

**Texas Commission on Environmental Quality  
New Technology Implementation Grant (NTIG) Program  
Quarterly Project Status Report**

**Contract Number:** 582-11-13126-3225  
**Grantee:** General Compression  
**Report for the Monthly period:** Q4 2013 (Oct-Dec 2013) **Date Submitted:** January 6, 2014

**Section I. Accomplishments**

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

General Compression submitted Task 4 deliverables and resubmitted Task 5 deliverables on November 18, 2013. General Compression also submitted Amendment Request No. 05 on January 6, 2014, requesting a revision to the budget to align with the Task 5 redesign.

**Task 1**

- Approved by February 6, 2013 Letter.

**Task 2**

- Approved by June 12, 2012 Letter.

**Task 3**

- Approved by April 18, 2013 Letter.

**Task 4**

- The following Task 4 deliverables were submitted on November 18, 2013:
  - Task #4 Deliverable Report
  - Confidential and Proprietary Appendices

**Task 5**

- The following Task 5 deliverables were re-submitted on November 18, 2013:
  - Task 5 Deliverable Report, Resubmission
  - The final design drawings for the GCAES™
  - GCAES™ Advances System Prototype Plant As-Built Specification
  - ASP Retrofit No.1, Gaines Texas Dispatchable Wind
  - The list of necessary components for the GCAES™

**Task 6**

- General Compression expects to submit the Task 6 deliverables after receiving the Notice to Proceed from TCEQ after its approval of the Task 4 and Task 5 reports.

## **Section II: Problems/Solutions**

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

- As previously reported, the redesigned rolling sock seal has not met its design specifications, so will need to be replaced for the first stage to function at full design pressures.
- Certain hydraulic valves leak, and certain process valves will also need to be replaced.

*Proposed Solution(s): Continue to report any possible solution(s) to the problems that were considered/encountered*

- Additional design changes – more fundamental than those previously undertaken – have been made for the next replacement seal.
- Unlike with the prior seal failure, the machine was able to accumulate operating hours even after this seal's problems became evident, albeit at lower pressures, slower stroke speeds and shorter stroke lengths.
- An analysis of the hydraulic valve leak suggests a repair that may allow full or near full functionality at reasonable cost and without undue delay.
- The process valves will be replaced.

## **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:*

- Upon receipt of the Notice to Proceed, General Compression will proceed with Task 6 (Procure components for, build, and install GCAES and wind turbine) and Task 7 (Final Report); as well as submit reimbursement requests and supporting expense documentation.

*R.J. Lyman – President*

*Date: January 6, 2014*

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*Authorized Project Representative's Signature*