

## **NTRD Program Disclaimers**

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11/2/05

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

Contract Number: 582-5-70807-0019

Grantee: Sonoma Technology, Inc.

Date Submitted: October 20, 2005

Report for the **Monthly** period:

Starting Date August 29, 2005 Ending Date September 25, 2005

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

During the above period STI completed the following:

- Conducted weekly project meetings with STI staff.
- Started installation of radar wind profiler and surface meteorological equipment. However, we did not complete the installation during the first trip because we were evacuated for Hurricane Katrina before installation was complete.
- After the evacuation for Katrina, we worked to reestablish contact with TEST staff who were based in New Orleans.
- Created a new installation plan to complete the installation during the second trip.
- Traveled to platform a second time and completed the installation of all the equipment. Began operation of the radar wind profiler and surface meteorological equipment. However, before we could get the Sodar instrument to produce good data, we were evacuated for Hurricane Rita.
- For installation the following steps were completed:
  - Created shipping items checklist
  - Prepared equipment for shipping. This included re-crating radome; re-crating Sodar once inspected; crating/wrapping clutter fences; water proofing and crating electronics, surface meteorological sensors, and all necessary tools into baskets for shipping. Numbered the baskets and itemized what was in each.
  - Oversaw loading and tie-down of equipment for trip to Galveston.
  - Verified that all equipment had been transported to the platform.
  - Setup radar wind profiler.
  - Attached radar wind profiler guy wires to platform deck using lag bolts.
  - Installed a Class 1 Division 2 shelter on deck and attached shelter to deck.
  - Ran power from platform B to platform D (over 800 ft. distance) following all regulations. Learned that the circuit on platform B was inadequate. Ordered a replacement circuit. The time and materials associated with the power install were not part of the original scope of work.

- Installed cable tray and ran all cables through tray to meet Shell's Class 1 Division 2 requirements.
  - Installed purge system on radar wind profiler to meet Shell's Class 1 Division 2 requirements. This included running tubing from platform B to platform D to supply the radar wind profiler with clean pressurized air. If Shell allowed us to follow the Federal Class 1 Division 2 requirements this effort would not have been necessary.
  - Installed the Sodar.
  - Attached guy wires from the Sodar to the deck.
  - Installed surface meteorological equipment on tower that was tall enough to be out of range of Shell Class 1 Division 2 requirements. If Shell had allowed us to follow the Federal requirements the extent of this effort would have been much less.
  - Attached cables to Sodar. Attached cables to shelter through penetrating system, then to computer inside shelter.
  - Attached DC power cable to batteries and jumpers to batteries. Installed batteries in battery cases. Attach battery charger to batteries.
  - Connected serial port and Ethernet connections from the Sodar computer to the radar computer.
  - Installed lightning rod to tower and grounded it.
  - Installed cable tray and ran all instrument cables through tray to meet Shell Class 1 Division 2 requirements.
  - Completed installation of satellite communications (using Stratos Offshore Service Company) for transferring meteorological data from platform to STI.
  - Grounded all equipment
  - Conducted final safety inspection with Shell and received approval from Shell that we meet their safety and Class 1 Division 2 requirements.
- Started operations of the website and display of the photos, radar wind profiler data, and surface meteorological data.
  - Completed lease agreement with Atmospheric Systems for use of the sodar on the platform.
  - Began working the Atmospheric Systems to debug the Sodar. Continued trouble shooting of Sodar System remotely with assistance from Shell platform personnel.
  - Made data available to NOAA FSL and National Hurricane Center.

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

Preparation and Installation of RWP, RASS, Sodar, and surface meteorological instruments.

Section II: Problems/Solutions

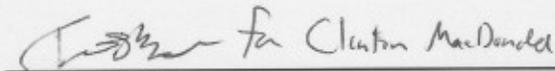
<p><b>Problem(s) Identified</b></p> <p><i>(Please report anticipated or unanticipated problem(s) encountered and its effect on the progress of the project)</i></p>	<p><i>The effort to complete the installation has been much greater than originally planned. This is primarily due to the following reasons:</i></p> <ul style="list-style-type: none"><li><i>• The evacuations for Hurricane Katrina and Rita have resulted in the team having to make two trips to the platform instead of one to complete the installation. In addition, a third trip may be needed to get the Sodar producing good data.</i></li><li><i>• Shell's Class 1 Division 2 requirements are more stringent than the Federal requirements and have required extensive modifications to our equipment and supporting infrastructure.</i></li><li><i>• The installation of power, communications, and a shelter has been more than estimated by TEST. This is due to some unforeseen issues and that the planned work took longer than originally estimated. Some unforeseen issues include that the power had to be run 800 ft instead of 600 ft; the circuit that Shell provided was not adequate and had to be replaced, and the purge system needed clean pressurized air that was only available from platform B (about 800 ft away).</i></li></ul> <p><i>Electronic interference is affecting the quality of the sodar data. We were unable to troubleshoot this on the platform due to evacuation for Hurricane Rita.</i></p> <p><i>It is likely the additional cost associated with installation will far exceed our savings from the reduced cost shipping and helicopter flights. We will not know the final costs until we receive an invoice from TEST automation and control.</i></p>
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<p><b>Proposed Solution(s)</b></p> <p><i>(Please report any possible solution(s) to the problem(s) that were considered/encountered)</i></p>	<p><i>STI will need to work with TCEQ to recover costs associated with the power, shelter, communications, Hurricane Katrina and Rita, and additional explosion proofing requirements that were beyond the normal scope of platform operations and beyond the scope of the original contract.</i></p> <p><i>After Katrina, STI traveled to the platform a second time to complete the installation of the meteorological equipment.</i></p> <p><i>STI is working with the Sodar owner to identify a solution to the electronic interference that is affecting the quality of the Sodar data. We will try to fix this remotely. If that is not successful, we will send our Sodar consultant to the platform to trouble shoot on-site.</i></p>
<p><b>Action(s) Conducted and Results</b></p> <p><i>(Please describe the action(s) taken to resolve the problem(s) and its effect)</i></p>	<p><i>Meteorological equipment was completely installed.</i></p> <p><i>STI is working with the sodar owner to identify a solution to the electronic interference that is affecting the quality of the sodar data.</i></p> <p><i>STI has verbally notified TCEQ TexAQS-II project leaders of additional costs associated with the power, shelter, communications, Hurricane Katrina and Rita, and additional explosion proofing requirements that were beyond the original project scope. The additional cost should be known by the end of October.</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)*

*In October, we hope to:*

- *Resolve the electronic interference problem and begin real-time display of the sodar data on STI's website.*
- *Continue to operate the equipment.*
- *Resolve budget issues discussed in the Problems Identification Section.*



Date: October 20, 2005

**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.*