

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

PROJECT 2.2 – ENHANCED ENERGY RECOVERY THROUGH OPTIMIZATION OF
ANAEROBIC DIGESTION AND MICROTURBINES PROJECT

REPORT PREPARED BY: COMMONWEALTH ENERGY TEAM

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What we planned to accomplish this period:

Information collection and analysis activities were to continue on the implementation of technologies identified in the *Process Selection Report*. Additionally, the CE Team planned to coordinate activity with the project hosts at IEUA and Riverside County. Efforts on the *Site Selection and Test Plan* will continue as the CE Team integrates the redefined approach into the project plan. Coordination with the technology vendors will also continue to ensure that the processes evaluated can and will be smoothly implemented into the design and construction phases.

What we actually accomplished this period:

Task 2.2.1 Process Selection:

- The CE Team continued to follow up on the *Process Selection Report* submitted previously. Efforts were focused on the review and analysis of the technologies presented in the *Process Selection Report*. Most notably, vendors continued to be contacted and plans established in order to fabricate and provide the latest ultrasound technologies to the projects planned at Riverside County. The ultrasound vendors provided detailed information about their technologies and continued to be heavily involved in the planning process so that the transition from process selection, to site selection, to design, and then installation will go smoothly.
- Discussions continued with Riverside County regarding the proposed *Memorandum of Understanding* (MOU) in relation to the implementation of this project at their facility. This was done so that detailed planning could be undertaken with Riverside County prior to finalization of the site selection report and development of the site selection test plan for the enhanced anaerobic digestion projects.

- Project planning was conducted related to the microturbine gas cleaning systems task. Technologies presented in the *Process Selection Report* were evaluated in terms of how they could best be deployed at the IEUA RP-1 plant. This included collecting information on the gas quality and quantity produced at the plant, as well as the additional gas that may be produced at RP-1 under Project 3.1. Overall, there are a number of locations where gas cleaning system elements could be deployed at RP-1. Technologies presented in the *Process Selection Report* were evaluated in terms of where they could be most efficiently deployed and tested.

Task 2.2.2 Site Selection and Test Plan:

- The CE Team and the technology vendors continued to apply the information developed in the process selection phase, to the site selection and test plan development activities. Detailed plans about where the test equipment should be located at each of the facilities (RP-1) and the City of Riverside Treatment Plant were analyzed. As noted above, efforts were undertaken with vendors and the hosts to ensure that the processes to be deployed at the proposed host sites are compatible with the existing systems. Additional discussions were held with project hosts and the vendors to ensure that siting preferences were considered and taken into account in the test equipment design and fabrication process. Similarly, anticipated project protocols were reviewed with the technology vendors to ensure that the systems to be installed were appropriate for meeting the projects objectives of increased gas production while ensuring the treatment processes are maintained or improved.

How we are doing compared to our plan:

As reported previously in November, the redirection of our approach (two ultrasound technologies, instead of one ultrasound and one thermal hydrolysis technology) will make the project findings more relevant to the State of California, but requires additional consultation and planning with the technology vendors. This modified focus continues to delay the finalization of the *Site Selection and Test Plan Report*. However, the CE Team believes that the delay impacts are minimal, particularly when weighed against the overall statewide value of the new approach.

Significant problems or changes:

There are no significant fiscal problems to report during this period and work is proceeding within budget. Progress and expenditures will result in project being completed on our revised project schedule and within budget.

What we expect to accomplish during the next period:

In January, information collection and analysis activities will continue as they relate to implementation of the technologies identified in the *Process Selection Report*. Coordination activity with the project hosts at IEUA and Riverside County will be ongoing. Activities related to finalizing the *Site Selection and Test Plan* will continue with particular effort on working with the vendors so that the intended six month testing period can begin in a timely manner later this year. Detailed planning related to fabrication of the planned test equipment is expected to begin in January. The Commonwealth Team and vendors are expected to continue to work closely on this effort.

Additionally, the CE Team plans to continue to work on the draft *Memorandum of Understanding*.

Status of Milestones and Deliverables:

Table 1 below summarizes the status of Project 2.2 task deliverables as of the end of the current reporting period.

Table 1: Summary of Project Status and Deliverables – Project 2.2

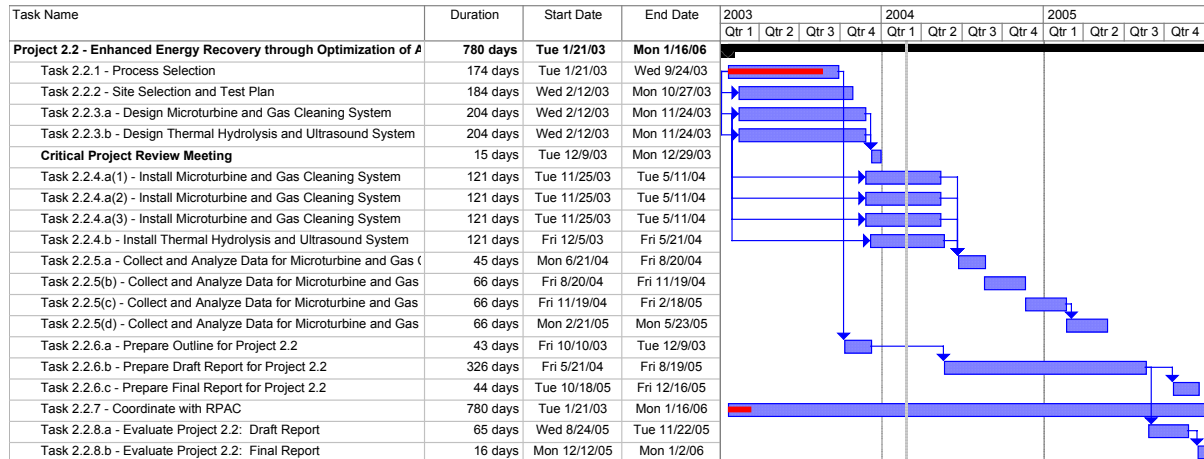
Task No.	Description	Start Date		Due Date		Status (%)
		Planned	Actual	Planned	Actual	
2.2.1	Process Selection	01/24/02	01/24/03	09/04/03		95%
2.2.2	Site Selection and Test Plan	02/15/02		10/26/03		
2.2.3.a	Design Microturbine and Gas Cleaning System	02/15/02		11/24/03		
2.2.3.b	Design Thermal Hydrolysis and Ultrasound System	02/15/02		11/24/03		
2.2.7	Coordinate with RPAC	01/24/02		01/16/06		

Explanation of any Difference(s) in Schedule

Task 2.2.2 – Site Selection and Test Plan – The findings of the Process Selection Report identified the technologies that are to be used at both the Riverside plant for enhanced anaerobic digestion and at RP-1 for gas cleaning. As noted previously, additional coordination activities with vendors are required. Efforts are being undertaken to streamline the site selection and test plan and design processes by conducting more detailed coordination with the vendors on their technologies. This approach will shorten the time needed to secure the long lead-time equipment items. It will also improve the likelihood that

demonstration pilot programs can be implemented most efficiently, but will delay the completion of the site selection and design tasks.

Overall Schedule for Project 2.2:



Overview of Fiscal Status:

Table 2 below summarizes the fiscal status of Project 2.2 by task as of the end of the current reporting period.

Table 2: Fiscal Status by Task – Project 2.2

Task Number	Budget	Invoiced To-Date	Fiscal Status *
2.2.1	\$236,563	\$0	OT
2.2.2	\$182,543	\$0	OT
2.2.3.a	\$242,995	\$0	OT
2.2.3.b	\$215,842	\$0	OT
2.2.7	\$22,557	\$0	OT

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