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16 December 1986

David Tiktinsky - SS623
U.S. Nuclear Regulatory Commission
Division of Waste Management
Washington, D.C. 20555

"NRC Technical Assistance
for Design Reviews"
Contract No. NRC-02-85-002
FIN D1016

Dear David:

Enclosed is Progress Report No. 16 for the period 1-30 November 1986 on Task Orders No. 001, 002, and 003, Contract NRC-02-85-002. Also enclosed is the summary sheet for the November voucher. Please call me if you have any questions.

Sincerely,

Roger D. Hart

Roger D. Hart
Program Manager

cc: J. Greeves, Engineering Branch
Office of the Director, NMSS
E. Wiggins, Division of Contracts
DWM Document Control Room

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ITASCA MONTHLY PROGRESS REPORT

Progress Report No. 16
NRC Technical Assistance
for Design Reviews

16 December 1986
Contract No. NRC-02-85-002

Reporting Period: 1 - 30 November 1986

1. INTRODUCTION

This progress report summarizes the work performed during November 1986 on NRC Contract No. NRC-02-85-002. During November, work progressed on Task Orders No. 001, 002 and 003. A proposal for Task Order No. 004 was submitted.

2.0 ACTIVITIES DURING THE REPORTING PERIOD

- A. On 5 November, the following reviews were transmitted (Task Order No. 001):
- (1) Itasca Review No. 001-02-18, "A Preliminary Assessment of Water Inflow into Proposed Excavations in the Cohasset Flow Interior," by F. M. Baker. Rockwell Hanford Operations, SD-BWI-TI-274, June 1985.
 - (2) Itasca Review No. 001-02-19, Document: "Determination of an Upper Temperature Limit for Bentonite as a Backfill Component in a Nuclear Waste Repository in Basalt" by R. A. Palmer, R. G. Johnston, and M. I. Wood. Rockwell Hanford Operations RHO-BW-ST-47P, February 1983.
- B. A revised copy of FLAC with thermal capabilities was transmitted to D. Tiktinsky on 7 November (Task Order No. 002).
- C. The proposal for Task Order No. 004 was transmitted to M. Little on 13 November.
- D. Progress Report No. 15 and Invoice No. 015-86-124 were submitted on 17 November.
- E. On 21 November, a draft copy of "Suggested Review Approach to In-Situ Testing at Yucca Mountain (Section 8.3.2, Planned Tests, Analyses, and Studies — Repository Program)" was sent to D. Gupta (Task Order No. 002).

3.0 RESULTS

A. Document Reviews Completed in November:

- (1) "A Preliminary Assessment of Water Inflow into Proposed Excavations in the Cohasset Flow Interior," by F. M. Baker. Rockwell Hanford Operations, SD-BWI-TI-274, June 1985.

Professional Labor: A. Brown 11 hours

- (2) "Determination of an Upper Temperature Limit for Bentonite as a Backfill Component in a Nuclear Waste Repository in Basalt" by R. A. Palmer, R. G. Johnston, and M. I. Wood. Rockwell Hanford Operations RHO-BW-ST-47P, February 1983.

Professional Labor: A. Brown 10 hours

B. Document Reviews On-going in November:

BWIP In-Situ Test Plan

Professional Labor: M. Board 43 hours
 R. Hart 4 hours

C. Other Works in Progress

- (1) verification of thermal analysis capabilities in MUDEC (Task No. 002)

Professional Labor: L. Lorig 1 hour
 M. Mack 49 hours

- (2) site technical position on in-situ testing at NNWSI (Task No. 002)

Professional Labor: J. Daemen 20 hours
 L. Lorig 6 hours

- (3) rockburst potential at BWIP Point Paper (Task Order No. 003)

Professional Labor: M. Board 29 hours
 J. Markham 3 hours

- (4) identification and prioritization of major underground system components for NNWSI (Task Order No. 003)

Professional Labor: L. Lorig 9.5 hours

4.0 QUALITY ASSURANCE

Correspondence and document review logs were monitored and updated. NNWSI and SRP documents were received and catalogued.

5.0 DIFFICULTIES

No specific difficulties were experienced during this reporting period.

6.0 ACTIVITIES PLANNED FOR THE NEXT REPORTING PERIOD

A. Work will continue on preparation of the following reports:

- (1) BWIP in-situ test plan (Task Order No. 001);
- (2) site technical positions on in-situ testing at NNWSI (Task Order No. 002);
- (3) rockburst potential at BWIP point paper (Task No. 003); and
- (4) identification and prioritization of major underground system components for NNWSI (Task No.003).

B. Meetings planned for the next reporting period:

- (1) Appendix 7 visit for the NNWSI program in Las Vegas, 8-11 December, to be attended by J. Daemen (Task Order No. 001); and
- (2) a meeting in Silver Spring on 18 December to discuss the in-situ testing review strategy, to be attended by L. Lorig and J. Daemen (Task Order No. 003).

C. Other work planned for December:

continuation of documentation of the thermal version of MUDEC.

7.0 MEETINGS/TRIPS DURING THE REPORTING PERIOD

No meetings were attended nor trips taken during this reporting period.

8.0 SCHEDULE AND COST PROJECTION

The billing summary for the November invoice is attached. Costs are well within the limit authorized for all three task orders.

Respectfully submitted,



Roger D. Hart
Program Manager
16 December 1986

Attach.
rdh/ks

Dec-86
 TASK ORDER 001
 TASK 2

TASK LABOR SUMMARY

REVIEW OF DOCUMENTS

LABOR CATEGORY	BUDGETED HRS	TOTAL HRS BILLED	HRS REMAINING
PROGRAM MGR	96	40	56
ADMIN MGR	120	94	26
SR. ENGINEER	980	643.5	336.5
ASST. ENGINEER	300	0	300
SR. REVIEWER	48	0	48
QA	48	17	31
SECRETARIAL	200	261.5	-61.5
	-----	-----	-----
TOTAL ITASCA	1792	1056	736
CONSULTANT			
	-----	-----	-----
J. DAEMEN	168	172	-4
I. FARMER	88	80	8
ASST. ENGINEER	208	0	208
R. BARNES	0	20	-20
K. WAHI	0	74	-74
R. RAJARAM	0	50	-50
	-----	-----	-----
TOTAL CONSULT	464	396	68
SUBCONTRACTOR-NWC			
	-----	-----	-----
PRIN. INVEST.	256	90	166
SR ENGINEER	144	0	144
ENGINEER/GEOL	208	31.5	176.5
DRAFTING	0	2	-2
CLERICAL	100	58.5	41.5
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TOTAL SUBCONT	708	182	526
	=====	=====	=====
TOTAL TASK	2964	1634	1330

Dec-86
TASK ORDER 002
TASK 1

TASK LABOR SUMMARY

SITE SPECIFIC IN-SITU TESTING POINT PAPERS

LABOR CATEGORY	BUDGETED HRS	TOTAL HRS BILLED	HRS REMAINING
PROGRAM MGR	72	11	61
ADMIN MGR	96	34.5	61.5
SR. ENGINEER	872	496.5	375.5
SR REVIEW	12	12	0
QA	48	5.5	42.5
SECRETARIAL	126	72	54
TOTAL ITASCA	1226	631.5	594.5
CONSULTANT			
J. DAEMEN	72	36	36
I. FARMER	40	0	40
K. WAHI	72	0	72
TOTAL CONSULT	184	36	148
SUBCONTRACTOR-NWC			
PRIN. INVEST.	72	37	35
ASST. PROF.	0	4	-4
CLERICAL	8	18	-10
TOTAL SUBCONT	80	59	21
TASK TOTAL	1306	690.5	615.5

Dec-86
TASK ORDER 002
TASK 2

TASK LABOR SUMMARY

THERMOMECHANICAL ANALYSES

LABOR CATEGORY	BUDGETED HRS	TOTAL HRS BILLED	HRS REMAINING
PROGRAM MGR	54	19	35
ADMIN MGR	72	40.5	31.5
SR. ENGINEER	592	349	243
ASST. ENGINEER	320	474	-154
SR REVIEW	88	0	88
QA	16	7	9
SECRETARIAL	112	188	-76
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TOTAL ITASCA	1254	1077.5	176.5
CONSULTANT			

J. DAEMEN	0	24	-24
K. WAHI	80	85	-5
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TOTAL CONSULT	80	85	-5
	=====	=====	=====
TASK TOTAL	1334	1162.5	171.5
	=====	=====	=====
TASK ORDER TOT	2640	1853	787

Dec-86
 TASK ORDER 003
 TASK 1 ROCKBURST POTENTIAL AT BWIP

TASK LABOR SUMMARY

LABOR CATEGORY	BUDGETED HRS	TOTAL HRS BILLED	HRS REMAINING
PROGRAM MGR	8	0	8
ADMIN MGR	16	7	9
SR. ENGINEER	160	93	67
SR REVIEW	16	0	16
QA	6	0	6
SECRETARIAL	36	10.5	25.5
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TOTAL ITASCA	242	110.5	131.5
SUBCONTRACTOR-NWC			
	-----	-----	-----
PRIN. INVEST.	40	0	40
SR ENGINEER	24	0	24
CLERICAL	8	0	8
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TOTAL SUBCONT	72	0	72
	=====	=====	=====
TASK TOTAL	314	110.5	203.5

Dec-86
TASK ORDER 003

TASK LABOR SUMMARY

TASK 2 IDENTIFICATION AND PRIORITIZATION OF MAJOR
UNDERGROUND SYSTEM DESIGN COMPONENTS FOR NNWSI

LABOR CATEGORY	BUDGETED HRS	TOTAL HRS BILLED	HRS REMAINING
PROGRAM MGR	6	0	6
ADMIN MGR	12	5	7
SR. ENGINEER	80	10.5	69.5
QA	4	0	4
SECRETARIAL	20	15.5	4.5
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TOTAL ITASCA	122	31	91
CONSULTANT			
	-----	-----	-----
J. DAEMEN	80	0	80
	-----	-----	-----
	80	0	80
	=====	=====	=====
TASK TOTAL	202	31	171
	=====	=====	=====
TASK ORDER TOT	516	141.5	374.5