

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

Contract Number: 582-11-11145-3264
Grantee: The University of Texas at Austin (UT)
Report for the Monthly period: June 2012 **Date Submitted:** July 9, 2012

Section I. Accomplishments

Provide a bulleted list of project accomplishments as well as a description of their importance to the project.

- Ran station and produced hydrogen. Carbon monoxide (CO), methane (CH₄), and carbon dioxide (CO₂) impurities measured in the produced hydrogen (H₂) were below J2719 limits.
- Produced approximately 54 kilograms of H₂ and compressed into storage.

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

- Task 2.1.1: The PERFORMING PARTY will contract with GTI to prepare hydrogen fueling station and increase hydrogen fuel capacity.
- Task 2.1.2.5: The PERFORMING PARTY and GTI will provide a supply of backup hydrogen for bus refueling.
- Task 2.3: The PERFORMING PARTY will ensure that the Proterra bus, Capital Metro personnel, and support material are prepared for the demonstration.

Section II: Problems/Solutions

Problem(s) Identified: Report anticipated or unanticipated problem(s) encountered and its effect on the progress of the project

- a) Lost communication with priority panel remote input/output (IO) island
- b) Kaeser blower would not start

Proposed Solution(s): Report any possible solution(s) to the problem(s) that were considered/encountered

- a) See below
- b) See below

Action(s) Conducted and Results: Describe the action(s) taken to resolve the problem(s) and its effect

- a) GTI shipped a new remote IO communication module and it was installed by UT personnel. Communication to the remote IO island was then re-established and the station and dispenser were back online.
- b) Circuit breaker was found to be tripped for Kaeser blower. The breaker was reset and starter errors were cleared and the blower was started.

Section III. Goals and Issues for Succeeding Period:

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

- GTI will continue to operate the station in order to produce H₂
- GTI will monitor the operation of the station and modify the programmable logic controller (PLC) code as needed in order to increase the level of automation and unattended operation time.
- GTI is developing a list of maintenance activities to accomplish during the next trip to the site. This list includes:
 - Removing spent desulfurizer adsorbent and replacing with fresh material
 - Replace check valve on priority panel
 - Calibrate station and dispenser H₂ sensors
 - Check site flame detector
 - Replace air actuator on priority panel that has developed an intermittent leak
- GTI will also take a sample of the produced H₂ in order to run a more detailed impurity analysis during the next trip.

Date: 7/9/2012

Authorized Project Representative's Signature

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.*