

WILLIAMS & ASSOCIATES, INC.

P.O. Box 48, Viola, Idaho 83872

(208) 883-0153 (208) 875-0147

WM DOCKET CONTROL CENTER
Hydrogeology • Mineral Resources Waste Management • Geological Engineering • Mine Hydrology

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April 3, 1985
Contract NRC-02-82-044
FIN #B7372-3
Communication #121

Mr. Matthew Gordon
Division of Waste Management
Mail Stop 623-SS
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

WM-R&S
WM Record File
B7372
WVA

WM Project 10
Docket No.
PDR ✓
LFOR ✓

Re: Thirty-third Monthly Progress Report

Distribution:
MGordon
NStill
(Return to WVA, 623 SS)
Joan-Ticket
C2

Dear Matt:

This document constitutes the thirty-third monthly (March 1-31, 1985) progress report as required by contract No. NRC-02-82-044 and modification.

Task 1, Subtask 1.1

A document list for references received this month is attached.

Task 1, Subtask 1.2 through Subtask 1.3

These subtasks are completed.

Task 2 and 3

These tasks have been completed.

Task 4

The work conducted under this active task is the preparation to review the BWIP Site Characterization Plan (SCP).

Task 6

Williams & Assoc., Inc. received the BWIP EA December 20, 1984. We completed our review of the EA; our comments on the EA were submitted to the NRC as Communication #112 via U. S. Express Mail

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on January 15, 1985. Williams & Assoc., Inc. continued their review of the EA comments. Detailed reviews were made on a major NRC comment and two NRC detailed comments. These reviews were incorporated into Communication #116 which was shipped Federal Express to the NRC. This communication was edited and a final draft was forwarded to the NRC as Communication #117.

Additional Work Performed

We reviewed, in great depth, two detailed NRC comments and one major comment on the BWIP EA. These reviews were transmitted to the NRC.

We are continuing our efforts on the statistical analysis of the latest hydrochemical data produced by Rockwell Hanford Operations. Our analysis of the data continues the multivariate analysis completed (Communication #46) on the hydrochemical data received during the July 1982 workshop. The statistical analysis of the data has been completed. A first draft of the report on this analysis is complete. Editing and revisions to this draft are in progress.

Numerous support references for the BWIP EA have been obtained and reviewed for background information. These references pertain to the hydraulic conductivity of fault gouge, analysis of barometric data, and statistical evaluation of hydrogeologic processes.

Future Activities

Williams and Associates will continue their preparation for the review of the Site Characterization Plan (SCP). We will review the appropriate documents as directed by the project officer.

We will continue our evaluation of the statistical analyses we have conducted on the hydrochemical data. We will complete our report of the analyses for submittal to the NRC.

Contractural Problems

No contractual problems have arisen.

Current Expenditures

A break down of individual hours and charges plus travel expenses is shown on the attached Table 1. Cumulative costs and projected costs are shown on the attached Table 2.

Sincerely,

Roy E. Williams/ew

Roy E. Williams

TABLE 1
INDIVIDUAL HOURS AND CHARGES

	<u>This Month</u>	<u>Cumulative Expenses</u>
Roy Williams	40 hrs=\$1840.00	963 hrs=\$42,351.00
Gerry Winter	84 hrs= 1428.00	4095.5 hrs= 69,722.50
Dale Ralston	46 hrs= 1840.00	631.5 hrs= 24,375.00
Jim Osiensky	0 hrs= .00	4 hrs= 63.00
Jeffrey Brown	0 hrs= .00	267.5 hrs= 9,362.50
K. Steinhorst	13.5 hrs= 472.50	111.25 hrs= 3,893.75
Clerical	11 hrs= 88.00	435.15 hrs= 3,461.20
Keypunch	0 hrs= .00	28.5 hrs= 195.00
Travel	\$.00	25,439.51
TOTAL (includes over-	\$ 9,776.61	\$285,165.98
head, etc.)		

TABLE 2
CURRENT AND CUMULATIVE PROJECT COSTS

TASK	CURRENT MONTH	CUMULATIVE TO DATE				TOTAL TO DATE	PROJECTIONS	
		FY82	FY83	FY84	FY85		NEXT MONTH	CUMULATIVE
1	Complete	\$67,549	\$-----	\$-----	\$-----	\$67,549	\$-----	Complete
2	Complete	\$23,930	\$51,257	\$-----	\$-----	\$75,187	\$-----	Complete
3	Complete	\$-----	\$25,846	\$-----	\$-----	\$25,846	\$-----	Complete
4	\$ 3,200	\$-----	\$-----	\$88,484	\$ 5,250	\$102,199	\$ 6,000	\$108,199
6	\$ 6,577	\$-----	\$-----	\$-----	\$18,655	\$18,655	\$-----	\$ 18,655
TOTAL	\$ 9,777	\$91,479	\$77,103	\$88,484	\$23,905	\$289,436*	\$ 6,000	\$295,436

TOTAL CONTRACT LIMIT PLUS MODIFICATIONS

\$390,625

* Round off error from total in Table 1

REFERENCE LIST

- Delhomme, J. P. 1979. Spatial Variability and Uncertainty in Groundwater Flow Parameters: A Geostatistical Approach. Water Resources Research, vol. 15, no. 2, pp. 269-280.
- Morrow, C. A., Shi, L. Q., and Byerlee, J. D. 1984. Permeability of Fault Gouge Under Confining Pressure and Shear Stress. Journal of Geophysical Research, vol. 89, no. B5, pp. 3193-3200.
- Narasimhan, T. N., Kanehiro, B. Y., and Witherspoon, P. A. 1984. Journal of Geophysical Research, vol. 89, no. B3, pp. 1913-1924.
- Schneider, R. and Trask, N. J. 1984. U. S. Geological Survey Research in Radioactive Waste Disposal--Fiscal Year 1982. U. S. Geological Survey, Water Resources Investigations Report 84-4205. 116 p.