



STC Support of CBRN Testing at Dugway

In the heart of Utah's West Desert, U.S. Army Dugway Proving Ground (Dugway) performs developmental and operational testing of chemical/biological (CB) defense equipment before it is fielded to warfighters. Dugway offers a "test tube to battlefield" suite of test capabilities that evaluates equipment effectiveness in laboratory, chamber, and field trials in realistic operating conditions. Data collection from that testing is primarily carried out by Dugway Data Services Team (DDST), for which STC is the prime contractor. Contract employees perform essential test support functions, from test inventory tracking to data collection to test incident reporting.

Currently utilizing Dugway's extensive capabilities and expertise is a program that looks to enhance warfighters' ability to identify CBRN (Chemical, Biological, Radiological, Nuclear) threats and determine protection levels needed to work in sensitive sites. Dugway's part in the program is to evaluate several detectors designed for use in areas not accessible by large, mounted CBRN detectors.

The data resulting from Dugway's testing will be used to make decisions about fielding the detectors to warfighters, so the importance of a high-quality test environment, management of test assets, and accurate data collection cannot be overstated. To help ensure testing success, Dugway scientists, test control officers, and test officers have enlisted the aid of DDST personnel.

Ms. Judy Castagno (STC) and **Ms. Jill McAfee** (Mellor Engineering) describe their work on the project as encompassing a wide



STC's Ms. Judy Castagno records pressure gauge readings on a glovebox used for conditioning systems under test.

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variety of essential test-related tasks. They each work up to 16 hours per day and up to 5 days per week managing test item inventory, tracking data logs, recording test data, and writing test incident reports in support of the test program.

"To the chem lab, we are the face of DDST," says Ms. McAfee.

Because they are involved in every step of the testing process, Ms. Castagno and Ms. McAfee say that the job requires them to be organized and able to find things quickly. Tracking the systems under test (SUT) during

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STC has Certified Welding Inspectors (CWI)

In effort to further develop STC's fabrication, design, and engineering capabilities, **Mr. Eric May** and **Mr. Matt Stearman** have taken and passed the exam to become Certified Welding Inspectors (CWI). We would like to recognize their efforts and dedication in pursuing this certification

and offer them our congratulations for this achievement. **Congratulations!**

As STC pursued our welding program last fall, we recognized the need to have CWIs as part of developing a comprehensive program. During the welding certification process, we contracted a CWI with whom to work. This led to the achievement of certified welding procedures and qualified welders, but did not allow us to cite a CWI on staff. We now have two CWIs on staff, and they are currently identifying new procedures that will help improve our welding program. The certification process was neither easy nor quick and took a great deal of dedication. Matt and Eric spent a lot of their own time studying and preparing for the certification exam. They immersed themselves into the effort to successfully pass the exam, and spent a week attending an eight hour a day course. The course was in Denver, Colorado

in January 2013, followed by an eight hour exam. Based on the CWIs we've spoken with, a large number of welders who take the exam do not pass the first time they take it. Matt and Eric passed on their first attempt, and as a result, STC has two new CWIs.

STC's new CWIs are now excited about putting their certifications to work and are currently developing welding procedures for Aluminum and Chrome-Moly. This new capability can be cited both individually and collectively along with our excellent welding qualifications. Additionally, this capability will more readily allow us to pursue new certifications for other materials and will provide

STC with the ability to more quickly respond to customer needs. Having CWIs on staff will also provide us with an ability to visually inspect our welds to provide a level of quality assurance we didn't previously have. The ability to provide a better level of quality

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Mr. Eric May (left) and Mr. Matt Stearman (right).



STC Education Outreach

Since the early 1990s, former professor at both European and American Universities, and program manager of the Science and Technology International Education Program (www.STIEP.org), **Dr. Amar Choudry** has provided opportunities to motivate graduate students in Europe to conduct internship research on diverse aerospace topics at different U.S. research facilities. These topics range from wake vortex studies to orbital debris management. Working through Science and Technology Corporation (STC), STIEP has provided over 120 research internships, with approximately 4–6 interns per year. The program's philosophy aims to rectify the reality that talented people can be found anywhere in the world, but opportunities to advance and motivate those talented few are not as available or accessible.

As reported in the NASA Research Park Post (Spring 2012), STIEP facilitated research internship opportunities for students from Universities in Mexico, Singapore, Spain, France, and the Netherlands. This Spring 2013, eight more students graduated from the program. The STIEP program



NASA Ames Research Center: Mr. Lewis Braxton, Deputy Director; Dr. Jacob Cohen, Chief Scientist; Dr. William Warmbrodt, Aeromechanics Branch Chief (and Mentor); Mr. David Morse, Dean of Students; Mr. Craig Burkhard, Chief Scientist Staff. Technical University of Delft, Netherlands: Mr. Chetan Angadi, Mr. Paul Bucksch, Mr. Rik Langeweg, and Mr. Saish Sridharan. École Nationale Supérieure de l'Aéronautique et de l'Espace, France: Mr. Thomas Lambot. International Space University, United States: Mr. Iman Datta.

was especially proud of three students who were selected by their mentors to continue their research and were provided positions at NASA. In addition to their research, STIEP encourages the students to become active in their local community where they intern by volunteering at local events or education

outreach; for example, the students helped provided organizational support for local events held in the Bay Area, such as the Silicon Valley Space Business Roundtable and the LunarCubes workshop in Palo Alto, California. In 2012, the students participated in local education outreach in San Jose high schools and middle schools, along with other NASA Ames volunteers.

Sponsored through STC's STIEP initiative, STC's Chief Scientist, **Dr. Mark Schoeberl** and the University of Maryland, Baltimore



Dr. Mark Schoeberl, STC Chief Scientist (left) and Mr. Steve Buczkowski, UMBC Ph.D. Student.

County (UMBC), **Professor Vanderlei Martins**, developed a pico-satellite named QubScout. QubScout is a prototype mission

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set-up and take-down alone would quickly become a nightmare if they didn't maintain constant awareness. Batteries, gasses, sensors, and other items are meticulously monitored. Add to that reams of collected data along with detailed reports of testing irregularities, and assisting in Dugway's chemical laboratories becomes a job requiring serious focus and dedication.



Ms. Jill McAfee of DDST partner Mellor Engineering records test data inside Dugway's Combined Chemical Test Facility.

The recorded test data is the most critical piece of Dugway's testing for this or any other program. Department of Defense program managers use the data to determine the usability of tested equipment. Each SUT is tested in prescribed environmental conditions, and



STC's Ms. Judy Castagno (left) and Mellor Engineering's Ms. Jill McAfee (right) review and record test data in the Test Control Officer's logbook inside Dugway's Combined Chemical Test Facility.

data have to be recorded during test set-up to ensure that the appropriate conditions are met before testing can begin. Ms. Castagno and Ms. McAfee monitor the test environment during set-up, keeping detailed logs to ensure testing validity.

Once testing has begun, Ms. Castagno and Ms. McAfee record test data for each SUT in a given test trial. The individual sets of collected data for each SUT are called "detection opportunities," up to six of which can occur during a given test trial. All of these recorded data are electronically documented as well as stored in hard copy.

"I don't have any more room in the office to store more binders of collected data," says Ms. Castagno. "There are so many!"

Yet while the job may at times seem taxing, Ms. Castagno and Ms. McAfee try to keep what they do in perspective, recognizing that Dugway's mission and the testing they support ultimately serves to protect the U.S. armed forces.

"The most important thing we have to remember as we do our jobs is that these detectors are going to be used in the field," Ms. Castagno says. "Our warfighters are going to be using them. You have to see the big picture." □

SECURITY CORNER

Protect Mobile Devices

- Lock device via password; set it to automatically lock after a certain time period
- Install antivirus protection
- Update operating system
- Update applications regularly
- Backup data
- Turn off Wi-Fi, location services, and Bluetooth when they are not in use
- Avoid texting or emailing personal information
- Log out of banking/shopping sites instead of closing the browser



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Mellor/STC TOCDF Effort Winds Down

Reductions-in-force (RIFs) on the Tooele Chemical Agent Disposal Facility (TOCDF) Project thus far in Closure have affected personnel in nearly every department; but none has seen a greater impact than the Battelle laboratory and monitoring subcontractor group – Mellor Engineering and Science Technology Corporation (Mellor/STC). On Thursday, 28 March 2013, 19 more employees finished their jobs, leaving only four remaining Mellor/STC people on site until sometime in June 2013, to assist Battelle with the last GA/Lewisite laboratory work and property disposition. Managers on Thursday, 28 March 2013, hosted a luncheon for the latest group of departing workers, also inviting some former workers back who still are working in Utah. **Mr. Steve Freudenberger**, STC Closure Laboratory and Monitoring manager, acknowledged RIFs are difficult and emotion-filled, but he says Mellor and STC people are proud of their accomplishments at the Sample Analysis Facility (SAF), and earlier, at the CAMDS laboratories, under contracts dating back to 1987. Mr. Freudenberger said, "We've seen a project that's been around a long time; that did a lot of work for the Army and the demil industry. To finally see that to its



Mellor/STC's staff gathered for this group photo on Thursday, March 28, 2013 just before a luncheon to honor 19 workers scheduled to be RIFed. Some former employees laid off last year also were invited. Mellor/STC, which continues to operate the GA-Lewisite Laboratory (GALL) in the Sample Analysis Facility (SAF), now has four employees remaining on site.

conclusion is rewarding. ... We've had a really good record here. Our safety performance has been outstanding. We haven't had a recordable injury in more than five years." Mr. Freudenberger said CAMDS closure already was being planned when he first arrived on site in 1989, which made it a challenge to hire people amid such uncertainty. Over the years, however, many Mellor/STC people launched successful careers on this site. Mr. Freudenberger said at last count, some 50 employees had transferred to TOCDF jobs with URS and Battelle. □

FOREIGN TRAVEL

STC must submit for approval to our insurance carrier all travel to countries that are on the sanctions list. The current list of sanctioned countries is below, but subject to frequent change. Without prior approval, the employee will be traveling without any STC-provided insurance.

Afghanistan	Libya
Belarus	North Korea (Democratic People's Republic of Korea)
Burma/Myanmar	Republic of Guinea-Bissau
Cote d'Ivoire (Ivory Coast)	Republic of Guinea (Guinea-Conakry)
Cuba	Serbia
Democratic Republic of Congo (DRC)	Somalia
Egypt	Sudan
Eritrea	Syria
Federal Republic of Yugoslavia	Tunisia
Iran	Yemen
Iraq	Zimbabwe
Lebanon	
Liberia (former Liberian Regime of Charles Taylor)	

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assurance has directed us to our next focus in regards to welding, which is in the realm of quality inspections. Our attention will be aimed towards Non-Destructive Examination (NDE), which includes dye penetration testing (PT), magnetic testing (MT), and ultrasonic testing (UT). This potential would further

STC's comprehensive welding program and continue our efforts to develop the best fabrication, design, and engineering group on the East Coast. This effort has taken another step forward with the CWI certifications that Eric and Matt have achieved. Again, **Congratulations!** □

NEW CONTRACTS

- STC completed subcontract negotiations with SAIC for the PAIS V subcontract, which is now a multiple-award IDIQ task order contract. To date we have submitted task order proposals, awarded one task order, and received notice that two other task orders were won by the SAIC/STC team and will be awarded to STC shortly.
- October 2012 – STC was on the winning team with Sev1Tech for the DHS TABSS contract. This is a five year, IDIQ task order contract.
- March 2013 – STC was on the winning team with ACT1 for the JPEO OPETS contract.
- March 2013 – STC became a subcontractor to Mellor Engineering for Agent Monitoring and Analytical Support Services in Libya. Mr. Steve Freudenberger will be supporting this effort through January 2014.
- STC and Vision Machine entered into two BPAs, each with the other, for welding and fabrication work. We also won a BPA with the U.S. DOT Maritime Administration for Welding Services, James River Fleet. This was an initial one year award and is renewable up to five years.
- STC continues to be awarded additional delivery orders under our NOAA Ancillary and Engineering BPAs in both Boulder, CO and NOAA NESDIS.
- Recently STC has been awarded new contracts and subcontract valued at over \$3M (not to include the IDIQ subcontracts) from our Government and commercial/prime customers, with aggregate orders totaling over \$1.9M under our GSA IT and PES contracts.

– **STC EDU** (Continued from page 2)

to test functionality and design of a new instrument that has been proposed for use on a larger satellite. Designed and assembled by the UMBC students (U.S. citizens), the QubScout was delivered to Morehead State University (MSU), Kentucky (**Professor Bob Twiggs**, advisor for the QubScout), in under 3 months and less than \$100,000. Program Manager for STC's Fabrication Division, **Mr. Jeff Manning**, supported the UMBC students by CNC machining the QubScout satellite bus in one day. Unfortunately, due to launch delays, the QubScout was sent back to UMBC for almost two years. The QubScout will be returned to Kentucky for integration in MSU's launcher and is scheduled to launch Summer 2013. □

HONORS and AWARDS

In 2012, STC improved its Milestone Loyalty Service Appreciation Program to award full-time and part-time employees for their loyalty of service to STC on reaching 3 years, 5 years, and every 5 years of service thereafter. Awardees are given the opportunity to select an award item out of the selection of awards available for the Awardees' milestone. The Awards are presented to Awardees at a luncheon held in their honor. □

25 YEAR EMPLOYEES



Delores Shackelford
March 1987



Chand Deepak
August 1988



Tonda Winston-Parham
August 1988



Paul D. Try
May 1988

20 YEAR EMPLOYEES



Merel D. Meyer
March 1992



Wesley D. Ercanbrack
June 1992



Joseph A. Traino, III
July 1992



Richard M. Gilligan, Jr.
September 1992



Carol Lightner
March 1993



John M. Forsythe
June 1993



Thomas H. Vonder Haar
June 1993



Dee M. Vonder Haar
June 1993

15 YEAR EMPLOYEES



Richard W. Travis
June 1997



Elyse A. Webb
October 1998



Grafton M. Apple, Jr.
January 2002



Samir V. Deshpande
April 2002



David B. Karnes
May 2002



Kent S. Billings
September 2003

10 YEAR EMPLOYEES

Not Pictured:

10 Year Employees: *Richard A. Frazer*, January 2002; *Jennifer D. Buchman*, January 2002; *Orville L. Tiger*, January 2002; *Parrish J. Vicars*, January 2002; *Brian T. Gollhardt*, February 2002; *Harvey M. Mosley*, February 2002; *Daniel W. Sexton*, May 2002; *David A. Lynerd*, January 2003; *Justin R. Thomas*, January 2003; *Anthony C. Heckler*, March 2003; *Hung P. Nguyen*, October 2003; *Hue T. Nguyen*, October 2003; *Michael G. Edler*, December 2003.