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8/11/05

**Texas Commission on Environmental Quality
New Technology Research & Development (NTRD) Program
Monthly Project Status Report**

Performing Party – WOW Energy Inc. I.D. 68-0554788

Contract Number: TCEQ New Technology Research and Development Grant
Contract 582-5-70807-0010

Grantee: TCEQ

Date Submitted: **August 9th, 2005**

Report for the **Monthly** period:

Starting Date **July 1st 2005** Ending Date **July 31st 2005**

Section I. Accomplishments

- **Conducted multiple meetings in Houston with Eisenmann Corporation (pilot plant design and fabrication contractor) and AES Deepwater (first test site) to review interconnection requirements, site specific locations and safety planning.**
- **Continued drafting of the Site Access Agreement with AES Deepwater which should be completed in the first week of August.**
- **Conducted meetings in Houston with Eisenmann Corporation to review project schedule and to revise the installation and testing plan for the high voltage transformers. Also review test monitoring equipment requirements and potential suppliers. We confirmed the delay in shipping the transformers/rectifiers to Eisenmann from the vendor. Originally the plan was to direct the units to Houston and complete the assembling at AES Deepwater. This also included the completion of the electrical testing. We have now extended the unit delivery date five weeks to enable delivery (two weeks), installation and testing of the electrical systems (three weeks) at the factory rather than on site at AES Deepwater. We are still ahead of the TCEQ plan.**

Indicate which part of the Grant Activities as defined in the grant agreement, the above accomplishments are related to:

**Task One: Test Site Selection
(July 14th 2005 to September 8th 2005)
Commenced January 3rd 2005 and is 70% complete**

Task One: A contractual detailed agreement with AES Deepwater is in final should be completed by mid-August. At Holcim, Midlothian testing discussions are continuing. We are targeting a Letter of Intent agreement with Holcim by late August.

2.1.1.1 The baseline flue gas analysis and testing procedures have been developed and detailed procedure will be complete by mid-September.

- 2.1.1.2 The detailed design of the FFGC-PP interface is in final review for approval. There is a project meeting was held on July 27th 2005 with Wow/Eisenmann and AES and we have confirmed in the interface design. There will be a similar review process with Holcim in late August.
- 2.1.1.3 The preliminary test plan and schedule for AES Deepwater was approved in our joint Wow, AES and Eisenmann meeting on the 27th of July. It is our plan to modify the test plan for Holcim. We anticipate completing the Holcim test plan and schedule by the end of September.
- 2.1.1.4 The preparation of the Safety Execution Plan is was initiated during the July 27th meeting with AES. The Holcim plan will be tailored to their facility safety plan during the development of the Holcim test plan and schedule reference in 2.1.1.3.
- 2.1.1.5 At Holcim, we are evaluating the intake and discharge parameters for the specific site and should conclude the interface design and related re-injection/discharge treatment issues by the end of September.

Completion of Task One is on track per the contract schedule. Our definitive agreements, procedures and plans with AES Deepwater will be completed by the end of August. The Holcim Midlothian agreements are scheduled to be completed by September.

**Task Two: FFGC Pilot Plant Design
(July 14th 2005 to November 2nd 2005)
Commenced April 15th 2005 and is 85% complete.**

- 2.2.1.1 The modifications to the existing scrubber design is complete.
- 2.2.1.2 The design of the serpentine section of the second stage is complete.
- 2.2.1.3 The analysis of the UV radiation system is ongoing and should be completed in August. The FFGC-PP will have the ability to incorporate this system in the field. It was determined to provide access in the first scrubber stage for the UV option.
- 2.2.1.4 The definition of the size and number of the FFGC-PP chemical additive vessels is complete
- 2.2.1.5 The definition of the size and number of by product vessels in ongoing. Existing plant storage and treatment systems are under review at AES and should be complete in August. Review of plant storage and treatment systems at Holcim are scheduled for late August and should be complete in September.
- 2.2.1.6 The FFGC-PP pumps, motors and piping component selection is complete. Purchase orders have been issued for; recycling pumps, metering pumps, exhaust

fan, nozzles, PH and ORP sensors, pressure/temperature and flow measuring devices, and the high voltage transformer/rectifier units.

- 2.2.1.7 The semi-trailer has been selected for leasing.
- 2.2.1.8 The design of the electrical and instrumentation systems is 95% complete and should be completed in early August.
- 2.2.1.9 The control system and control logic design is 93% complete and is scheduled to be completed in early August.
- 2.2.1.10 The final layout drawings including the trailer mounting details is completed.

The project schedule demonstrates that the FFGC-PP project is ahead of the contractual schedule and that Task Two is currently scheduled to complete in early September. The final design report shall be submitted to TCEQ at completion of this task.

Task Three: Fabrication & Construction
(July 14th 2005 to January 26th 2006)
Commenced May 1st 2005 and is 20% complete.

Eisenmann has commenced the unit construction based on our submitted production schedule. Prior to releasing the shell design, Wow Energy approved the Eisenmann Quality Control and Inspection Plan.

- 2.3.1.1 The selection of major component suppliers is complete and major procurements have been released.
- 2.3.1.2 The baseline production schedule is approved. The plan was updated during the project meeting scheduled on July 26th 2005 incorporating the changes referenced above.
- 2.3.1.3 Quality Control and Inspection Plan review is complete.
- 2.3.1.4 The final construction drawings release was discussed in the July 26th meeting and all holds are scheduled to be released within 30 days.
- 2.3.1.5 The shop test plan draft is complete and annotations with regard to specific test parameters are being incorporated.
- 2.3.1.6 As-built drawings are scheduled to commence in August and is scheduled for completion in late October. This was delayed to compete the delivery, installation and testing of the transformers and rectifiers at Eisenmann.

2.3.1.7 Conduct shop test is currently scheduled for October.

Task Three is well ahead of the contract schedule. The FFGC-PP will be ready to ship to Texas in late October. The as-built drawings, shop test reports and photographs will be submitted upon delivery of the unit in Houston.

**Task Four: Operating and Test Plan
(July 14th 2005 to January 26th 2006)
Commenced May 1st 2005 and is 18% complete.**

Wow Energy has selected the chemical additives to be used in the FFGC-PP. The initial flow rates and quantities have been determined and used to size the pumps, sumps and vessels.

- 2.4.1.1 The test site hosts are evaluating their existing permits and have taken the action to amend them if required. AES has completed the review.
- 2.4.1.2 The chemical additives have been selected. The quantity of chemicals required for each test site is under review. AES testing evaluation of chemical requirements is complete. This task for both sites will be completed by early September.
- 2.4.1.3 The Safety Execution Plan is in the drafting stage. It will incorporate the handling of the chemical solutions and waste products.
- 2.4.1.4 The initial chemical quantities and storage requirements are complete for AES Deepwater and will be developed for Holcim during the upcoming project meetings in August.
- 2.4.1.5 As the FFGC-PP design basis was to recycle the used solutions and by-products, there should be very little waste or by-product. We are analyzing and quantifying the amount of by-product for each test site.
- 2.4.1.6 We are developing a plan with AES that incorporates these by-products into their gypsum production. As we further the technical reviews with Holcim, we will develop a by-product disposal plan for testing at their site.
- 2.4.1.7 As we proceed with definitive site test agreements, there will be a site specific test plan and procedure. This task will commence in mid- August. This is on-track.

Parts of this task were performed early in the design stage as they relate to the FFGC-PP design basis. The main part of this task is scheduled to commence at the end of July and carry on until early September.

Task Five is scheduled to commence in October 2005

Task Six is scheduled to commence in December 2006

Task Seven is ongoing throughout the project commencing on January 3rd 2005.

Section II: Problems/Solutions

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| <p>Problem(s) Identified</p> <p><i>(Please report anticipated or unanticipated problem(s) encountered and its effect on the progress of the project)</i></p> | <p><i>We have experienced a longer than planned lead time for the delivery of the transformer/rectifier units which resulted in adding two weeks to the completion target of the FFGC-PP.</i></p> <p><i>Note: July 31st. the meeting with AES Deepwater opened the testing schedule to enable Eisenmann to complete the installation and testing of the completed FFGC-PP</i></p> |
| <p>Proposed Solution(s)</p> <p><i>(Please report any possible solution(s) to the problem(s) that were considered/encountered)</i></p> | <p><i>We decided against expediting the components which would have resulted in a higher cost.</i></p> <p><i>In addition, we will avoid the field installation of components.</i></p> |

Action(s) Conducted and Results

(Please describe the action(s) taken to resolve the problem(s) and its effect)

As we kicked off the project approximately 5.5 months prior to the Notice to Proceed, the extra two weeks were added onto the FFGC-PP production schedule without impact to the contract timeline.

We have extended the schedule a total of 5 weeks with the unit delivery scheduled to ship in late October.

Section III. Goals and Issues for Succeeding Period: (Please provide a brief description of the goal(s) you hope to realize in the coming period and identify any notable challenges that can be foreseen)

- **We are working on the Holcim test site issues.**
- **We are finalizing the contractual agreement between AES Deepwater and Wow Energy for the testing at AES.**
- **We are drafting a Letter of Intent between Wow Energy and Holcim which we plan on signing and moving into contractual agreement negotiations.**
- **We will finalize the flue gas instrumentation port locations and selection of the monitoring equipment..**



Authorized Project Representative's Signature

Date: 9/8/05

