



Mr. H. J. Miller, Chief  
High Level Waste Technical  
Development Branch  
Division of Waste Management  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555

Dear Mr. Miller:

Your January 13, 1983, letter requested additional information on the BWIP Exploratory Shaft construction and sealing program. We have reviewed your request and understand that your concerns principally relate to the long term sealing of the shaft and considerations that such site characterization activities not compromise subsequent isolation and containment capabilities of a repository. As discussed in our February 16, 1983, meeting at your Silver Springs, Maryland offices, the information request will be satisfied by providing documents which confirm material discussed at the October 4-5, 1982, BWIP-NRC workshop on repository design.

Consistent with the February 16 discussions, we are enclosing design, construction, and quality assurance documents for the initial shaft construction activities. Additionally, by April 1, 1983, we will prepare and forward to you a summary report which addresses the questions in the enclosure to your January 13 letter, including factors affecting long term sealing of the shaft and consideration of these factors in the design and construction of the shaft. This summary report will cover both the initial stage of shaft construction addressed in the enclosed documents and subsequent stages of the shaft construction. The report will also identify the project documents for exploratory shaft development and when they will be released for project use. This project documentation can be provided to your staff, as requested.

If there are further questions on this matter or if there is a need to discuss the enclosed information, please contact Mr. Lee Olson, Basalt Waste Isolation Project Office Manager.

Very truly yours,

John H. Anttonen, Assistant Manager for  
Projects and Facilities Management

BWI:OLO

Enclosures:

1. List of Reference Documents
2. Reference Documents

8307270223 830223  
PDR WASTE  
WM-10 PDR

WM Record File  
101.2

WM Project  
Docket No. \_\_\_\_\_

PDR ☒   
LPDR ☒

Distribution: \_\_\_\_\_

(Return to WM, 623-SS)

WM Record File ... 101.2 ...  
WM Dir. \_\_\_\_\_  
WM Insp. Dir. \_\_\_\_\_  
WMEL \_\_\_\_\_ WMEL \_\_\_\_\_  
WMHT H.M. \_\_\_\_\_ WMHT \_\_\_\_\_  
WMUR \_\_\_\_\_ Others \_\_\_\_\_

(Continued on other side)

FEB 23 1983

(problem cys of 2/28/83)  
red 2/28/83 - cys to  
H5Ms. R. Wright

Enclaves

## BWIP EXPLORATORY SHAFT CONSTRUCTION REFERENCE DOCUMENTS

### I. Documents Currently Available and Attached

1. B-314-C-X28018 (BWIP 7490)  
Construction Specification for Shaft Drilling and Rig Services
2. (No number available)  
Dowell letter report on their chemical seal describing available laboratory test data, performance experience in past applications, and recommendations for further testing/development.
3. B-314-P-S28005 (BWIP 7473)  
Procurement Specification for 72" ID Steel Casing
4. B-314-P-S28004  
Procurement Specification for the 112" ID Steel Casing
5. B-314-B-X28028  
Procurement Specification for Drilling Mud
6. (No number available)  
Amchitka Mining History, Fenix and Scisson (1972)
7. Letter #R83-0283.1  
Contingency Plan for Anomaly Detection and Resolution During Exploratory Shaft Construction
8. NM 79-137  
Topical Report, "Preliminary Evaluation of the Rock Mass Disturbance Resulting from Shaft, Tunnel, or Borehole Excavation," D'Appolonia, July 1982.
9. QAP 9.03  
Sperry Sun Survey Procedure
10. SD-BWI-TI-113  
Principal Borehole Report
11. SD-BWI-AR-003  
M-K Drilling Program (144" Hole)
12. SD-BWI-AR-002  
M-K Mud Program (114" Hole)
13. M-K Q.A. Plan for drilling 144" Hole (including mud)

- 144  
14. Rockwell Q.A. Inspection Plan for drilling ~~114"~~ Hole  
(including mud)

II. Documents to be Completed and Forwarded Prior to Drilling Surface Hole

1. RHO-QA-PL-3, Rev. 1 L  
"Basalt Waste Isolation Project - QA Program Plan"
2. RHO-QA-PL-3, Rev. 1 L  
Appendix A, "QA Program Index"
3. (No number available)  
M-K QA Plan

Rockwell Hanford Operations Richland, WA 99352		EO TYPE		QA Level II III	Change Type --	Building 8901, 8903	Project No. B-314	EO 02696	
		XX	Release	Supersede	Cognizant Engineer		Phone	Priority	Is A Cross Reference To
			Release To File	Cancellation	J. S. Ritchie (KE/PB) 415-271-5281			N	AUTHORIZATION NO. WBS LF2223 (2222) CEI CM014
			Authorize Requirements	Obsolescence	Responsible Organization B. K. Schroeder-ES Design (Acting)		Phone 6-7283		
ENGINEERING ORDER			Change	File As Drawing					
Index No.	CEI No.	Document No.	Sheet No.	Rev.	Next Used On				
N/A	CM014	B-314-C-X28018 <del>Procurement</del> CONSTRUCTION Specification for Shaft Drilling and Rig Services	1-22	0					
N/A	CM014	**B-314-P-X28028 Procurement Specification for Drilling Mud	1-18	0					
**Note; B-314-P-X28028					Initiated by: KE/PB Used By: Rockwell				
<div style="text-align: center; font-size: 2em; font-weight: bold;">BASALT</div>					M. J. Lauterbach Prepared By <i>[Signature]</i> Date <i>2/8/83</i>				
					B. K. Schroeder, Acting Cognizant Manager <i>[Signature]</i> Date <i>2/8/83</i>				
					X Configuration Mgmt. Checker P. J. Reder <i>[Signature]</i> Date <i>2-9-83</i>				
					Cognizant Engineer _____ Date _____				
					Authorizer <i>[Signature]</i> Date <i>2/8/83</i>				
					Quality Assurance _____ Date _____				
					Health, Safety & Environment _____ Date _____				
					Criticality Engineering & Analysis _____ Date _____				
					XX B. K. Schroeder <i>[Signature]</i> Design Review Chairman <i>[Signature]</i> Date <i>2/8/83</i>				
					Project Engineer <i>[Signature]</i> Date <i>2/8/83</i>				
Reasons & ESR No. All Design Review comments incorporated per DR-B314-83-10. RCR's not verified, omissions (if any) will be incorporated by DFC.									
DISTRIBUTION					F. C. LARJIE (M-K) (1 control, 3 construction)				
H. W. Brandt					M. F. Nicol				
M. T. Black (1 construction, 1 control)					J. V. Mohatt				
R. D. Hudson (DOE) (3)					R. W. Carlson				
T. R. Cloud (1 control, 6 construction) <i>[Signature]</i> <i>2/8/83</i>					P. J. Reder (EO Only) <i>[Signature]</i>				
T. L. Walton (KEH) (1 control, 6 construction)					W. F. Todish (orig) <i>[Signature]</i>				
					Engineering Files <i>[Signature]</i> <i>2/8/83</i>				
					Work Completed <i>[Signature]</i> Date _____				
					Rec. Ret. _____				
					1983-Feb 9				