

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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Contractor Project Director:	Patrick Lilly (360) 906-0616
Contractor Project Manager:	Bill Kitto (503) 235-5022
Commission Project Manager:	Zhiqin Zhang (916) 654-4063

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

The planned focus of activity was to be the continuation of information collection and analysis activities 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 also would continue. Activities related to finalizing the *Site Selection and Test Plan* would focus on working with the vendors so that the intended six month testing period could begin in a timely manner later this year. Detailed planning related to fabrication of the planned test equipment was expected to begin in January. As reported previously, the CE Team and vendors will continue to work closely on this effort.

Additionally, the CE Team planned to continue working on the draft *Memorandum of Understanding*.

**What we actually accomplished this period:**

Task 2.2.1 Process Selection:

- The CE Team continued its follow up on the *Process Selection Report* submitted previously. Primary efforts continue to focus on the review and analysis of the technologies presented. Contact and coordination with the technology vendors continued to occur in order to fabricate and provide the latest ultrasound technologies to the projects planned at Riverside County. As reported previously, the ultrasound vendors continue to provide detailed information about their technologies and will be heavily involved in the planning process in order to ensure a smooth process from selection to installation.

Task 2.2.2 Site Selection and Test Plan:

- Discussions continued with Riverside County regarding the proposed *Memorandum of Understanding (MOU)*. This continues to be an ongoing process, as roles and responsibilities are defined.
- 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 regarding the location of the test equipment at each of the locations planned (RP-1) and the City of Riverside Treatment Plant, continued to be analyzed
- As part of the preparation of the *Site Selection and Test Plan Report*, process and instrumentation diagrams and other elements of the site selection report were prepared. A draft of this report was completed in January and was circulated for internal CE Team review. Related to this effort, preliminary planning was initiated on the critical project review meeting for this project. Information is being included in the *Site Selection and Test Plan* so that the proposed project can clearly present a detailed six-month testing plan that will foster gas production and improved operations at the host site.

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

As reported previously, 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 continues to require 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 upon completion, the findings produced will clearly document how the use of ultrasound technology can help increase gas production as well as improve the treatment process.

As part of the ongoing coordination with the technology vendors, the CE Team is seeking to streamline the site selection and design tasks by involving the vendors in the project planning. This will allow future efforts to focus on project implementation, rather than further evaluations and design activities. However, these additional processes/steps continue to delay the finalization of the *Site Selection and Test Plan Report*.

**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:**

As part of an ongoing effort, information collection and analysis activities will continue in relation to the implementation of the technologies identified in the *Process Selection Report*. Activity related to enhanced energy production, gas cleaning and advanced energy recovery will continue and additional coordination activity with the project hosts at IEUA and Riverside County will also continue. February efforts will continue to focus on integrating two ultrasound systems into the Riverside Plant. As well as integrating H<sub>2</sub>S and siloxane removal systems into the RP-1 site. Activities related to finalizing the *Site Selection and Test Plan* will continue with significant emphasis placed on working with the vendors in order to ensure that the intended six-month testing period can begin in a timely manner later this year. Also, the detailed planning related to fabrication of the planned test equipment is expected to continue in February, with the CE Team and vendors working closely on this effort.

Further refinement is expected on the *Memorandum of Understanding (MOU)* between Riverside County and the CE Team as related to the proposed ultrasound-testing program at the City of Riverside Treatment Plant.

**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**

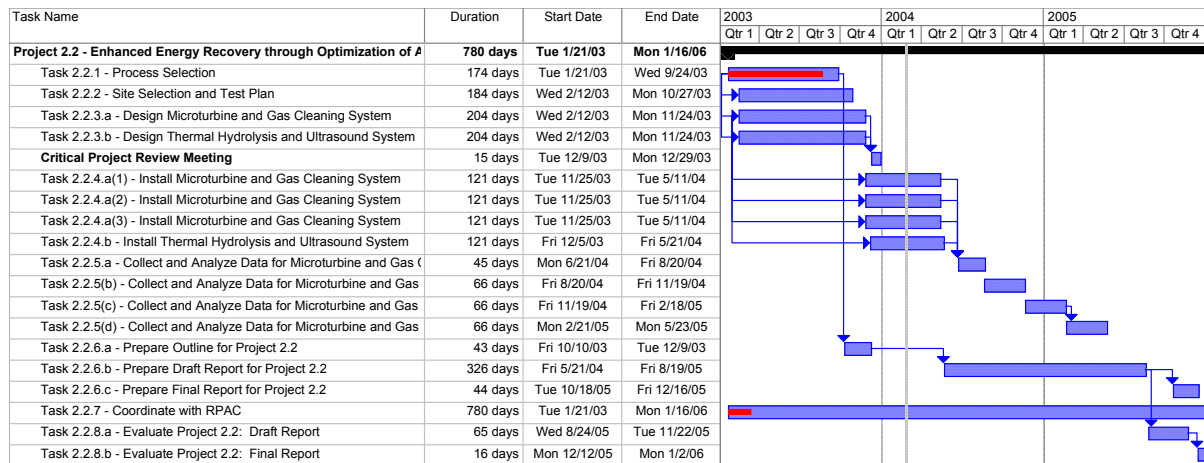
Task No.	Description	Start Date		Due Date		Status (%)
		Planned	Actual	Planned	Actual	
2.2.1	Process Selection	01/24/02	01/24/03	09/04/03		95%
2.2.2	Site Selection and Test Plan	02/15/02		10/26/03		15%
2.2.3.a	Design Microturbine and Gas Cleaning System	02/15/02		11/24/03		
2.2.3.b	Design Thermal Hydrolysis and Ultrasound System	02/15/02		11/24/03		
2.2.7	Coordinate with RPAC	01/24/02		01/16/06		5%

*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 <sup>1</sup> 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)

<sup>1</sup> Invoice to-Date refers to amount invoiced prior to 10% retention withheld.