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COVID-19 Pushes Remote Testing Ahead

By Becki Bryant

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The Rapid Integration Acceptance Center (RIAC), a tenant at Dugway Proving Ground, successfully completed remote testing with Redstone Test Center (RTC). Challenges safely transferring the test data was the initial reason behind the planned move to real-time testing between the two Army Test and Evaluation (ATEC) subordinate organizations, but the coronavirus pushed implementation forward faster than anticipated.

"Our capability to conduct remote testing with Redstone is an example of something good coming from a bad situation," said RIAC Director Jennifer Gillum. "We'd been working with Redstone for some time to finalize our remote testing plan and most of the groundwork was complete, but COVID-19 helped expedite the planning and got us to execution sooner."

◆ RIAC remote testing.

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A Shadow UAS is launched from Dugway Proving Ground's Michael Army Airfield. Testing of the system's upgrades was recently done remotely. Remote testing eliminates the need for many of the test personnel to travel to Dugway. Photo by Al Vogel, Dugway Public Affairs

Command Perspective



By Col. Scott D. Gould

Commander, Dugway Proving Ground

refers to the ability to spring back after a time of adversity. It is our ability to cope, recover, and adapt after facing adversity. That adversity at an individual level could be something as simple as a flat tire on the way to work or something much worse. From an organization perspective, it could be bouncing back after a potential chemical exposure within the workforce or dealing with the next budget cut. How we react to adversity as individuals and as an organization matters. It matters as we collectively work together to overcome these challenges and accomplish our mission.

Are you resilient?

At Dugway Proving Ground we run a Commander's Ready and Resilient Council (CR2C). The mission of this council is to ensure all of us can achieve mission success but ultimately it is to make Dugway a great place to work, live, and play! One of the best ways to get at this goal is to be resilient as an individual and as an organization.

What is resilience? Resilience

makes for circumstances that challenge everyone's resiliency.

On the individual level, ensure you maintain your physical, emotional, and spiritual well-being. This also means engaging through your social network and family. Look for healthy ways to cope and adapt to the stresses in your life. For me, I find trail running, spending quality time with my family, and enjoying the great outdoors of Utah as ways to relieve stress, connect with my family, and bounce back from adversity. These things help me be resilient as an individual and ensure that I am ready and mission focused. I also find that engaging with you, the people who are Dugway, provides me energy and focus to command.

This all leads towards being positive and self-confident.

Resiliency goes beyond the individual and extends to the organizational level. I challenge leaders to find ways to make your people confident, connected, and valued. Create an environment based on trust and psychological safety. Leaders also need to unite their organization with a shared purpose. We have to adequately resource our people and support a learning culture. This builds resiliency within the unit.

We are all in this together. The resiliency of Dugway Proving Ground depends on your resiliency. It depends on everyone working together, moving forward. So I challenge you with the following: What are you doing to ensure your resilience and the resilience of your organization?

Find more information at <https://readyandresilient.army.mil/index.html>

RIAC Remote Testing...



Multiple monitors display the real-time data provided to test personnel at Dugway Proving Ground and Redstone Test Center during a test flight of a Shadow UAS. Photo by Porter Hansen, Dugway Public Affairs

Continued from page 1.

RIAC had previously tried remote testing, but had never executed it successfully on a long-term basis. This time it was done over several weeks during the testing of Shadow Block III upgrades. The data from the Shadow Unmanned Aerial System (UAS) test flights was

pushed out over the Defense Research and Engineering Network (DREN) in real time. Test personnel at DPG and those at RTC located on Redstone Arsenal, Alabama, were able to watch the same thing at the same time.

"They're seeing what we're

seeing," shared RIAC Test Officer Kipper Odom.

The next phase of testing, with the Gray Eagle UAS later this summer, aims to push the capabilities of remote testing even further by including the flight's test files in the real-time data. Remote piloting is also a future goal.

"This first remote test was a very successful first step," said Troy Hawkins, RTC Project Manager. "Like any new tool, we are learning what we can do." While the limits of remote testing are not fully known, the benefits are already clear.

"Remote testing is more efficient," shared Odom. "Fewer people are having to travel and it eliminates the challenge of safely transferring the data. Instead, the data is immediately available and we can share our observations

faster with the developers and they can work toward a solution—if they need to—right away."

And because fewer people are having to travel to Dugway Proving Ground, remote testing also helps reduce the risk of spreading the coronavirus.

"We don't want to risk anyone's safety or the viability of mission critical operations," Gillum explained. "Remote testing has clear benefits, but those benefits are of even greater value during a pandemic."



A pilot flies a Shadow UAS at Dugway Proving Ground. Remote testing between DPG and RTC was successfully completed over several weeks during the testing of Shadow Block III upgrades. Photo by Al Vogel, Dugway Public Affairs

SPITFIRE Doubles Task for Efficient Use

By Al Vogel
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At Dugway Proving Ground, the innovative SPITFIRE fixture is bagging two birds with one stone. While being validated for an upcoming test, it is also being used to ensure a new lot of glove box glove replacements are durable enough for use in the Chemical Test Division.

SPITFIRE (Swatch Permeation Test Fixture, Reengineered) is a recent fixture created for reduced cost of operation and easier setup when challenging samples of material (called "swatches") and how well the material protects its wearer from chemical agents and

hazards.

In the past, the AVLAG (Aerosol Vapor Liquid Assessment Group) was used to challenge swatches with agent, requiring tedious assembly with multiple bolts in a permanent chamber. SPITFIRE is within a wheeled glovebox chamber and may be moved from one lab to another before testing begins. It retains similar components to AVLAG, but the tension of a single clamp holds all pieces together tightly. In both systems, sandwiched within two hollow-centered components, is the test swatch. Agent or simulant is disseminated onto the swatch, and testing begins.

"The Air Force has scheduled a test of material, to contaminate it with X-amount of chemical agent vapor," explained Project Scientist Aaron Rogers of West Desert Test Center. "Then, the material will be monitored as the agent off-gases from the material. The Air Force wants to know if the levels get so low that it's possible to reuse the protective suit after a certain period of off-gassing time."

But before this test, SPITFIRE must be verified and validated – a series of steps to determine if a system or component meets all requirements. To that end, the material used in glovebox gloves also faces testing.

"We're verifying gloves for lab use," Rogers said. "The material needs to last a certain amount of time before it can be considered safe for use in the lab. In this case, however, we're actually letting it go long enough that we see a breakthrough of agent to the other side of the swatch."

Knowing the point of breakthrough will indicate when replacement is due. Eight glove samples will be challenged with chemical agent, and two additional samples serve as controls.

Rogers noted that engineers and testers are already designing an improved SPITFIRE 2.0, which



Material from a new lot of glovebox gloves, similar to this one, is being tested to determine if the gloves can resist agent breakthrough long enough for safe use within the Chemical Test Division. At the same time, SPITFIRE is using the glove testing to verify and validate that the test fixture itself functions as designed and is accurate. This classic example of downing two birds with one stone saves time and money, and reduces waiting time for the next customer.

will be quite different from the current model. At an Army post where innovation and efficiency are commonplace, one has to

wonder how many birds SPITFIRE 2.0 will bag with one stone.



SPITFIRE (Swatch Permeation Test Fixture, Reengineered) is a swatch testing fixture more easily set up than the AVLAG (Aerosol Vapor Liquid Assessment Group) created more than 20 years ago.

M53 Mask Arrives for Testing; Designed for Spec-Ops Uses



The M53 protective mask was developed to counter multiple threats found on the modern battlefield, war on terrorism and response by Special Operations units. Dugway Proving Ground recently received M53 masks for extensive testing. Here, one is attached to the Simulant Agent Resistance Test Manikin (SMARTMAN) fixture that simulates breathing patterns. Across the manikin's chest is a Powered Air Purifying Respirator that reduces breathing resistance by supplying filtered air to the mask. Photos by Al Vogel, Dugway Public Affairs



David Rose, project scientist for the M53 test (left) looks over the protective mask with Jim Haines, senior analyst. The M53 is based on the U.S. Government M50 Joint Services General Purpose Mask that replaced the M40 mask across all services. The M53 is designed to work with most PPE (Personal Protective Equipment) without having to remove or change components. It can supply its wearer with filtered air from surroundings, tanks, air purifying respirator or rebreather.

CHAPLAIN'S CORNER

By Chaplain (LTC) Shawn P. Gee

As I write my last Chaplain's Corner article for the Dispatch, I cannot help but reflect on this past year and all of the memorable events we've shared together. From Monday Night Madness events to monthly Community Potlucks at the chapel, from Resiliency Lunches to the Martin Luther King Jr. Prayer Breakfast, from the Christmas Eve Candlelight service to virtual worship services, virtual Children's Church and even a virtual Vacation Bible School. This has been a year of many blessings and I am so very grateful.

This year, I've learned the importance of having an attitude of gratitude. To express gratitude, we need to vigorously scan the world and hunt for the good stuff. Hunting the good stuff (HTGS) is a powerful exercise because it ushers in gratitude, which leads to the good life physically, psychologically and socially.

On the physical side, gratitude is linked to optimally functioning immune systems, lower blood pressure, better sleep and being bothered less by pain. Psychological benefits of gratitude include more happiness, joy and pleasure as well as increased alertness. Grateful folks are more mentally tough, hardier and resilient. People who are grateful also have less of what are often called "toxic"

emotions — resentment, envy, and regret. You simply can't be grateful and resentful, envious and full of regret at the same time.

The biggest bang from gratitude comes with how it affects people socially. People higher in gratitude are more generous, more helpful, more compassionate and less lonely. Researchers warn that loneliness has become an epidemic, not caused only by people being isolated but more from people feeling isolated from others even when people are all around them. This is why we must stay socially and spiritually connected to counteract the extreme vulnerabilities that come with isolation, especially during the pandemic. Please know that if you are struggling, you can reach out using the many methods that are available to you in order to take care of yourself. You will be receiving a new Garrison Chaplain who will be a resource and can be reached at 435-830-8929. He is coming from Monterey, California. Please welcome him and his family, as you have welcomed me and mine.

Dugway Community, as I bid my farewell, my prayer for each of you is, "May the Lord smile on you and be gracious to you. May the Lord show you His favor and give you peace."



A new reflex seal inside the M53 mask provides high levels of protection and comfort to the wearer. Inside, there is also a high-flow tube that may be attached to bladders or canteens, for drinking water without removing the mask. The flexible panoramic lens minimizes visual stress and maximizes field of view.

Soldiers at Clinic Stand in for Civilians at Home



Spc. Nathan Baker, a medical lab technician, does some of the duties that a civilian did at the entry to Dugway Occupational Health Clinic. He answers the phone, keeps personnel from using the front door (entry is temporarily moved to the side) and accepts package deliveries. Photos by Al Vogel, Dugway Public Affairs



Patricia Vice has her temperature taken by Spc. Reef Gabriel upon entering the Dugway Occupational Health Clinic. As much as possible, the services once provided in separate rooms have been combined into a few rooms, to limit the travel of visitors within the clinic.



Sgt. Andre Wiggins has his blood drawn by Sgt. Cody Conway in a room with consolidated uses at the Dugway Occupational Health Clinic. The main entry of the clinic is now closed to the public; enter at the former ambulance entrance on the south side.

By Al Vogel
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With most civilians at the Dugway Occupational Health Clinic working at home during the pandemic, Soldiers have been busy providing service and completing tasks requiring on-scene involvement.

They are answering the main phone line, taking package deliveries, doing initial screening of patients, and doing what can't be done from civilians' homes.

The main entrance has been temporarily modified to accept only deliveries. Patients and personnel must use the ambulance entrance, on the south side. Equipment has been moved around to consolidate nearly all patient needs into a consolidated area. Two exceptions are the rooms for radiology and audiology; because of their massive equipment they are still in the same rooms.

"If we have a patient come in, we do the initial screening for COVID-19 and the civilian at home does some of the paperwork," Sgt. 1st Class Jeffrey Barth said. "There's some of the paperwork we have to do, and the civilians prep the paperwork."

Most of the paperwork is able to be done by the civilian working from home, Barth noted. An exception is the occupational technician, a civilian who continues to work at the clinic Monday through Thursday,

because he works closely with the offices on post.

Civilians do all the ordering of supplies. When they arrive at the clinic, they are distributed by Soldiers as directed by the civilian. Certified paramedics are still providing ambulance response, always alongside civilian EMTs or Soldiers with much experience. Civilian firefighters, law enforcement and security continue to provide their services without reduction as well.

The patient workload has gone down, with most seen today for blood draws. Four physicians rotate between DPG and Tooele Army Depot; one of them does only telework. Two are full time on scene, and one is part time.

Due to Army guidelines, screening of personnel that are not mission-essential has been suspended.

"The day-to-day operations of our people have been impacted," Barth said.

"The people working at home have had to meet the same responsibilities as before, but they have had to figure out new ways to do it."

Though the number of Soldiers on DPG isn't as much as most other posts, they have stepped up to fill in for civilians working from home.

"Anything that cannot literally be taken care of from their home, we are doing," Barth said.



Dugway Independence Day

The family of Cameron and Megan Sawyer won Best Patriotic Dress Family. Their children are, left to right: twins Whitley and Decklan, Logan, Bryce, Wyatt and Alexis.

Independence Day Celebration at Dugway Proving Ground, celebrated July 1, 2020. Winners were selected in the categories of Patriotic Dress Family, Patriotic Youth Face Painted, Patriotic Drawing and Patriotic Rock Art. A parade of residents wove through the housing area. At night, a splendid aerial fireworks show began. Photos by Al Vogel, DPG Public Affairs

Year 2 of Eagle Observation Study Complete

By Sydney Knight

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In 2019, Dugway Proving Ground began a two-year study to examine the most effective way to closely monitor Golden Eagles in a “non-invasive but effective way,” described Sam Phillips, DPG



A two-year study being conducted at DPG is trying to determine the best way to observe nesting eagles. This photo of golden eagles was taken by a motion-activated trail cam on WIG Mountain.

Natural Resources Avian Specialist. The purpose of the study is to compare three observation techniques: ground-level human observation, a Small Unmanned Aircraft System (sUAS), and a military-grade Unmanned Aircraft System (UAS), which is a larger drone, and in this case an MQ1C Gray Eagle UAS was most often utilized. Using these three observation methods, DPG, along with several other partners, monitored the golden eagle nests

on the installation during breeding season.

The study was sponsored by a grant from the Environmental Security Technology Certification Program, or ESTCP, who funds projects and research for the Department of Defense.

The study is a collaboration between Dugway Proving Ground, Hawk Watch International, Target Management Office at Redstone Test Center, Select Engineering Services, and the Rapid Integration and Acceptance Center, a DPG tenant. Robbie Knight, DPG Wildlife Biologist, said the benefit of using a multi-partnership approach is that “it’s real-time training on all the aspects of how to monitor eagles using UAS that will be distributed nationally in a

final report. Through this monitoring program, the critical Dugway mission has opened up additional areas of operation with more time available for use, resulting from the increased knowledge we now have about eagle ecology on Dugway.” The teams were able to work together using their unique tools and skill sets to observe the eagles.

The three observation teams surveyed the nests once a week to check on the eagles, specifically to see if they had laid eggs, if and when the eggs had hatched, and to check on the overall well-being of the birds. They wanted to gather as much data as possible from the nests. During the early portion of the breeding season, the teams surveyed up to two times a week. The monitoring was able to continue even while maintaining social distancing, although the UAS observer had to pause his observations to avoid sharing a confined space in the ground control station with the pilot of the drone.

At an Army proving ground such as Dugway, it’s important to regularly monitor golden eagles and other wildlife to ensure the testing is not having a negative impact. As René Parker, ESTCP Project manager, emphasized, the key is to find the balance between protecting the eagles and being able to continue the mission and activities at DPG.

The observation phase of year two of the study ended in June, in conjunction with the breeding season of the eagles. The project is now moving on to the analysis phase.

Results of year one have been indicated, but won’t be confirmed until year two results are fully analyzed. Overall, year one results suggest that there are benefits and drawbacks to each observation method, and determined that all three methods have great potential to help support the eagle monitoring program at Dugway.

Dugway will provide a final report to the Department of Defense ESTCP office and will share the conclusions with other programs. The findings will be

published in scientific journals, and the Natural Resources team is heading up a project to write a guidebook on the process of a drone monitoring operation that will help other military facilities nationwide with the management of sensitive species and increased ability to support mission operational activities. Other groups will benefit from the findings on how to effectively monitor golden eagles and keep the impact of day-to-day base operations to a minimum.



Sam Phillips (left) and SES employee and sUAS drone operator Aaron Bronson (right) with the sUAS prepare to start observing eagles’ nests on DPG earlier this year. Photo by Keeli Marvel, Dugway Natural Resources

THE DISPATCH

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