



BROOKHAVEN NATIONAL LABORATORY
ASSOCIATED UNIVERSITIES, INC.

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Department of Nuclear Energy

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March 17, 1989

Mr. Derek Widmayer
Division of Low-Level Waste Management
and Decommissioning
Technical Branch
Office of Nuclear Material Safety &
Safeguards
WFl Mail Stop 5-E-4
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Widmayer:

This is the monthly management report for the month of February for the program entitled, "Analyses of Special Waste Problems," FIN A-3175. Included is the monthly highlight letter together with the breakdown of costs for the month and year-to-date.

The following budget summary is provided for each current task in this program.

	Cost Per Task, \$K			
	Task 2 <u>Mixed Waste</u>	Task 4 <u>WVNS</u>	Task 5 <u>PLASAR-1</u>	Task 6 <u>PCP</u>
Task Effort				
A - Labor Related	155	85	47	68
B - Non-Labor Related	0	0	8	12
Total Task Effort	155	85	55	80
Obligated Funds	100	N/A	55	80
FY 87 Costs (A/B)	66/0	0/0	0/0	0/0
FY 88 Costs (A/B)	33/0	52/0	0/0	0/0
FY 89 Costs (A/B)	0/0	26/0	30/2	14/2
% Spent	99	92	58	20
Projected Costs - FY 89	0	0	23	59
Projected Costs - FY 90	---	---	---	5
Anticipated Completion	NRC Guidance	6/89	6/89	11/89

Funds Obligated to Date (\$K) = 465.0

Funds Spent to Date (\$K) = 371.7

Funds Available (\$K) = 93.3

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PDR WMRES EXIBNL
A-3175 PDC

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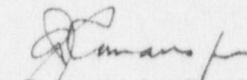
Mr. Derek Widmayer

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March 17, 1989

I hope this meets with your approval. If you have any questions regarding this information, please call the principal investigator or Mr. A. J. Weiss, Administrative Technical Assistant, FTS 666-4473.

Sincerely yours,


Robert A. Bari
Deputy Chairman

RAB/nms

Enclosures

cc: M. Knapp, NRC
B. Siskind, BNL
P. Soo, BNL
J. J. Surmeier, NRC
A. J. Weiss, BNL
Document Control Center

MONTHLY HIGHLIGHTS FOR FEBRUARY 1989

"Analyses of Special Waste Problems"

(FIN A-3175) (Acct. #04633)

BNL PRINCIPAL INVESTIGATOR (PI): B. Siskind (FTS 666-5374)

NRC PROJECT MANAGER (PM): D. Widmayer (FTS 492-0505), NMSS/LLWM/TB

Task 2 - Testing and Treatment of Mixed Waste: Availability and Associated Radiological Exposure

The purpose of this task is to provide NRC with information needed to resolve the regulation of mixed wastes under both NRC and EPA regulations. BNL will (1) identify currently available commercial treatment options for mixed wastes as well as options and disposal capacity considered likely to be available in the near future; (2) assess the potential radiological exposures associated with hazardous characteristics testing from the technical literature; and (3) investigate the feasibility of procedures for non-intrusive inspections of LLW packages at LLW disposal facilities.

BNL charged no technical effort to this task this month.

Task 4 - West Valley Solidified Waste: Continued Technical Assistance

The purpose of this task is to continue the effort begun under Task 3 of this FIN to provide technical assistance to the NRC in its review of the management of LLW at West Valley. This task begins with but will not necessarily be limited to an assessment of the process control plan (PCP) for solidification of the decontaminated supernatant waste stream at West Valley.

BNL charged no technical effort to this task this month.

Task 5 - DOE Prototype License Application Safety Analysis Report Reviews
Review of Earth-Mounded Concrete Bunker

The purpose of this task is to provide assistance to the NRC in its review of the DOE Prototype License Application Safety Analysis Report (PLASAR) for a low-level radioactive waste disposal facility employing an earth-mounded concrete bunker technology. Specifically, BNL will (1) review certain sections of the report using as guidance the Standard Review Plan for such facilities (NUREG-1200, Rev. 1) and other documents; (2) provide comments and questions on the PLASAR to the NRC in the form of a technical letter report; and (3) prepare sections of the Summary Evaluation Report (SER) corresponding to the sections and subsections of the PLASAR reviewed.

"Analyses of Special Waste Problems"

(FIN A-3175) (Acct. #04633)

This task was initiated in January 1989. Review of the six designated sections or subsections was completed during January. The comments and questions arising from the review were compiled in a draft technical letter report which was transmitted to the NMSS PM on February 1, 1989, in partial fulfillment of the requirements of Subtask 2 of this Task. Subsequently, sections of the SER were prepared which corresponded to those sections and subsections reviewed. The SER sections were included in a draft technical letter report transmitted to the NMSS PM on February 23, 1989, in partial fulfillment of the requirements of Subtask 3 of the Task.

Task 6 - Evaluation of Process Control Parameters

The purpose of this task is to provide technical assistance to NRC in the area of process control plans used by vendors and utilities to produce waste forms that meet the stability requirements of 10 CFR 61. Specifically, BNL will identify and evaluate possible process control parameters, instrumentation, and testing methods required to establish process control parameters for five generic stabilization processes:

- 1) solidification in Portland cement,
- 2) solidification in pozzolanic and other cementitious materials,
- 3) solidification in bitumen,
- 4) solidification in organic polymer binders,
and
- 5) dewatering in high integrity containers.

The literature review initiated in January is continuing. A brief overview and outline of the draft letter report were prepared during February. These will be sent to the NRC PM early in March as a memorandum to file.

Following discussions with the NRC PM, priorities for the focus of the report were established. Portland and pozzolanic cements and other cementitious materials will be given the greatest attention, to provide additional relevant input to the upcoming NRC-sponsored workshop on cement solidification. Effort on the remaining waste treatment processes will be as follows, in decreasing order: dewatering, bitumen solidification, and polymer solidification.

The review of vendor process control plans (PCP) which have been approved by NRC (NRR) was discussed with the NRC PM. This review may be more appropriate under Subtask 2. A list of 22 approved PCPs was sent to BNL. Since these are all on microfiche and some are sizable documents (as large as 500 pages), only a few will be selected for review in March.

MONTHLY HIGHLIGHTS FOR FEBRUARY 1989

"Analyses of Special Waste Problems"

(FIN A-3175)

Schedules

Task 2 - Testing and Treatment of Mixed Waste: Availability and Associated Radiological Exposure

Because the NRC PM has indicated to us that Tasks 4 and 5 of this FIN has higher priority than Task 2, BNL will wait for guidance from the NRC PM on scheduling for Task 2.

Task 4 - West Valley Solidified Waste: Continued Technical Assistance

BNL anticipates no further work in this task at this time. Additional West Valley documents concerned with LLW management will be reviewed in accord with guidance received from the NRC and to the extent resources in this task permit.

Task 5 - DOE Prototype License Application Safety Analysis Report Reviews Review of Earth-Mounded Concrete Bunker

BNL has not received NRC comments on the first of the draft technical letter reports for consideration in preparing a final version of this report. The due date for submitting this report to the NRC is currently March 6, 1989. BNL presently anticipates that the draft SER prepared by the NRC staff will be submitted to BNL for comments on appropriate sections by March 24, 1989.

Task 6 - Evaluation of Process Control Parameters

BNL anticipates preparing the technical letter report for Subtask 1 during March.