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Texas Commission on Environmental Quality
New Technology Research & Development (NTRD) Program
Monthly Project Status Report
GTI Project # 20284

Contract Number: 582-5-70807-0001

Grantee: Gas Technology Institute

Date Submitted: December 10, 2006

Report for the Monthly period: November 2006

Starting Date: November 1, 2006 Ending Date: November 30, 2006

Section I. Accomplishments (*Please provide a bulleted list of project accomplishments as well as a description of their importance to the project.)*

Accomplishment	**Importance to the Project**
GTI and the University of Texas, Center for Electromechanics have agreed on all key terms for UT-CEM's participation in this project. A contract is in process of being negotiated that would provide for co-funding of a fuel cell bus in Austin. Draft has been submitted to TCEQ	UT-CEM's participation in the project is important because it provides important funding for the fuel cell vehicle, it provides certainty for site selection, thereby clarifying outstanding design criteria, and UT-CEM will be an excellent host for the station demonstration. This accomplishments significantly exceeds project goals as UT-CEM brings federal matching funds and resources to this project.
GTI and UT – CEM have selected a fuel cell vehicle provider. Contract language has been agreed-to by the vehicle supplier and signed-off. GTI is finalizing a purchase order for the vehicle. The draft purchase agreement has been submitted to TCEQ.	Identifying a fuel cell vehicle configuration and supplier is a key deliverable for this project.
GreenField has completed the design of the fueling station skid and container configuration. The PLC unit has been delivered to GreenField for installation into the integrated fueling station system.	GTI and GreenField are finalizing the integration of the five key components of the on-site hydrogen station configuration; the reformer (hydrogen generation unit, purification system, compressor, storage, and dispensing. There are also multiple sub-components such as the water treatment system, filtration, air intake, and cooling system that are being engineered. Subsystem configuration and integration "inside the container skid" will continue to be the focus of the fueling station work for the next reporting period.
GTI is 80% complete on reformer skid construction and expects to begin testing completed skid assembly in December.	The reformer skid is the "heart" of the hydrogen fuel supply system and contains the key technology upon which the modular fueling system is based.

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

Accomplishment	Grant Activity
Host site negotiations for station deployment	Task 1, Article 2.1.2 in the Project S.O.W.
Vehicle proposal evaluations	Task 2
Integrated fueling station engineering and design	Task 1
SMR design, fabrication and testing	Task 1, Article 2.1.1.1 in the Project S.O.W.

Section II: Problems/Solutions

Problem(s) Identified (*Please report anticipated or unanticipated problem(s) encountered and its effect on the progress of the project)*	GTI will request a no cost time extension in December due to expected delivery of the fuel cell vehicle and because of fabrication delays in the hydrogen fueling station system.
Proposed Solution(s) *(Please report any possible solution(s) to the problem(s) that were considered/encountered)*	The cause of project delays (fabrication delays due to material orders, and the identification of a fuel cell vehicle provider) have been identified and addressed.

Action(s) Conducted and Results *(Please describe the action(s) taken to resolve the problem(s) and its effect)*	GTI and GreenField, along with new project partner, UT-CEM are diligently addressing contractual and material supply issues and will be able to complete the project in the first quarter of 2007.

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)*

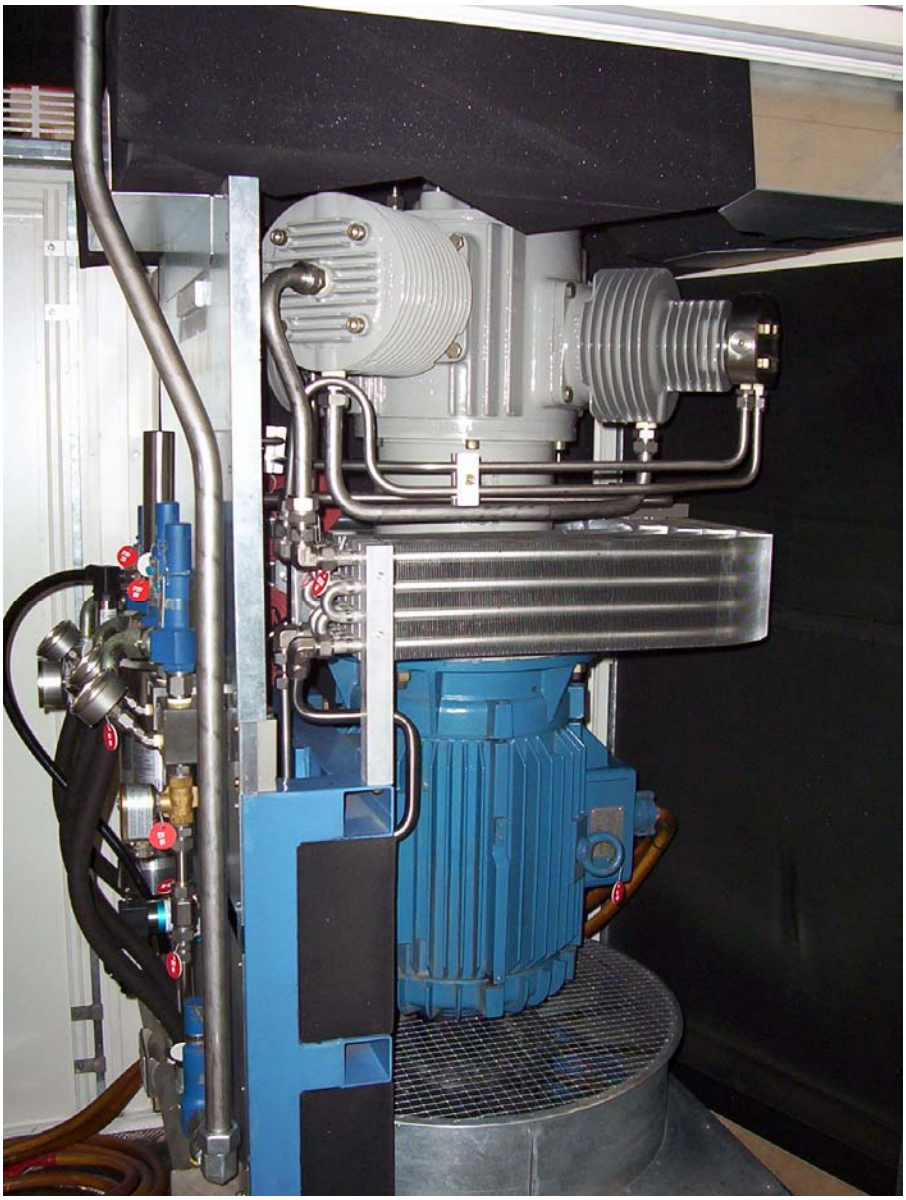
- Continue preliminary work on the selected deployment location and begin on-site permitting, gas supply, and operating groundwork.
- Generate a cost estimate for the deployment phase of the fueling station project
- Complete the fabrication work on the integrated fueling station.
- Complete all related partnering contracts, and fuel cell vehicle supply contracts.
- Schedule and complete a review with TCEQ for all proposed contract amendments that will be needed to accommodate expected project updates.

_____ Date: 10-10-2006

Authorized Project Representative's Signature

J. B. Weeks, Associate Director,
Hydrogen Energy Systems
Gas Technology Institute

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.*



Picture of GreenField hydrogen compressor that is contained within the container skid of the hydrogen fueling system. Hydrogen fuel supplied by the reformer and purified by the PSA unit is then compressed to about 400 Bar by this compressor for dispensing to vehicles.