

NTRD Program Disclaimers

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10/11/05

**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: **October 7th, 2005**

Report for the **Monthly** period:

Starting Date **September 1st 2005**

Ending Date September 31st 2005

Section I. Accomplishments

- Completed the construction of the Final Flue Gas Cleaning Pilot Plant at the Eisenmann Corporation. The unit has passed preliminary shop testing and will go into full shop test on October 3rd. The unit will ship to Houston once the accounting has caught up.
- Continued technical testing dialogs with all three test sites to finalize the physical interface requirements and contractual agreements for the actual testing programs. Each facility will have 30 to 45 days of testing. TXU has requested a presentation of the FFGC-PP in early October.
- Continued to finalize the test matrix and test plan for the first test site. The Test Plan and Safety Execution Plan will be finalized once the Pilot Plant has completed shop testing.
- As-built drawings are in work as the unit is complete. The drawings and operating manuals will be completed and delivered in October.

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 80% complete

Task One: A contractual detailed agreement with AES Deepwater is complete with the exception of the Test Plan and Safety Execution. Similar agreements under in negotiations with Sempra Twin Oaks and TMPA's Gibbons Creek. All plants are currently scheduled for planned outages in October during which time any modification to support the Pilot Plant testing will be made.

2.1.1.1 The baseline flue gas analysis and testing procedures have been developed and detailed procedure will be complete by mid-September. This data has been used in the selection of the emissions analyzer equipment. The finalization of the

purchase of the equipment will be in October. We are considering using a gas analyzer in lieu of the mass spectrometer.

- 2.1.1.2 As referenced above, we are expanding our testing agreements with Sempra Twin Oaks, TMPA Gibbons Creek and have initiated discussions with TXU.
- 2.1.1.3 The final shop test was deferred until October 3rd. As of the filing of this progress report, the Final Flue Gas Cleaning Pilot Plant has passed all of the shop testing and has been accepted by WOW.
- 2.1.1.4 The preparation of the Safety Execution Plan continues with AES. This plan is being modified after the shop testing to roll in comments in the operational procedures. Currently the AES Deepwater test will begin in late December or early January. The schedule accommodates modification to the plant during the planned outage for our Pilot Plant interconnections. Follow-on test site Safety Execution Plans will be base lined on the AES plan.
- 2.1.1.5 As mentioned in the last report, Holcim may be replaced in the testing program by either Twin Oaks or Gibbons Creek.

Completion of Task One is on track per the contract schedule.

**Task Two: FFGC Pilot Plant Design
(July 14th 2005 to November 2nd 2005)
Commenced April 15th 2005 and is 100% 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 Vendors for UV components are under review for selection prior to start-up of the testing program. The pilot plant design allows for a UV system to be installed in an access port on top of the unit between the scrubber sections.
- 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 complete and has been relayed to AES Deepwater. Existing plant storage and treatment systems review is complete.
- 2.2.1.6 The FFGC-PP systems and subsystems are all procured (with the exception of the gas analyzer and UV systems).
- 2.2.1.7 The semi-trailer has been selected for transportation.

- 2.2.1.8 The design of the electrical and instrumentation systems is complete.
- 2.2.1.9 The control system and control logic design is complete.
- 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 complete. The final Task Two 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 98% complete.

Eisenmann has finished the unit construction based on our submitted production schedule. Wow has approved the Eisenmann Quality Control and Inspection Plan.

- 2.3.1.1 The selection of major component suppliers is complete and major procurements are complete.
- 2.3.1.2 The baseline production schedule is approved.
- 2.3.1.3 Quality Control and Inspection Plan review is complete.
- 2.3.1.4 The final construction drawings release is complete.
- 2.3.1.5 The shop test plan draft is complete and annotations with regard to specific test parameters is complete.
- 2.3.1.6 As-built drawings is scheduled for completion in mid-October.
- 2.3.1.7 Conduct shop test is currently scheduled for October 3rd.

Task Three is well ahead of the contract schedule. The FFGC-PP is ready to ship to Texas. 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 45% complete.

Wow Energy has selected the chemical additives to be used in the FFGC-PP.

- 2.4.1.1 This task is complete.
- 2.4.1.2 The chemical additives have been selected and this task in complete.
- 2.4.1.3 The Safety Execution Plan continues to be revised.
- 2.4.1.4 The initial chemical quantities and storage requirements are complete.
- 2.4.1.5 We are analyzing and quantifying the amount of by-product for each test site. Proper disposal of the small amount of by-product will be in compliance with the facilities permits.
- 2.4.1.6 We are developing a by-product disposal plan for Twin Oaks and Gibbons Creek.
- 2.4.1.7 Final baseline of the Test Plan will be completed in October.

This task is well underway and will require modifications to the plans as we finalize ach of the test sites operational criteria.

Task Five is scheduled to be completed in October 2005 for AES. Other follow-on Test Plans and Safety Execution Plans will follow.

Task Six is scheduled to commence in December 2006

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

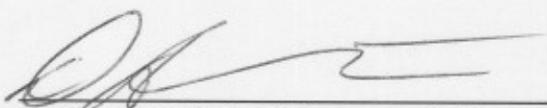
Section II: Problems/Solutions

<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 continue to experienced a delay with Holcim. This has delayed those parallel tasks associated with the Test Plan and the Safety Execution Plan, as well as the site specific interface and interconnection requirements. We had wanted to conduct testing here as it is a non-generating plant and typical of cement plant emissions.</i></p>
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<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 have meet with Sempra Twin Oaks and TMPA Gibbons Creek for discussions on entering their respective power plants as test sites. Both plants were very interested in participating. We have also now scheduled a meeting with TXU in October.</i></p>
<p>Action(s) Conducted and Results</p> <p><i>(Please describe the action(s) taken to resolve the problem(s) and its effect)</i></p>	<p><i>We now have two additional flue gas characteristics to work with. AES Deepwater uses petcoke as fuel. Twin Oaks is a mine mouth lignite power plant and Gibbons Creek uses Power River Basin coal as fuel.</i></p>

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 have completed the Final Flue Gas Cleaning – Pilot Plant.***
- ***We are ready to complete shop testing and take delivery.***
- ***We are working to accelerate the AES Deepwater testing schedule.***
- ***We have substantial interest from other power plant operators in the pilot plants ability to remove NOx, SOx and heavy metals, specifically mercury.***



Authorized Project Representative's Signature

Date:

10/7/05

NOTE: *Please attach any additional information that you feel should be a part of your report or that may be required to meet the deliverable requirements for tasks completed during this reporting period.*

TCEQ New Technology Research and Development Grant
Contract 582-5-70807-0010
Performing Party – WOW Energy Inc. I.D. 68-0554788
Notice to Proceed Issued July 14th 2005

Narrative

Tasks One is ongoing. Tasks Two and Three are complete. Task Four and Seven are ongoing in accordance with the above reports.. Tasks Five has been scheduled to commence in late November of 2005. Task 6 will commence in December of 2006.

The Wow Energies project team has held continuous discussions with Eisenmann during the construction of the FFGC-PP.

In accordance with the contract, we will continue to hold monthly project reviews, as well as, day to day project discussions. On October 3rd, Wow Energies will conduct a final pilot plant inspection and witness the Shop Testing in Chicago. We are focused on finalizing our Test Plan and Safety Execution Plan, as well as, lining up our second and third test facility.

Photographs



