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REPLY TO RFP CC NO: 5-RF-01549

CTION ITEM STATUS
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R APPROVALS:

TYPIST INITIALS

June 7, 1995 95-RF-04888

Mark Silverman
Manager
DOE, RFFO

SYSTEMS ANALYSIS AND SITE WIDE INTEGRATION OF WASTE WATER TREATMENT CONSTRUCTION PROJECTS AND ACTIVITIES - AHB-193-95

Ref: M. N. Silverman ltr (09492) to A. H. Burlingame, Same Subject, May 23, 1995

PURPOSE

The purpose of this letter is to propose a plan of action to achieve the goals indicated in the above referenced letter.

DISCUSSION

A meeting was held on June 2, 1995 to discuss and propose a plan of action for the Systems Analysis and Site Wide Integration of Waste Water Treatment Construction Projects. It was unanimously agreed that such a study was required and that it should commence immediately. The study would look at all Waste Water Treatment projects and activities under Waste Management and Environmental Restoration. The study is estimated to cost $100,000 and EG&G's commitment is to complete this study and present the results to DOE no later than September 30, 1995. Rick Dunn, Waste Management Programs, is being assigned to be directly accountable for the completion of this study.

RECOMMENDATION

In the interests of maintaining cost effectiveness and integrity of design packages for the on-going projects, EG&G recommends the following:

- The study will produce a survey of the current and future waste water generated by all buildings and programs as well as an analysis of the current treatment methods and proposed upgrades. This study shall propose, as appropriate, an alternative plan based on identifiable cost savings to operations.

- The Liquid Waste Treatment Facility Upgrade Project design is recommended to continue at a reduced level while this study is being conducted. Costing during these three (3) months are estimated to be approximately $500,000. This costing is recommended to continue to avoid contractual penalties and loss of the Engineering Design Team. During this time period work will continue as follows:

  - Phase 1, Title II design
  - Phase 2, Title I design

- On the Waste System Evaporator Title II design will be completed as suggested in your letter. All procurement activities on this project will be suspended until the results of the study have been made available.

- The projects under Environmental Restoration are approaching completion and are required to meet environmental compliance commitments. Additionally, payback analysis of these projects have shown that the cost savings during the minimum 2 years anticipated for consolidation and construction would provide a full payback and an additional savings (See Attachment 1).

ADMIN RECCRD

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RESPONSE REQUIREMENTS
This proposed response will be initiated immediately. Should you have any questions, concerns or comments, please contact Rick Dunn at X7729.

Anson H. Burlingame
President

PC:sak

Orig. and 1 cc - M. N. Silverman

Attachment:
As Stated

cc:
J. Kerridge
J. Rau
J. Schneider

EG&G recommends the current consolidation of treatment systems for Operable Units (OU) 1 and 2 continue for the following reasons:

1. Waste minimization.
1.1 The new design maximizes UV treatment (OU 1 system) over the carbon absorption systems used for OU 2 that generate waste.
1.2. The new design minimizes waste sludge production form OU-2 precipitation system by utilizing ion exchange treatment from OU 1.
1.3. The new design reduces the overall amount of chemicals necessary to support the OU 1 precipitation process.

2. Budget
2.1. The current budget requests for FY 96 and out are tied to the assumption that the new design is operational. Invalidating this assumption will require 1,200 K additional for operational and maintenance costs.
2.2. The CPI for FY 95 has been approved. An additional 350 K in operational and maintenance funding will be required if the project is delayed.

3. Technical
3.1 . Levels of organics in the ER water recovered from OU 1 and OU2 exceed the current acceptance criteria for organics for Bldg. 374.
3.2 Levels of radionuclides and metals in the decontamination and purge waters exceed the individual (OU1 and OU2) facilities' acceptance criteria. No other facility can handle this water due to the organics level. This problem requires that the waters be run through the treatment sytems more than once in order to meet discharge limits. Consolidation of the units will eliminate this obstacle.
3.3 The consolidated unit will provide the greatest flexibility and acceptance range for RFETS waters.
3.4 The treatment units are currently required by Interim Measure/Interim Remedial Action (IM/IRA) Decision Document agreements with the State and EPA.

4. Cost Analysis.
A thorough cost analysis has been conducted by EG&G for this effort. This analysis shows that the cost payback period for recovering the consolidation costs in terms of reduced labor costs is less than two years. (See Figure 1.) This time period is significantly less than the time required to modify any of the other RFETS facilities. EG&G projects that the savings from reduced operational and maintenance (O&M) costs versus the costs for consolidation will result in significant cost savings for RFETS regardless of the findings from the sitewide integrated waste water study.

5. Project summary.

Estimated funding spent through May 31, 1995	$ 512K
Total Implementation costs for the consolidation	$1,330K
Annual OU-1 and OU-2 O&M costs	$3,500K
Annual consolidated unit O&M costs	$2,300K
Annual O&M cost savings	$1,200K

Figure 1. ER Sitewide Payback