

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

**Contract Number:** 582-15-53907-1471  
**Grantee:** Southwest Research Institute (SwRI)  
**Report for the Monthly Period:** Q2 2015 (Apr-Jun 2015) – First Report      **Date Submitted:** July 9, 2015

**Section I. Accomplishments**

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

- **Noticed to Proceed (NTP) letter received on June 11, 2015.**
  - This letter provides the executed contract for the grant, authorizing the activities according to the terms of the grant contract, as well as the basis for the reporting periods for all the tasks and deliverables.
  
- **Task 1- Project definition of expectations, constraints, and implementation. 100% completed.**
  - SwRI has defined the expectations, constraints and characterization of the pollution abatement system (PAS) performance requirements.
  - SwRI has developed a project budget, and a formal execution plan.
  - SwRI has issued purchase orders as follows:
    - *Continental Research and Engineering (CR&E)*
      - Complete systems design, including ductwork, equipment selection, operational controls, duct supports at equipment pad, and interface to existing systems.
    - *Zephyr Environmental*
      - Provide assistance in obtaining a pollution control project standard permit.
    - *ESA Engineers*
      - Provide supplemental mechanical, electrical, and plumbing services for the installation of the PAS.
    - *Pape Dawson Engineers*
      - Provide civil engineering and surveying services in the area.
    - *RSCR Engineers*
      - Provide basic structural design services for the installation of the PAS.
    - *Howell Crane and Rigging*
      - Crane operator and equipment services utilized to offload the baghouse equipment.

- **Task 2-Design, interface, and support systems. 95% completed.**
  - *Task 2A- CR&E system design. 100% completed.*
    - Design of the PAS has been completed.
      - Inclusion of a spark arrester is a recent requirement for the system (please refer to section II of this document). This addition has not affected the overall design of the system.
  - *Task 2B- Scope definition of Engineering Services. 100% completed.*
    - Completed the definition of responsibilities and duties for the engineering services firms required to document the implementation phase.
    - Proposals have been received, and contracts written.
  - *Task 2C- SwRI Responsibility Design Services- 90%*
    - Conducted project design kick-off with engineering services firms and SwRI stakeholders.
    - Completed implementation design documents and conducted stakeholder review/coordination meetings at 50%, and 95% completion.
    - Finalized implementation package documents. 90% ready for issue to contractors for bidding.
  
- **Task 3-Contractor selection. 50% completed.**
  - *Determined implementation delivery process model for construction.*
    - This process has been segmented into three distinct packages:
      - Package 1: Site work, concrete, control building and structural
      - Package 2: Mechanical systems and PAS erection
      - Package 3: Electrical
    - Implementation Package 1 has been issued for bid.
  
- **Task 4-Secure an air quality standard permit. 100% completed.**
  - *An air quality standard permit for pollution control project was issued on April 13, 2015.*
    - Standard Permit Registration number: 1301031
  
- **Task 5- Procure PAS Process Equipment. 95% completed.**
  - *95% of the equipment is currently on site.*
    - Baghouse
      - Filter housing, structural steel supports, filter bags, filter cages, wireway, rotary valve, and filter pre-coat materials.
    - Activated carbon/dry sorbent (AC/DS) injection systems
      - Injection skid, electrical panel, vent line materials, eductor, blower, platforms, and transport tube.
    - Induced-draft (ID) fan
    - Discharge stack
    - Filter bypass valves

- Ductwork
- Quench
  - Quench vessel, flow meter, discharge gate
- Expansion joints
- Duct supports
- Instruments
- Variable frequency drive (VFD) for the ID fan

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

Each accomplishment has been identified and associated with a task activity delineated in the grant agreement. The following list shows a summary of the tasks and their progress:

- Task 1- Project definition- 100% completed
- Task 2 – Finalize design for PAS, interface, and support systems – 95% completed
- Task 3- Select contractors – 50% completed
- Task 4- Secure necessary permits – 100% completed
- Task 5 – Procure PAS process equipment – 95% completed

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

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

- a) Cost escalation for the AC/DS injection system and the baghouse increased 10.2% and 11.6%, respectively.
  - o *The vendor's quote that was used in the proposal that was submitted for this grant reflected material costs for the year 2014, while the actual costs reflect the equipment costs in 2015.*
  
- b) Inclusion of a spark arrestor to the original was recently determined by Facilities Engineering and the Fire Technology department.
  - o *This inclusion does not present an effect in the progress of the project.*

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

- a) Request additional grant funds to cover the increase in costs of these two equipment items.
  
- b) CR&E will perform formal engineering studies for the inclusion of this system.

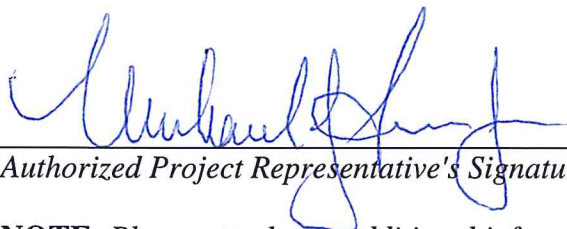
*Action(s) Conducted and Results: Describe the action(s) taken to resolve the problem(s) and effect(s) had*

- a) No action has been conducted to date. SwRI will provide cost documentation of expenses with reimbursement request.
  
- b) This is a new item; no action has been conducted yet.

**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*

- **Submission of Tasks Report**
  - SwRI plans to submit a report encompassing the first four tasks.
  
- **Task 3 – Contractor selection**
  - Develop and issue competitive packages 2 and 3 for bid.
    - Package 2: Mechanical systems, plumbing, and PAS equipment erection.
    - Package 3: Electrical, instrumentation, and controls.
  - Bid Invitations
  - Determine best value, most qualified contractor
  - Execute construction agreements
  - Update budget
  
- **Task 6 – Construct and assemble PAS, interface, and support systems equipment**
  - Work scheduled to begin in early August, 2015.
    - Site work
    - Concrete foundations
    - Equipment pad for PAS
    - Primary electrical systems
    - Construct controls/storage building
    - Begin exhaust piping modifications
    - Begin the erection of PAS equipment
    - The expected completion date of Task 6 is by the end of November 2015.
    - An update on this task will be provided in the second quarterly report (3Q-July-September 2015).
  
- **Submit request for reimbursement.**
  - Complete and provide the Financial Status Report for reimbursement of equipment expenses, including justification for equipment cost escalation.
    - Form 1-Request for reimbursement
    - Form 2- Financial status report



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*Authorized Project Representative's Signature*

Date: 7/9/2015

**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.*