

MONTHLY PROGRESS REPORT FOR CONTRACT NO. 500-00-036

PROJECT 2.1 – ENHANCED LANDFILL GAS PRODUCTION USING BIOREACTORS

REPORT PREPARED BY: COMMONWEALTH ENERGY TEAM

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**What we planned to accomplish this period:**

It was anticipated that efforts would be undertaken in September to schedule and conduct the Technical Advisory Committee meeting. It was anticipated that such a meeting would be held in late September or October.

**What we actually accomplished this period:**

As noted in previous reports, in early July San Bernardino County determined that it needed to proceed with the liner extension project at Mid-Valley without the bioreactor elements in order to be able to accept waste by early 2005. This decision meant that the bioreactor project could not be implemented at Mid-Valley as planned. At the time this decision was made, it was determined that work on the Commonwealth Project would be stopped and that a Technical Advisory Committee meeting would be scheduled in to review lessons learned on this project so that they could be applied to future projects. Efforts were undertaken in September to schedule this meeting for October. Also during September, preparation activities related to the meeting occurred. These included preparing the presentation materials and reviewing and assembling the previously prepared project documents. Activities on individual tasks are summarized below.

*Task 2.1.1 Characterize Waste to be Placed in Bioreactor:*

- As the *Waste Characterization Report* was previously submitted and approved by the Commission, no activities under this task were undertaken in September. Data from this effort were reviewed and used to facilitate the completion of the Project 1.1, Task 1.1.10 *Prioritization Report* and other Project 2.1 activities.

Task 2.1.3a Conceptual Design for First Bioreactor

- In September, no activities on the *Conceptual Design* (which was completed previously) were completed. The draft report was submitted in April and the only activity since that time had been on efforts to incorporate the results of the *Conceptual Design Report* into the *Construction and Test Plans*, as well as ongoing coordination with the host, San Bernardino County. Once the decision not to proceed with the bioreactor project was made, all activities on this task ceased.

Task 2.1.3b Construction And Test Plans For First Bioreactor

- No activity was completed on this plan in September. As noted previously, drawing on information presented in the *Conceptual Design Report*, the team completed work on elements of the *Construction and Test Plans* that link the bioreactor project with the ongoing design project of extending the liner, a portion of which will serve as the test area for the bioreactor. This effort included permitting (being undertaken under separate effort funded by the County), engineering and construction elements, and in general, involved the integration of PIER bioreactor project elements into the work being undertaken by San Bernardino County as part of the Unit 3 liner expansion. BAS, the County's design engineer, prepared an addendum to the design document prepared earlier so that the County's construction contractor would be able to proceed with implementation of the bioreactor elements of the project once Commission approval was received. Once the decision was made not to proceed with the bioreactor, work on this task ceased and the report that was being prepared by the Commonwealth team was submitted to the Commission in July. No additional work was undertaken on this task in September and no additional work anticipated on this task other than that related to making this document available to participants in the Technical Advisory Committee to be scheduled in October.

Task 2.1.6 Coordinate with Technical Advisory Committee

- In September, efforts were undertaken on this task focused on scheduling and preparing for the Project Wrap-Up Meeting. This meeting was scheduled for October 14<sup>th</sup> in Sacramento and was to include members of the Technical Advisory Committee whom would either participate in person or by phone. Materials for the presentation were assembled and the first draft of the PowerPoint presentation to be given at the meeting was prepared.

**How we are doing compared to our plan:**

Work was ceased on this project due to the decision not to proceed with the bioreactor elements of the liner extension project at Mid-Valley. Work had been proceeding with a schedule for the bioreactor being able to accept waste in January or 2005. The project schedule will be reviewed at the Technical Advisory Committee that is planned to be scheduled in September or October.

**Significant problems or changes:**

The County needed to proceed with the construction of the Unit 3 liner extension project so that construction of the liner extension would occur starting this summer. This was needed so that waste could be placed in the Mid-Valley unit 3 cell early next year. Because the County could not delay the decision to proceed with the liner extension project, the bioreactor project was stopped without including the bioreactor elements.

**What we expect to accomplish during the next period:**

It is anticipated that in October there will be limited activity on this project. It is expected that a project wrap- up meeting involving the Technical Advisory Committee will be held. Meeting preparation activities are expected to be undertaken and CE Team Members are expected to participate in the meeting under Task 2.1.6. Other activities on the Project stopped in July 2004 so activities on other Project 2.1 activities are not anticipated to be undertaken in October.

**Status of Milestones and Deliverables:**

Table 1 on the following page summarizes the status of Project 2.1 task deliverables as of the end of the current reporting period.

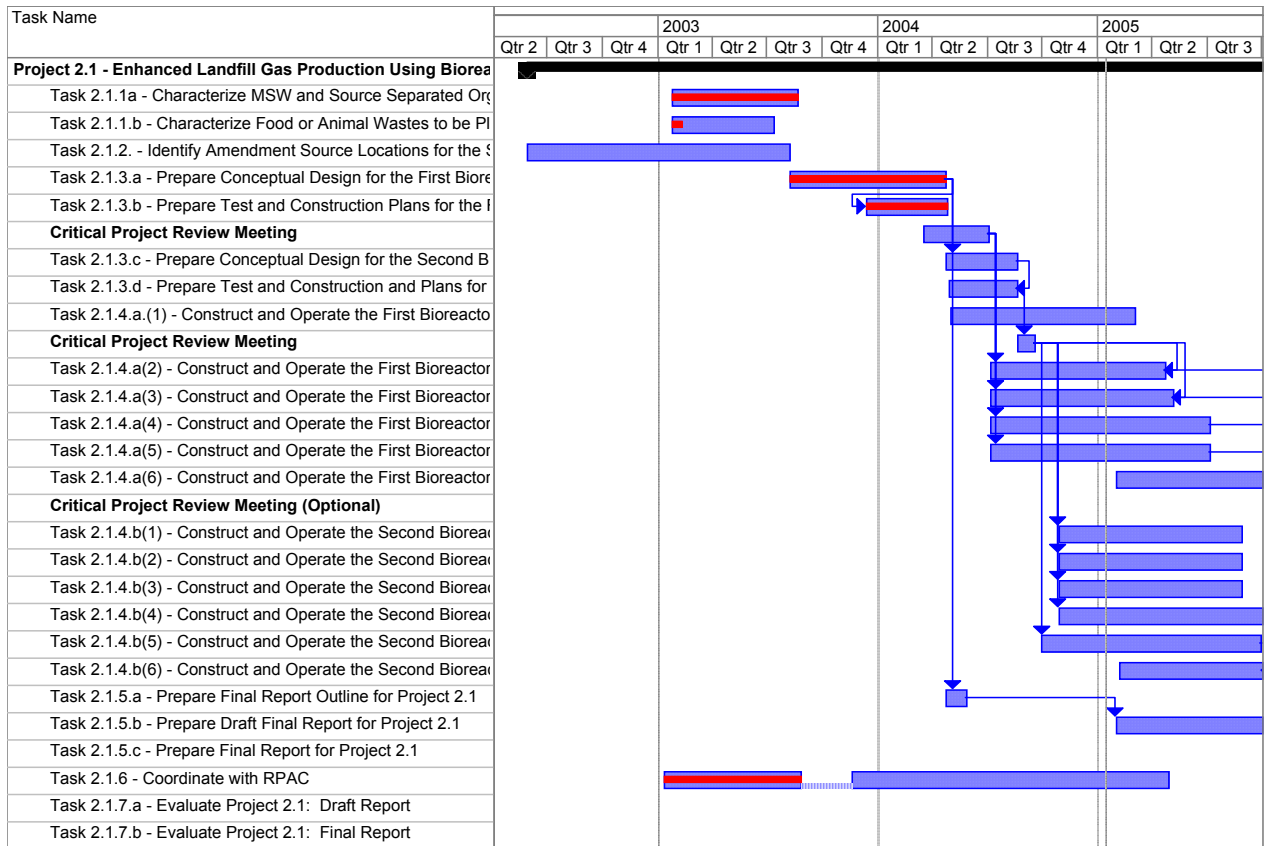
**Table 1: Summary of Project Status and Deliverables – Project 2.1**

Task No.	Description	Start Date		Due Date		Status (%)
		Planned	Actual	Planned	Actual	
2.1.1a	Characterize MSW and Source-Separated Organic Waste to be Placed in Both Bioreactors	01/10/02	1/24/03	05/31/02 08/21/03	DR: 08/20/03	100%
2.1.1b	Characterize Food or Animal Wastes to be Placed as Amendment in the Second Bioreactor	03/25/02	1/24/03	On Hold		
2.1.2	Identify Amendment Source Locations for the Second Bioreactor	05/26/02		On Hold		
2.1.3a	Prepare Conceptual Design for the First Bioreactor	09/28/02		12/18/03	4/22/04	100%
2.1.3.b	Prepare Construction and Test Plans for First Bioreactor	12/11/03		3/6/04		100%
2.1.6	Coordinate with RPAC/TAC	01/10/02	1/10/03	04/26/06		30%

Explanation of any Difference(s) in Schedule:

Task 2.1.1a – Landfill Feedstock Characterization Report – Information needed to complete this report took longer to collect than anticipated as the primary data to be used was not available in an electronic format. This delay did not affect the overall schedule for the project as the overall schedule was affected by the delay in the issuance of R&D exemption mentioned above and other developments that could affect the overall development of the bioreactor.

**Overall Schedule for Project 2.1:**



**Overview of Fiscal Status:**

Table 2 below summarizes the fiscal status of Project 2.1 by task/deliverable as of the end of the current reporting period.

**Table 2: Fiscal Status By Task – Project 2.1**

<b>Task Number</b>	<b>Budget</b>	<b>Invoiced To-Date<sup>1</sup></b>	<b>Fiscal Status *</b>
2.1.1 a	\$52,117	\$52,117	OT
2.1.1 b	\$53,064	\$0	OT
2.1.2	\$40,476	\$0	OT
2.1.3 a	\$103,578	\$0	OT
2.1.3.b	\$92,334	\$0	OT
2.1.6	\$45,024	\$0	OT

\*Fiscal Status – Please indicate if you are “On Track” (OT), OverBudget (OB), or UnderBudget (UB)

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<sup>1</sup> Invoiced To-Date indicates the total amount invoiced prior to 10% retention being withheld