

Spray Reveals Agent, but what is Effect?

By Al Vogel
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A liquid sprayed onto surfaces that changes color to disclose the presence of a chemical agent was tested Nov. 16 and 17 at Dugway Proving Ground on six types of military equipment to determine whether it would affect their function.

Agent Disclosure Spray (ADS) was sprayed from the Contamination Indicator Decontamination Assurance System (CIDAS) onto the exterior of M4 Carbines, M240B Machine Guns, M9 Pistols, Enhanced Combat Helmets, M19A1 ammo cans and small Pelican carrying cases. Two configurations of ADS were tested, one for nerve and one for blister agents.

CIDAS and ADS have been tested for some time at DPG, but this test was conducted solely to learn if the liquid affected the function of critical gear. No simulated or live agent was used, no live fire was conducted.

“If they’re going to decontaminate weapons, and use CIDAS to find agent, then they want to make sure that once it’s washed off, these items function as intended,” Test Officer Jaromy Jessop said.

“After the weapons are sprayed, they let them lie for some time, then do a military strip-cleaning,” Test Control Officer Francis Bahe



After an item is sprayed with the Agent Disclosure Spray from the CIDAS applicator, it’s allowed to sit for a short time. Then, just as troops would do, it’s wiped down, disassembled, cleaned thoroughly and checked for function. This is the M9 9mm pistol, adopted in the early 1980s. Photo by Al Vogel, Dugway Public Affairs

said. “Then they put it back together and do a function check.”

The CIDAS project is under the Joint Program Manager for Protection, a DoD office based in Virginia. Approximately 15 government and contract workers took part in the test at DPG.

Results are being compiled.

CIDAS ADS formulations are composed of two parts, each a liquid created by mixing water and proprietary powders. When the two parts are pumped to the application wand, they create a spray that discloses the presence of chemical agent as a color

change.

Ranging from clear to amber, odorless, and requiring no more than a pinhead’s amount to severely injure or kill, chemical agents are notoriously difficult to detect on surfaces. The tell-tale spray makes disclosure quicker

◆ ADS testing. Page 3.

Command Perspective



By Ryan W. Harris
Director, West Desert Test Center

Team Dugway, This has been a crazy year. Who would have thought we’d have to conduct our critical test mission during a worldwide pandemic that would last through the rest of the year? Your response to the pandemic has been outstanding, you’ve demonstrated that we can be adaptable and overcome external stressors while continuing to perform our test mission and mission support functions with

◆ Command Perspective. Page 2.

minimal to no impact. Thank you for enduring through this difficult time.

As 2020 comes to a close, I want to take this opportunity to highlight a few of the significant accomplishments we’ve completed this past year. We’ve been working on a multitude of strategic investments to ensure we continue to provide innovative solutions to support the Warfighter.

For example, we finished transition of the new Test Grid

Safari Instrumentation (TGSi) and Data Management System (DMS) which will allow us to reduce the time to provide data to customers from days/weeks to a matter of hours. We successfully employed the system to support Integrated Early Warning – CENTAUR test, and the Technology Experimentation & Characterization Field Trials (TECFT) event. TECFT, formerly known as S/K Challenge, was hugely successful and I’m confident this program is going to

INSIDE YOUR DISPATCH

TECFT A SUCCESS



Spray discloses the presence of a chemical agent with a color change.

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COMMAND PERSPECTIVE



Even with a pandemic, our critical mission was accomplished.

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BIG BENEFITS



New data management system will save time.

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THE MESSAGE OF THE SEASON



We are average yet we are also unique.

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SPECIAL ISSUE



Special journal highlights far reaching impacts of Jack Rabbit II.

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TWICE RETIRED



Two NCO’s retire in a dual ceremony from Dugway clinic.

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SHARP SHOOTING



Basic and advanced training for Marine Special Forces Operations.

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AND MUCH MORE

Command Perspective . . .

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bring additional workload to the test center as the program continues.

We completed upgrading and validation testing of the Chemical Agent Vapor (CAV) detection test fixture, and we are getting close to finishing validation testing of the Advance Threat Vapor Fixture (ATVF) in order to support DoD next generation detection equipment, Aerosol and Vapor Chemical Agent Detector (AVCAD) & Multi-Phase Chemical Agent Detector (MPCAD).

We successfully brought our Boot & Glove Test Fixture out of mothball status and are currently testing the new Seams & Closures Swatch Test Fixture to support the upcoming Uniform Integrated Protective Ensemble – Family of Systems (UIPE-FOS).

Finally, we installed a new Spectrum Monitoring Capability on the range in order to better manage and deconflict frequencies used by our test and training operations. This capability will also increase our ability to safely support unmanned aircraft system (UAS) testing.

We also continue to support a myriad of test and training customers throughout all of DoD. It would be impractical to mention **all of the critical support we've provided** to our test customers, but I would like to highlight a few key events.

First, I would like to congratulate the Chemical Biological Center (CBC) BioTesting Division (BTD) for resuming biological agent operations. It has been a 5-year process to reach full operating capability, and we are excited to see them resume full operations just in time to conduct agent testing for the Joint Biological Tactical Detection System (JBTD). Well done!

We conducted the second phase of the Dust Off test program, which is a unique aircraft contamination study for SOCOM utilizing a MH-47 Chinook helicopter that assesses how contamination is transferred between surfaces. Next summer we are scheduled to finish phase II with testing of a MH-60 Blackhawk.

We've started agent testing for the MPCAD chemical detection system, and are on track to finish testing in FY21. We continued support for the Contamination Indicator Decontamination Assurance System (CIDAS) program with various

decontamination and compatibility testing. Our Environmental test team continues to be very busy with completion of the AVCAD & JBTD environmental conditions testing. We also completed Stryker risk reduction on-the-move test.

We continue to be the center of excellence for lethal UAS testing. The Lethal Miniature Aerial Munition System (LMAMS) Switchblade 300 UAS platform and its larger cousin, the Single Multi-Mission Attack Missile System (SMAMS) Switchblade 600 UAS, is a precision strike weapons system test program. In spite of COVID-19 restrictions and challenges, the LMAMS and SMAMS programs have successfully executed 35 weeks of test events since the beginning of January 2020. These tests have been crucial in supporting fielding of these systems to deployed units.

Finally, we completed several large chemical stand-off detection field tests for the Fugitive Iguana phase I and II test programs with phase III continuing into FY21. These tests have had senior **government official's interest, which precipitated a visit to the test event by Congressman Chris Stewart.**

Looking forward, FY21 is expected to be very busy. We are anticipating a ramp-up for testing of the Stryker NBCRV Sensor Suite Upgrade program and the individual protection testing for the UIPE-FOS. We also plan to field an upgrade to the TGSI software and network system that will make it easier to use and deploy to remote location testing. We will see a return of the XM-75 Screening Obscuration Module (SOM) performance testing and a second **TECFT event. I could go on and on but I'll stop here.....should be a fun and exciting year!**

In closing, I want to thank all of you for the extraordinary work that you continue to provide to this great Nation. Your dedicated service enables DPG to provide premier chemical and biological testing and training support to the Warfighter. Your contributions to the mission are greatly **appreciated, and I'm very proud to be serving with you.**



SMAMS LAUNCH

Spray Reveals Agent . . .

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and easier. The ADS does not decontaminate, but shows warfighters if chemical agent exists on their weapon or gear. It is solely an indicator, revealing whether spot or full decontamination is needed. After decontamination, ADS may be used to indicate missed areas and confirm cleanliness.

During the test, personnel sometimes used the M334 Decontamination Kit, Individual Equipment, created specifically to wipe chemical agent from weapons and other small items. Tested extensively at DPG beginning in 2015, the M334 disposable wipes were adopted a few years ago by all services.



Spraying an Enhanced Combat Helmet with Agent Disclosure Spray. The CIDAS application system may be carried on a backpack or by hand. Testing was originally scheduled at DPG's 300-foot decontamination pad, but inclement weather forced it indoors. The test was unaffected. Photos by Al Vogel, Dugway Public Affairs



The Contamination Indicator Decontamination Assurance System (CIDAS) has two tanks containing one liquid component that comprises one part of the two-part system. They are mixed in the applicator wand, seen at left, to create the Agent Disclosure Spray that indicates the presence of chemical agent.



Agent Disclosure Spray on the receiver and rear sight of an M4 Carbine in 5.56mm NATO caliber. Wiping down all the nooks and crannies takes a few minutes, but it's water-based and removes more easily than if it were oil-based.

The need is constant.
The gratification is instant.
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Holiday Blood Drive Dugway Proving Ground

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Multipurpose Room
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Dugway, UT 84022

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10:00 a.m. to 3:00 p.m.**

Please visit RedCrossBlood.org and enter: **dugway** to schedule an appointment.
Or call 1-800-RED CROSS (1-800-733-2767) to schedule an appointment.

Dugway Proving Ground Holiday Hours

Shocklee Fitness Center, Outdoor Recreation, Library, CYS& ACS Programs

Christmas Eve - 24 December - CLOSED
Christmas Day - 25 December - CLOSED
New Year's Eve - 31 December - CLOSED
New Year's Day - 1 January - CLOSED

Commissary

Christmas Day - 25 December - CLOSED
New Year's Day - 1 January - CLOSED

Ditto Diner

18 December to 3 January - CLOSED

AAFES Express (Shoppette)

Wednesday 23 December - 1000 - 1600
Thursday 24 December - 1000 - 1500
Christmas Day - 25 December - CLOSED
Saturday & Sunday 26 - 27 December - 0900 - 1700
Monday 28 December - 0800 - 1700
Tuesday & Thursday 29 - 31 December - 1000 - 1600
Friday New Year's Day - 1 January - 1000 - 1500
Saturday 2 January - 1100 - 1500

**For more information please contact
NAF Support at (435)-831-2524**

OADMS Coming Together Piece by Piece

By Becki Bryant
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With the New Year approaching, it will soon be out with the old, in with the new. The adage also rings true for the West Desert Test Center's Data Management System (DMS).

The DMS provides a general overview of the test grid's activities, showing the location and status of test towers and dissemination vehicles, allowing the user to measure distances and directions, start and end the recording of a trial, and launch other interfaces such as tracking a simulated agent cloud.

In order to provide this picture of the test grid, the DMS depends on numerous pieces of equipment like test towers armed with radio frequencies, GPS, and meteorology instruments (temperature and humidity probes, sonic anemometers), dissemination systems to release simulants that resemble chemical and biological warfare agents, and numerous referee systems to detect and track the agent cloud.

But, as great as it is, the DMS

has its challenges, particularly its Common Network Interface (CNI), a proprietary field data collector that is under service contract with the manufacturer. Repairs to the CNI are time consuming and expensive, as is integrating new field equipment into the DMS software. Additionally, a new system under test (SUT) has to be manually entered into the CNI, which takes time and is much more open to typing/data errors.

The drawbacks of DMS will be avoided with the new Open Architecture DMS (OADMS). Most notably, OADMS is replacing the CNI with a new data acquisition box (called a 'sidecar') that will be easier and cheaper to repair. The OADMS sidecar is also plug-and-play, meaning it will automatically detect new SUTS, and software updates to integrate new field equipment will be done in-house.

"As the OADMS software is being developed, our personnel are learning alongside the contracted software team," said Adam Drochner, WDTC test

officer, who is overseeing the project. "Our personnel will be able to make future updates, saving time and money."

Before OADMS can be fully functioning, each piece of field equipment needs to be integrated into its operating software. Meteorology instruments, dissemination systems and the improved chemical cloud tracking system (ICCTS) have been incorporated. LIDAR systems, including the West Desert LIDAR and the Scanning Micropulse Aerosol LIDAR-Eyesafe (SAMPLE), were integrated in November; all remaining field equipment should be part of the OADMS operating software by summer 2021, followed by verification and validation testing.

"I am a big proponent of OADMS; I see the benefits," said Drochner, who recently hosted an internal open house showcasing OADMS to fellow colleagues. "I think more people are realizing what it has to offer and as we get closer to showcasing its full capabilities, I think more and more people will see its potential."

CHAPLAIN'S CORNER

By Chaplain
(MAJ) Wesley A. Gornall

Christmas is good news! Isaiah 42:9: "Behold, the former things have come to pass, now I declare new things; before they spring forth I proclaim them to you."

Luke 2:10: "And the angel said to them, "Do not be afraid; for behold, I bring you good news of a great joy which shall be for all the people; for today in the city of David there has been born for you a Savior, who is Christ the Lord."

The angel was sent to an obscure group of people—the shepherds—to proclaim the news of the Messiah's birth. The shepherds were average people, going through their normal routine, when God came into their lives to tell them about something new. They weren't unique in any way—except that God chose to

tell them of the birth of His Son. And these simple people believed the message and went to see the Child, Jesus.

We are average people, and yet we are also unique because God has come into our lives, we have believed in His Son, and He has allowed us to participate in His plan of salvation. Let's remember that we are to "proclaim His salvation day after day" (Psalm 96:2) just the way the shepherds did. They went and "spread the word. . . and all who heard it wondered at the things which were told them. . ." (Luke 2:17-18). Jesus Christ is the message of forgiveness, peace, hope, love and salvation. If we will only share this good news, God will work in the hearts of those who hear it, and they too can wonder with us at the wonderful things God has done.



The transition from the Data Management System (DMS) to the Open Architecture DMS (OADMS) is approximately six months away. By then, all field equipment will be integrated into the OADMS software and ready for verification and validation testing. OADMS will provide an improved outdoor test capability for chemical and biological defenses.

Fond Farewell to Principal Wyatt

By Becki Bryant
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The Principal of Dugway School, Jeff Wyatt, has been given a new job assignment from the Tooele County School District.

Wyatt came to Dugway in July 2015, when the community had two schools, an elementary school and a high school. As Principal, he played a key role in opening and transitioning to the new Dugway School, for K-12 students, in 2016.

Wyatt's additional accomplishments include changing the Dugway School to a 4/10 schedule consistent with the

DPG work schedule, expanding college classes for high school students, and retaining and recruiting a diverse staff dedicated to the educational well-being of their students.

DPG Command presented Wyatt with a certificate of appreciation for his leadership and dedication to the school and community.

"I appreciate the partnership you have established with the Command, and it was highlighted with COVID. You have been an integral part of the COVID working group, participating in our weekly meetings and bringing a

perspective that we didn't always see," said Col. Scott Gould, DPG Commander. "I'm sad to see you go, but wish you the best of luck, and remember, you will always have friends and family in Dugway."

Wyatt thanked the Commander and Command Sergeant Major, and added, "The nice thing is that I'll still get to come out here in my new job."

Wyatt is now the Director of Student and School Safety for the school district. Bryce Eardley is the new Dugway School Principal.



Dugway Proving Ground Command presented Jeff Wyatt with a certificate of appreciation for his dedication during his service as Dugway School Principal. Wyatt's last day as Principal was Nov. 30, 2020. Pictured from left: Col. Scott D. Gould, DPG Commander, Jeff Wyatt, former Dugway School Principal, and Command Sgt. Maj. Kyle R. Brinkman, DPG Command Sergeant Major. Photo by Becki Bryant, Dugway Public Affairs

DPG Test's Impact Still Strong

By Becki Bryant
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Large-scale releases of chlorine conducted at Dugway Proving Ground have proven invaluable to emergency responders. The project, known as Jack Rabbit II and conducted in 2015 and 2016, is now the topic of a special issue of the Journal of Atmospheric Environment.

Researchers with the Department of Homeland Security (DHS) Science and Technology Directorate (S&T) say it's critical to do such large-scale research



According to the Department of Homeland Security, Jack Rabbit II findings were used to update a Chlorine Institute guide to help chlorine producers, local emergency planning committees, fire departments and municipalities estimate areas affected by potential chlorine release incidents.

because millions of tons of chlorine are produced and transported across the globe every year. During transportation, incidents can happen by accident or intentionally, threatening lives.

"Large scale releases of chlorine have never been tested and studied at the volumes representative of shipments via tanker truck (20 tons) or railcars (90 tons)," said Dr. Shannon Fox, Jack Rabbit II principle investigator and director of the DHS S&T Chemical Security Analysis Center (CSAC). "Outdoor field testing affords the unique opportunity to study this type of release scenario and directly address critical data and knowledge gaps to improve hazard prediction modeling, emergency response, and industrial safety and security."

The special journal issue contains 18 articles involving the Jack Rabbit II field

and lab tests, written by subject matter experts from around the world.

"The special issue of Atmospheric Environment is an extraordinary collaborative accomplishment that highlights the far-reaching impact of Jack Rabbit II," said Fox.

Researchers say next year they will start a new round of research—Jack Rabbit III—which will focus on developing strategic technology solutions for chemical incident countermeasures, decontamination, protection, emergency response, training

and national level exercises.

"Jack Rabbit III will expand on previous work and build security, safety and resilience in the chemical supply chain through experimentation over the next five years," said Fox. "Jack Rabbit III is building on the success of the Jack Rabbit II trials and significant impacts made in securing the homeland from persisting chemical threats."

It is unknown at this time if any of the Jack Rabbit III research will take place at Dugway Proving Ground.

This article was compiled from a Newswise release by the Homeland Security's Science and Technology Directorate: <https://www.newswise.com/articles/journal-highlights-groundbreaking-st-research-on-chlorine-spread>



The Jack Rabbit II project conducted at Dugway Proving Ground, said researchers, has greatly improved and will continue to improve hazard prediction modeling, emergency planning and response strategies against chemical releases.

Dual Retirement Ceremony Honors Clinic NCO's

Master Sgt. Michael Langmo and Sgt. 1st Class Jeffrey Barth were honored in a retirement ceremony Nov. 24, 2020 at the Dugway School auditorium. Both spent their careers in Army medicine, and retired from the Dugway Health Clinic.



Master Sgt. Michael D. Langmo received a Certificate of Retirement during his retirement ceremony. It was presented by Col. Scott C. Gould (left), Commander of Dugway Proving Ground. Photos by Al Vogel, Dugway Public Affairs

Master Sgt. Langmo was the Medical Non-Commissioned Officer in Charge for Dugway Proving Ground, serving in the tenant unit from Fort Carson, Colorado. He entered the Army in 1996 as a Combat Medic and served at a number of installations in the U.S., and overseas in Germany, Kosovo and Iraq.



During his retirement ceremony, Master Sgt. Michael D. Langmo looked on while his daughters Isabella and Collette received Army Certificates of Appreciation. Col. Scott C. Gould, Commander of Dugway Proving Ground presented the certificates during the retirement ceremony.



Sgt. 1st Class Jeffrey Barth received a farewell gift from the Soldiers at the Dugway Clinic during his retirement ceremony; a framed photo of the Soldiers in the desert, with handwritten praises around the photo's border. The gift was presented by Maj. Craig Anderson (left), Officer in Charge of the Dugway Clinic.

(Top) Danielle Barth, the wife of Sgt. 1st Class Jeffrey Barth, received a certificate of appreciation for supporting her Soldier husband. The certificate was presented by Col. Scott C. Gould, the Commander of Dugway Proving Ground.

Sgt. 1st Class Jeffrey Barth was the Emergency Medical Services NCOIC at Dugway Health Clinic. He enlisted in 2001 as a Combat Medic, and served at a variety of installations in the U.S., and overseas in Korea, Afghanistan and Iraq.

The retirement ceremony was streamed live on the [DPG Facebook page](#).

There was a small parade after the ceremony so well-wishers could congratulate the retirees from afar.

Marines Sharpen Shooting Skills

By James B. Munn
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Elements of the Marine Special Operations Forces (MARSOF) came to Dugway Proving Ground to conduct their Advanced Sniper Course, designed to train Critical Skills Operators (CSOs), Special Operations Forces (SOFs), or equivalent personnel in precision rifle fire.

Training is designed to provide instruction in basic and advanced marksmanship techniques, field craft, special reconnaissance skills, urban and rural hide construction, urban movement and observation, high angle shooting, counter sniper techniques, ballistics testing, loophole construction and firing, aerial operations and close proximity engagement.

The MARSOF Advanced Sniper Course trains personnel to be an accredited SOF Level I Sniper, capable of supporting Special Forces operations. The course

consists of four blocks of instruction: 1. classroom instruction, basic marksmanship and field craft, 2. Target engagement consisting of classroom instruction and advanced shooting techniques, 3. special reconnaissance consisting of digital collections, technical observation, hide construction, urban movement and observation, and 4. SOF sniper tactics consisting of high angle shooting, counter sniper, ballistics testing, loophole construction and shooting, aerial instruction and close proximity target engagement.

The course is 10 weeks long and held two times a year; between 60 and 75 percent of the course is conducted at Dugway Proving Ground.

DPG was selected to host the majority of the course because of its terrain and trainings venues after the Marine Raider Training Center toured all of the U.S. Army and Marine Corps training locations for optimal locations.



Marine Sniper candidate fires on moving targets in the west desert of Dugway Proving Ground. Photos by Darrell L. Gray, Dugway Audio/Visual Production Specialist



Marine Sniper candidates fire from covered positions at simulated enemy targets at Dugway Proving Ground.



Marine Sniper candidates identify targets downrange at Dugway Proving Ground.

Chemical Detector Test has Two Objectives

By Al Vogel
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A prototype chemical agent detector recently faced two concurrent test challenges at Dugway Proving Ground, in a facility that aided test completion in two days.

While strong winds blew outdoors, the Aerosol and Vapor Chemical Agent Detector (AVCAD) searched a controlled, light breeze for simulated agent, generated

inside the cavernous Joint Ambient Breeze Tunnel (JABT).

Completed in 2005, the JABT was designed for testing chemical or biological detectors -- with simulated agent only -- without the need for ideal weather that outdoor testing requires. The JABT is 550 feet long, 46 feet wide, with 50-foot walls.

Powerful fans draw air from outdoors, **simulant is disseminated, the mixed "cloud"** continues to the tested detectors and out



Though difficult to see, a fine mist of simulant emerges from the head of this disseminator, which is some distance from the AVCADs being tested in the Joint Ambient Breeze Tunnel (JABT). Only simulated agent is used in the JABT.



Two AVCADs inside the Joint Ambient Breeze Tunnel, mounted at different heights to replicate their mounting on a Stryker NBCRV. Their white screen offers a variety of options for the operator. The red lights at the base of each AVCAD is a separate referee chemical detector, providing trusted data to measure the AVCAD against. Photos by Al Vogel, Dugway Public Affairs

the rear. During the two-day AVCAD test, 20 trials were conducted each day.

Testers compared AVCAD's performance in the semi-controlled environment of JABT, against controlled chamber testing conducted earlier. Throughout testing, samplers with proven accuracy monitored **the cloud's simulant concentration for later comparison.**

A second objective was to demonstrate the integration of the AVCAD on and inside a Stryker M1135 Nuclear Biological Chemical Reconnaissance Vehicle (NBCRV).

AVCADs were placed at the same height as they would be on an NBCRV, while the cloud passed at varying speeds.

"We vary wind speed to duplicate AVCAD

mounted on an NBCRV, on the move," Test Officer Rocky Fonger said.

The test sought to answer critical questions: Will AVCAD detect chemical agent while moving? Compared to the chamber, what was the simulant/air concentration in JABT when AVCAD sounded the alarm? How much time elapsed from the release of simulant to the alarm?

During the 40 trials, a dozen or so technicians adjacent to JABT operated test equipment and recorded data via monitors. Their data and observations go into a report that help decide whether AVCAD is adopted by U.S. forces and allies.

