

NTRD Program Disclaimers

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11/10/05

**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: **September 9th, 2005**

Report for the **Monthly** period:

Starting Date **October 1st 2005**

Ending Date **October 31st 2005**

Section I. Accomplishments

- Completed the construction of the Final Flue Gas Cleaning Pilot Plant at the Eisenmann Corporation fabrication facilities and the unit is now stored ready for shipping.
- WOW Energy, Inc. personnel traveled to the Eisenmann Corporation to test the unit on October 3, 2005. The unit successfully passed its shop testing.
- WOW Energy, Inc. continued testing dialogues with test sites to develop further the specific requirements of each site.
- Details of testing equipment, methodology and specifications were analyzed in depth and interviews were held with various manufacturers of equipment. Independent third party testers are also in the process of being selected.
- The Company is reviewing all technical and equipment data in preparation of the first site test.

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. Date for initiation of testing remains to be set. At Holcim, Midlothian testing discussions are continuing but as mentioned above we have initiated discussions with additional candidates focusing on those that are coal power plants.

2.1.1.1 The baseline flue gas analysis and testing procedures have been developed and detailed procedures are close to completion. This data has been used in the selection of the emissions analyzer equipment. Equipment analyzer equipment selection is close to being completed. The Company has also looked at the

possibility of incorporating mercury testing capabilities at some stage in the future. A strong interest has been shown by various plants to test for the removal of mercury.

- 2.1.1.2 The expansion of testing sites and agreements continues.
- 2.1.1.3 Shop Testing took place on October 3, 2005 at the Eisenmann Corporation facilities and the unit passed all tests. The unit is now in storage awaiting shipping dates.
- 2.1.1.4 Safety planning continues with AES.
- 2.1.1.5 Holcim may be replaced in the testing program by either Twin Oaks or Gibbons Creek. There has been strong interest for further testing at other sites, including possible mercury testing.

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 95% 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 and specific equipment for UV components are under review.
- 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 type of 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 complete.

Task Three: Fabrication & Construction
(July 14th 2005 to January 26th 2006)
Commenced May 1st 2005 and is 85% complete.

Eisenmann has completed the unit construction based on our submitted production schedule. Wow Energy, Inc. 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.

2.3.1.6 As-built drawings are complete.

2.3.1.7 Conduct shop test successfully completed.

Task Three is well ahead of the contract schedule. The FFGC-PP is ready to be shipped. 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 25% 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 Task complete.

2.4.1.2 The chemical additives have been selected, task 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 for AES Deepwater.
- 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 The analysis and quantity of by-products for each test site continues to be developed.
- 2.4.1.7 Final baseline of the Test Plan continues to be developed.

This task is almost complete subject to modifications to the plans as the operational details of each of the test sites is incorporated.

Task Five is scheduled to commence in October 2005

- 2.5.1.1 Delivery and installation. The unit is ready for delivery and will be shipped when timetable with AES is finalized and when Eisenmann releases the unit as it is satisfied that payments are met.

Task Six is scheduled to commence in December 2006

Task six is dependant on results of testing for each site and specific full scale designs will be undertaken following testing.

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 experience a delay with Holcim.</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.</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 are working on the Holcim test site issues but now have two additional sites under review. Other sites have been identified and a strong interest continues to take place for further testing with the unit.*
- *We have finalized the contractual agreement between AES Deepwater and Wow Energy for the testing at AES. The two attachments (Test Plan and Safety Execution Plan) are in draft.*
- *We are drafting a Letter of Intent between Wow Energy and our other test site candidates which we plan on signing and moving into contractual agreement negotiations.*
- *We have finalized the flue gas instrumentation port locations and are close to selecting the monitoring equipment.*
- *Preparation for the initial test site will continue during the month of December, 2005.*



Authorized Project Representative's Signature

Date: 11/9/05

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

Task One is now complete and a date for the unit to be shipped to Texas remains to be scheduled. Testing of the unit was successful. Tasks, Two, Three, Four and Seven are ongoing in accordance with the above reports. Task Five is dependant of shipping schedule of unit. Task 6 will commence as soon as data is available following site testing.

The Wow Energies project team has held continuous discussions with Eisenmann during the construction of the FFGC-PP. This part of the project is now complete other than site installation at AES. Wow has been pleased with the quality of the work and product and is eagerly anticipating site testing. The Company continues to hold discussions on installation and operational procedures.

In accordance with the contract, we will continue to hold monthly project reviews, as well as, day to day project discussions. We are focused on finalizing our Test Plan and Safety Execution Plan, as well as, lining up our second test facility.

Photographs



