls.
  - 1.2 DOE describes major delegation of work involved in establishing and implementing the QA program or any part thereof to other organizations.
  - 1.3 DOE describes how responsibility is exercised for the overall QA program. The extent of management responsibility and authority from DOE Headquarters and the field office should be addressed.
  - 1.4 DOE evaluates the performance of work delegated to other organizations. This shall include audits of the prime contractor's QA program and audits of representative subcontractors, consultants, vendors, and laboratories furnishing equipment or services to the prime contractor or DOE. The frequency and method of evaluation should be specified.

(Current QA Program Status as of 11-26-84).

The Rockwell BWIP organization verifies proper performance of work by Rockwell and other BWIP contractors through review and approval of documents which control quality and other verification processes such as audits, surveillances, and inspections as described in RHO-BW-MA-14. The Rockwell BWIP line organization also performs internal quality verification controls by such means as management and peer reviews and other monitoring activities prescribed in RHO-BW-MA-14 and RHO-BWI-MA-4.

Rockwell establishes QA program requirements for work performed by other BWIP contractors as described in RHO-BW-MA-14, Section 4.0. Contractors are responsible to establish and implement QA programs which are responsive to these requirements under the purview and approval of Rockwell as established in the procurement documents.

The extent of management responsibility and authority for Rockwell over the QA program is described in RHO-QA-PL-3, Criterion I.

Rockwell performs audits and surveillance over other BWIP contractors in accordance with RHO-BW-MA-14, QAPP's 10-101 and 18-101.

# BWIP HIERARCHY OF PROJECT ACTIVITIES AND DOCUMENTATION

FEDERAL  
LEGISLATION  
& REGULATIONS  
CRITERIA

STATE & LOCAL  
LEGISLATION  
& REGULATIONS

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<ol style="list-style-type: none"> <li>1 DOCUMENT HIERARCHY SUMMARY</li> <li>2 PURPOSE OF HIERARCHY</li> <li>3 PROJECT WORK FLOW REFLECTED BY THIS DOCUMENT HIERARCHY</li> <li>4 DEFINITION OF TERMS</li> <li>5 BWIP HIERARCHY OF PROJECT ACTIVITIES &amp; DOCUMENTATION</li> </ol>	SIGNATURES	LATEST REVISION (DATE)	
	AUTHORIZED BY:	DATE:	3/06/84
	<u>EB Ast</u> 5/16/84	PROJECT DIRECTOR	3/09/84
			5/16/84
			8/24/84
	<u>W. J. ...</u> 5-16-84	ASSOCIATE DIRECTOR	10/24/84
			11/7/84
	<u>L. Connell</u> 5-17-84	MANAGER, ENGINEERING & CONSTRUCTION	
	<u>L.R. Fitch</u> 5/16/84	MANAGER, RESEARCH & LICENSING	
	<u>RT Wille</u> 5-16-84	MANAGER, PROJECT INTEGRATION & PERFORMANCE ASSESSMENT	
<u>JR K...</u> 5/16/84	MANAGER, PLANNING, SCHEDULING AND CONTROL		

## LEGEND

SOLID LINE      HIERARCHIAL RANKING RELATIONSHIPS

DASHED LINE      KEY INTER-DEPENDENCY RELATIONSHIPS

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↓
 KEY RELATIONSHIP DEPICTED WITHOUT CONTINUOUS CONNECTING LINES

A
 DOCUMENT RESPONSIBILITY (CODED TO EACH ORGANIZATION'S OPERATING PLAN)

( )
 RESPONSIBILITY NOT YET ASSIGNED

UNCONTROLLED  
COPY

INFORMATION ONLY RHO-BW-M

# Rockwell Hanford Operations

## Quality Assurance Program Manual

Basalt Waste Isolation Project



Rockwell International