S·C·U·D
SEVIERCOUNTYUTILITYDISTRICT

September 29, 2014

Ms. Mahua Mazumdar
Agreement Administrator (AA)
U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration
Office of Acquisition Services, PHA-30
1200 New Jersey Avenue, SE, E22-230
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Mr. Sam Hall
Agreement Officer's Representative (AOR)
U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration
Office of Pipeline Safety, PHP-20
2180 Adventure Lane
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E-mail: sam.hall@dot.gov

RE: Technical Assistance Grants (TAG) to Communities Program Final Report
Funding Opportunity Number: DTPHS6-13-SN-000003
CFDA Number: 20.710
Award Number: DTPH56-13-G-PHPT21
Project Title: Sevier County Utility District's project to upgrade and enhance both pipeline and public safety
Grant Amount: $50,000
Effective Date: September 30, 2013

Dear Ms. Mazumdar and Mr. Hall,

On behalf of Sevier County Utility District (SCUD), I would like to thank the U.S. DOT PHMSA Office for selecting our organization to receive Technical Assistance Grant funding. This grant has definitely allowed us to provide greater public and pipeline safety to the community. Please accept this letter as the Final Report for the above referenced contract. Below is an outline of the completed objectives as outlined in Article III of the contract (Expected Program Outputs). Attached are copies of the invoices and pictures/documents of the work that was completed. The Federal Financial Report, Standard Form (SF-425) is also attached.





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1. **Deploy ESRI Geographic Information System (GIS) web mapping technology to the general public and SCUD employees.**

SCUD selected Magnolia River Services, Inc. (MRS) to upgrade and deploy our ESRI mapping system. MRS began offsite configuration and updates on the ESRI server the week of March 24. This upgrade from ArcServer 10.0 to ArcServer 10.2 was necessary to deploy the mobile mapping solution to our field crews. Onsite training, setup, desktop upgrades and final installation was performed on April 28-30. At this time, the ESRI web map was deployed and the general public was given external web access to an interactive map that functions much like Google Maps or Bing Maps. The user can zoom/pan, look-up streets/addresses, and view gas main locations and size. The direct link to the website is http://gis.scudgas.org/apps/publicwebmapscud/ and it can also be accessed through a link from our company website (http://www.scudgas.org). The general public, local government officials, and contractors have become more aware of facility locations, which helps decrease third party damage and increase awareness during emergency situations. This has also been helpful to local officials to know if there are any conflicts that they should be aware of when planning for future infrastructure or developments. SCUD employees have login access to a web or mobile map that has additional detailed facility information such as customer account information, regulator station pressure settings, maximum allowable operating pressure (MAOP) of gas lines, valve locations, and other critical information such as install date, type of fittings, etc. By having rapid access to this information and the ability to view it on a map out in the field, SCUD employees have been able to make informed decisions in emergency situations, which provides better service and safety to our customers and community. The SCUD Engineering and IT department have hosted two training classes on how to use the ESRI webmap and also how to use the ESRI ipad app, which displays the same information. This training took place on 5/5/2014 and again on 8/14/2014 as more ipad's were ordered. SCUD currently has 25 employees that are utilizing mobile mapping. We have eight field users that are using the webmap with laptops and another 17 users that are using ipads. The following is a breakdown of the number of users from each department are using the mobile map.
3 – Top Management
2 – Engineering Department
9 – Operations
5 – Inspectors / Locators
5 – Marketing / Customer Service
1 – Safety / Compliance

Everyone has realized how GIS can make their job easier by allowing them to quickly utilize information, which ultimately provides better service and safety to the community.

Budget Amount in TAG Proposal: $15,000.
Actual Amount:
$5,000 - Upgrade to our software license (Equipment)
$14,300 - Software configuration and implementation by MRS (Contractual)
$964.80 – Mileage & Accommodations by MRS (Travel)

$288.33 – Food by MRS (Other)
**$20,553.13 – Total ($17,858.75 TAG Funds, $2,694.38 SCUD Funds)**

2. **Purchase an instrinsically safe Remote Methane Leak Detector (RMLD), and train employees on how to properly use it.**

The RMLD was ordered from Heath Consultants, Inc. (Heath) on 12/4/2013 and received on 1-14-2014. Five SCUD employees received training from a representative of Heath at SCUD on 12-13-2013 with Heath's loaner RMLD and learned how to properly use the equipment. Heath allowed us to keep the loaner unit until we received our unit. Once we received our RMLD, the Heath employee came back and went out in the field with these same SCUD employees to witness them using the unit and verify that they were using it correctly. The RMLDs has been used by these SCUD employees for leak surveys, by emergency responders for leak investigations and odor complaints, and by inspectors for pipes in difficult to reach or inaccessible areas. The RMLD has been extremely useful in allowing the user to safely survey difficult to reach areas, such as in busy roadways and intersections, yards with large dogs, over or through fences, under parked vehicles, areas with locked gates, under bridges, and other hard to access places. One outdoor odor call comes to mind shortly after we received the RMLD where SCUD employees were able to quickly pinpoint a leak under the roadway with the RMLD and repair the situation. The RMLD is a wonderful tool to reduce the time required to pinpoint a possible leak location, which ultimately provides greater public safety.

Budget Amount in TAG Proposal: $20,000
Actual Amount:
$19,950 – Purchase of 1 RMLD (Equipment)
$206.11 – Shipping by Heath (Other)
**$20,156.11 - Total**

3. **Purchase and install two (2) Remote Terminal Units (RTUs) for our Supervisory Control and Data Acquisition (SCADA) system to be able to accurately monitor and record pressure, flow, and ambient temperature in real time.**

SCUD selected Innovative Controls, Inc. (Innovative) to upgrade and deploy the two RTUs. With the help of Innovative, it was determined before the project began that we needed to upgrade our SCADA server to a Windows 2008 R2 machine before we would be able to add these additional sites and upgrade our SCADA software. SCUD purchased a new Dell PowerEdge server on 10/10/2013 at a cost of $2,836.45 and paid for this expense using SCUD funds. Innovative began offsite setup and configuration of the new server on the week of 12/12/2013. As part of the proposal, Innovative also upgraded our SCADA IFIX software from version 5.0 to 5.5 and iHistorian software from version 3.5 to 4.5.

SCUD had purchased the two RTUs (enclosure and main board) prior to this grant being awarded, so the cost of the two RTUs ($5,382) was paid by SCUD and was not included in the grant funds. However, additional hardware and software was required to be purchased and

installed in the RTU to allow them to communicate via cellular phone modems. Operating the RTUs on new cellular phone technology is cheaper than having dial-up telephone service and also provides a quicker and more reliable connection at these locations. The modems required an additional software driver to be purchased and installed on the SCADA server. It also resulted in additional programming time required for Innovative.

Two RTUs were installed at critical regulator station locations and high consequence areas in our distribution network. These units were integrated into our existing SCADA system and allow us to accurately monitor and record pressure, flow, and ambient temperature in real time. This information has allowed us to know exactly what is happening along the pipeline at all times, which permits quick response time to possible equipment malfunctions, leaks, third party damages, or any other unusual activity along the pipeline, as well as to monitoring load control. The RTUs have given us a more detailed view of our operations in real time and most importantly provide greater public safety to our community. If any of these value fall outside of the acceptable range that we set, we will get an alarm via text message. This project was completed on 4/17/2014. I am happy to report that we have not had any alarms or issues since the setup was completed.

Budget Amount in TAG Proposal: $15,000
Actual Amount:
$1,800 - Upgrade to our software license (Equipment)
$1,143 – Purchase 2 wireless modems for the RTUs (Equipment)
$8,362.14 - Engineering services, setup, programming, installation, and technical assistance by Innovative (Contractual)
$680 – Travel Time for setup and installation by Innovative (Travel)
**$11,985.14 - Total**

These projects were completed at a final cost of $52,694.38 (Total of attached invoices). Of that amount, $50,000 were federal funds from the TAG and $2,694.38 were SCUD funds. As explained in the project outlines above, SCUD also contributed additional funds to best utilize the federal TAG funds.

Please contact me if you have any further questions or require any additional documentation.

Sincerely,

James Greene

James Greene
Director of Engineering & Technical Services
Principal Investigator (PI) of PHMSA TAG