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CHEM NEWS

www.cbrne-terrorism-newsletter.com

Virtual HUMINT™ vs. Terrorist CBRN Capabilities

Source: http://www.cbrneportal.com/virtual-humint-vs-terrorist-cbrn-capabilities/

Chemical, Biological, Radiological and Nuclear weapons are the "game-changers" that jihadists all over the world aspire to get their hands on. Terrorist organizations and other non-state actors continue to seek bona fide WMDs in order to further their goals in most macabre ways – if "terror" is the goal, CBRN is surely the ideal means.

The ubiquity and efficiency of internet means that any piece of CBRN knowledge published on terrorist online networks is immediately available to all terrorists everywhere. This simple fact translates into an exponential growth of theoretical and operational CBRN knowledge at the fingertips of non-state actors, both foreign and domestic.

It is imperative to infiltrate and monitor these online social platforms where CBRN knowledge is exchanged, in order to keep tabs on the growth of the "game-changer" threat as it develops within adversary networks who are well positioned to connect this knowledge with operational know-how gained in Afghanistan, Iraq, Syria and beyond.

Consider this brief sampling of recent CBRN happenings gleaned from foreign language open sources and, especially, deep web sources:

- A jihadist forum member posted approximately ten files containing presentations of biology courses in a secure forum, stating that they "would be of benefit to the fighters."
- In late September Syrian regime forces seized several tunnels belonging to the Syrian rebels in the city of Tadmur, a suburb of Aleppo. Tubes with tablets of Phostoxin (aluminum phosphide) were discovered in the raid, in addition to IEDs, IED precursors and foreign car license plates.
- In mid-September, several Turkish websites published information about the indictment brought against the six members of Jabhat al-Nusra (JN) and Ahrar al-Sham. Five were Turkish citizens and one a Syrian, named Haytham Qassab. The Syrian was charged with being a member of a terrorist organization and attempting to acquire weapons for a terrorist organization. Turkish authorities claim that the six, who had been under surveillance, were recorded discussing their intentions to acquire precursors for producing sarin. The accused were trying to obtain chemicals by contacting official organizations such as state-owned Mechanical and Chemical Industry [MKE] and Adana Cukurova University, in addition to many other organizations and people. Among the items the Turkish authorities claim the six were attempting to acquire, were time fuses, chrome pipes to make mortars, thionyl chloride ($SOCl_2$), potassium fluoride (KF), methanol (CH_3OH), isopropanol (C_3H_8O), isopropanolamine (C_3H_9NO),

white phosphorus (P4), medical glucose, and bauxite.
- A prominent jihadist forum member uploaded a detailed new manual on the topic of anthrax, explaining the effect anthrax has on humans, its safe handling procedures, and dispersal methods: aerial dispersal from an aircraft and envelope-borne dispersal through the mail.
- A jihadist forum member published three recipes for improvised explosives (HME), including one highly unorthodox recipe said to yield an explosive 1.6 times more powerful than dynamite.

And all this is merely a very recent sampling. It is plain to any online observer that, not only are terrorists eager to obtain CBRN capabilities, but they are also certainly sharing knowledge online at an unprecedented rate. Because much of this sharing takes place in password protected forums and on user-access-controlled social media platforms, Terrogence has developed extensive Virtual HUMINT™ capabilities in order to infiltrate and participate, either passively and sometimes even proactively, in such discussions and threads where CBRN issues are discussed by the terrorists themselves. Findings from such operations are issued monthly in a subscription report called Chimera™.

U.S. unable to keep up with CBRN threats

Source: http://e-ring.foreignpolicy.com/posts/2012/09/10/report_us_unable_to_keep_up_with_cbrn_threats?wp_login_redirect=0

The U.S. cannot afford to develop defenses to the entire possible chemical, biological, radiological or nuclear weapons being developed today, according to the results of a blue-ribbon study. More alarming, the U.S. has a "poor understanding" of its adversaries' intentions for ever using them, and an even lesser handle on how to stop them.

As a result, the National Research Council is calling on Deputy Assistant Secretary of Defense for Chemical and Biological Defense Gerald Parker to take some "bold moves" to get his house in order.

"The U.S. simply cannot afford to deal with all threats on an individual basis, and there is no universal solution - it has to choose which problems to solve," the National Research Council said, in the findings of a study released Monday.

The panel reviewed DOD's Chemical and Biological Defense Program, which includes several defense offices and agencies, to determine what capabilities DOD possesses and how much needs to kept alive inside the Pentagon or could be better found in the civilian world. One problem: all of those offices and agencies.

The panel found that almost all of DOD's core "science and technology needs" for the defense of chemical, biological, radiological and nuclear weapons already exist outside of the military, but argue that a culture change is needed to bridge that gap.

The military, the group argues, needs to seek out breakthroughs and promote "blue sky thinking" to partner better with private research and development.

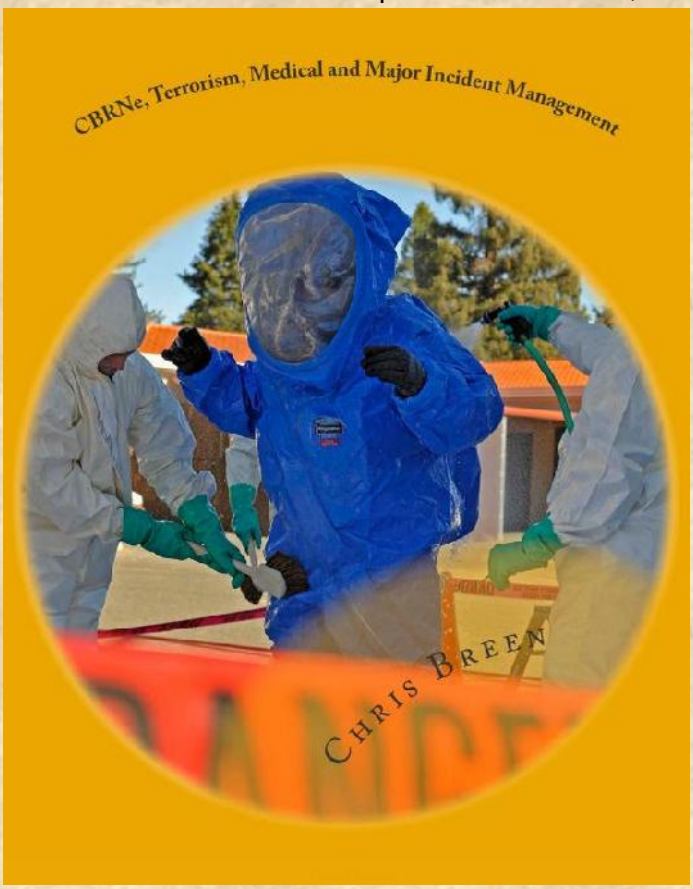
"The committee found that almost all

of the capabilities can be found outside of the service laboratories."
The NRC found it difficult to fully evaluate secretive military capabilities. But while some commercial capabilities often exceed military ones, the panel argued they also can be prohibitively expensive to move them into DOD.
For example, DOD is well-suited for using "Animal Models" (as PETA is well-aware, the military uses live animals for testing) and discovering methods of decontamination.
But the Pentagon is poor where defense or pharmaceutical industries or other government agencies excel, such as in developing the instruments to detect chemical or biological agents, or analyze how they are transported.
Additionally the missions of the many offices working under the program are "far from seamless." NRC called on Parker's office to align "all of the program elements and offices."
"Bold moves are needed to break the current stagnation that permeates the chemical and biological [science and technology] and acquisition environment. Tweaking the management or refocusing a few projects will not be sufficient."

CBRNe, Terrorism, Medical and Major Incident Management Paperback

By Chris Breen (Author)
Source: http://www.amazon.com/CBRNe-Terrorism-Medical-Incident-Management/dp/1477592458

Chris Breen is a Registered Nurse who served with the Royal Army Medical Corp (RAMC), a Paramedic and Clinical Tutor with additional qualifications in Trauma, and Remote Medicine. He has had a long term interest in Disaster medicine and Emergency planning, is the Medical Advisor for a Preparedness group and runs courses in Survival Medicine. A guide to medical and major incident management. Roles and responsibility of staff setting up the command and control systems of the emergency services are detailed. Including the gold, silver and bronze structure. The process of triage is explored with exercises and details of commonly used triage aids. Medical management of environmental issues, traumatic injuries are all covered. Tactical injuries caused by explosions and firearms are also covered including techniques for dealing with catastrophic haemorrhage and amputations. With recent events in mind epidemics and pandemics are explored, as well as exposure and treatment of biological, chemical including Nerve Agents and radiation releases. Equipment for CBRN protection and detection is covered in addition to the roles of the Hazardous Area Response Team (HART) and the Special Operation Response Team (SORT) and the Mass Casualty Vehicles.
Hazmat incidents including transportation of dangerous goods and chemical suicides are also covered.



Chemical weapons stockpile lingers

Article Last Updated: Saturday, October 26, 2013 8:40pm

Source: http://durangoherald.com/article/20131026/NEWS01/131029560/Chemical-weapons-stockpile-lingers-

On the high plains at this city's eastern edge, fields of concrete bunkers arrayed like a vast cemetery hold most of the remaining stockpile of the nation's chemical weapons. The earth-covered "igloos" with their reinforced concrete headwalls contain 2,611 tons of mustard agent in mortar rounds and artillery shells.

Palletized ACWA test equipment is positioned for testing at the Pueblo Chemical Agent-Destruction Pilot Plant in Pueblo. ATE munitions weigh the same as real projectiles, but they don't contain chemical agent.

Slated for destruction since at least 1985, the munitions are old, leaky and expensive to protect.

The process of dismantling them is 29 years behind schedule and $33.8 billion over budget, according to Defense Department documents and historians.

Half a world away, the Organization for Prohibition of Chemical Weapons is seeking to take apart Syria's estimated 1,000-ton stash of poison agent in just eight months. The group recently was awarded the Nobel Peace Prize for its work, which proceeds amid a raging civil war.

The depot here in Pueblo shows how difficult the job can be, even absent the chaos of war. Stymied by technical barriers, concerned neighbors and increasingly complex environmental regulations, the U.S. effort to get rid of its own weapons of mass destruction consistently has fallen short of projections.

Ronald Reagan was president when Congress first directed the Army to eliminate its stockpile of 31,500 tons of mustard agent, sarin and VX developed by the U.S. military for use in war. At that time, the Army thought the job would be done by 1994 and cost $1.7 billion, according to the Henry L. Stimson Center, a Washington, D.C.-based research institute.

By the time of the 1997 Chemical Weapons Convention – an international treaty under which the U.S. and other nations agreed to destroy their stockpiles – estimates had shifted. But the U.S. still expected to destroy its arsenal by a 2007 deadline. The convention held out the possibility of a five-year extension. That deadline slipped by last year.

In the latest Defense Department projection, the remaining 10 percent of the stockpile won't be destroyed until 2023, at a total cost of $35.5 billion.

The initial estimates were "optimistic," said Greg Mahall, a spokesman for

the Army department responsible for destroying most of the stockpile to date.

"As we got more and more into the reality of it, we found that some of the assumptions were

"When I got into this, I didn't know it was going to be a lifestyle choice," he said.

In 1996, in response to public pressure, Congress directed the Army to seek

off base," Mahall said.

Among these assumptions were that the toxic agents would remain inert as they were dismantled.

"Some of the mustard projectiles champagned when we opened them – spit out and went like a champagne bottle," Mahall said. Walls and equipment in the destruction plants were contaminated with the toxic blister agent, creating more cleanup work.

At the same time, environmental groups and neighbors of storage sites like Pueblo Chemical Depot presented hurdles to the Army's plan to incinerate the material.

Ross Vincent, a retired chemical engineer, moved to Pueblo with his wife in 1988 thinking they had arrived in an "environmental nirvana."

When the couple found out at a chamber of commerce meeting that the Army was planning to burn chemical weapons nearby, Vincent said, "My wife and I looked at each other and went, 'Uhhh.'"

Now 71 and chairman of the local chapter of the Sierra Club, Vincent says he has spent the last quarter-century pushing the Pentagon to seek faster, safer and more efficient ways to destroy the toxic weapons.

alternatives to incineration. The result of that effort is a plan to use processes of neutralization – diluting the chemicals with water before treating them – to eliminate the stockpile in Pueblo by 2019. A similar plan is in place for the 523 tons of chemical material, including weaponized sarin, held at Kentucky's Blue Grass Army Depot, by 2023.

In Pueblo, a destruction plant has been built and is undergoing a rigorous process of systemization – that is, testing the equipment and training the staff – before its proposed launch in 2015.

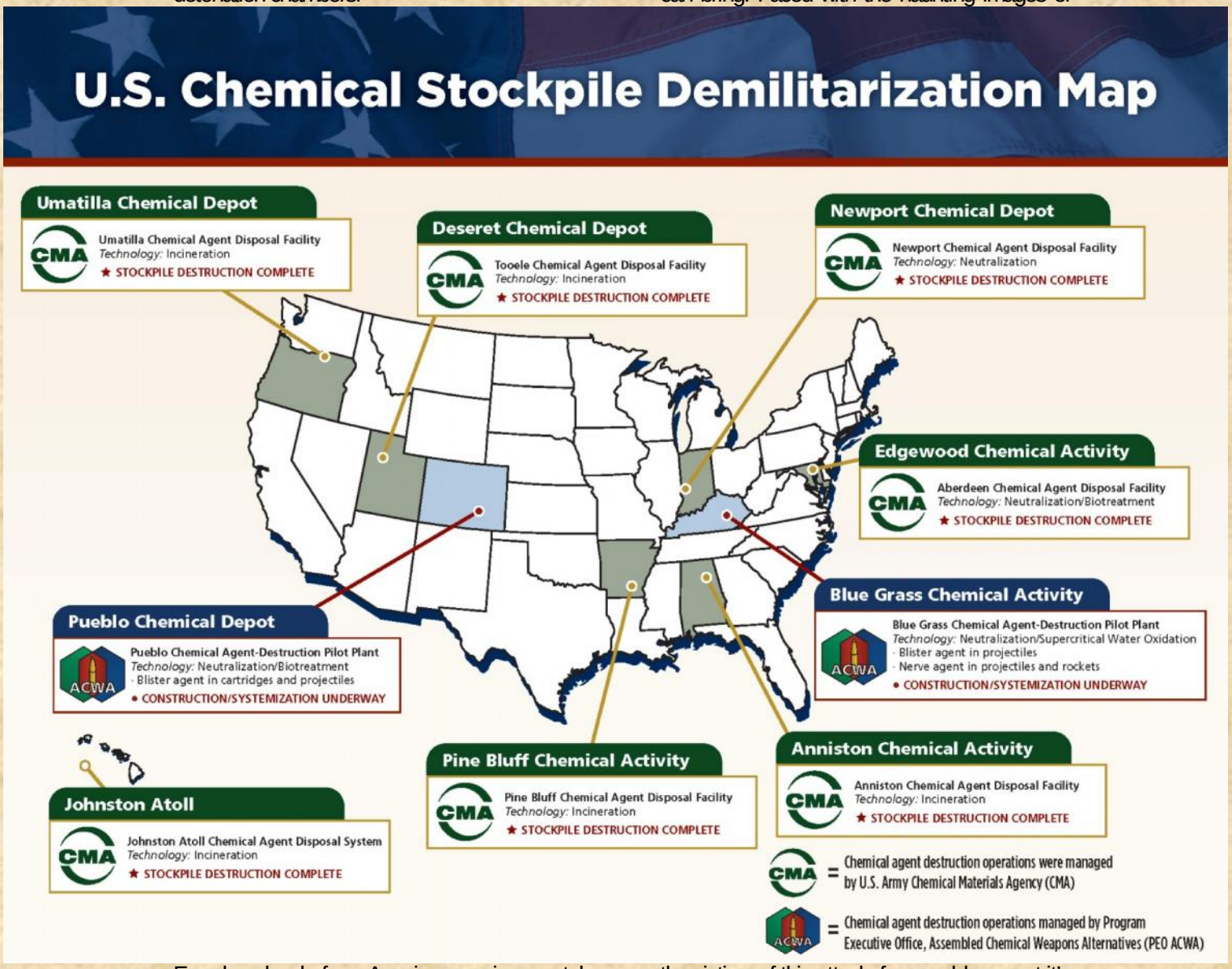
Even with the technological advances of recent decades, however, the process of neutralizing toxic agents can be especially complicated when they have been built into projectiles and mortars.

"Every once in a while the munitions leak," said Charles Sprague, spokesman for the Pueblo Chemical Depot. "We usually find the leaking munitions after a good low-pressure storm comes through."

Sensors detect the leaks inside the igloos, and chemical operations crews are sent in with protective equipment to find the culprit, Sprague says. The problem munitions then are packed

into other material and put into a separate igloo.

These overpacked and leaky munitions can't be neutralized in the prescribed way, so the current plan is to explode them in mobile detonation chambers.



For decades before American environmental regulations came into play in the early 1970s, some weapons simply were buried. A 1996 Army report identified 96 possible chemical weapons burial spots in 38 states. The likely burial sites included Rocky Mountain Arsenal, an area east of Commerce City that once housed facilities for the manufacture of nerve and blister agents. The 27-square-mile area now is undergoing cleanup as a Superfund site, and it has been named a wildlife refuge.

Some munitions simply were tossed into the ocean. The acronym for this method, said Army spokesman Mahall, was CHASE – Cut Holes and Sink 'Em.

A sarin attack that killed hundreds of people in the suburbs of Damascus on Aug. 21 brought a fresh reminder of the horrors these weapons can bring. Faced with the haunting images of the victims of this attack, few would suggest it's not worth destroying Syria's stockpile of poison agent.

The differences between the two countries' chemical weapons stockpiles are stark, said Defense Department spokeswoman Jennifer Elzea. The U.S. stockpile was much older and largely weaponized – put into munitions.

"It's not a very good comparison," Elzea said. "It was done very slowly and deliberately in the U.S."

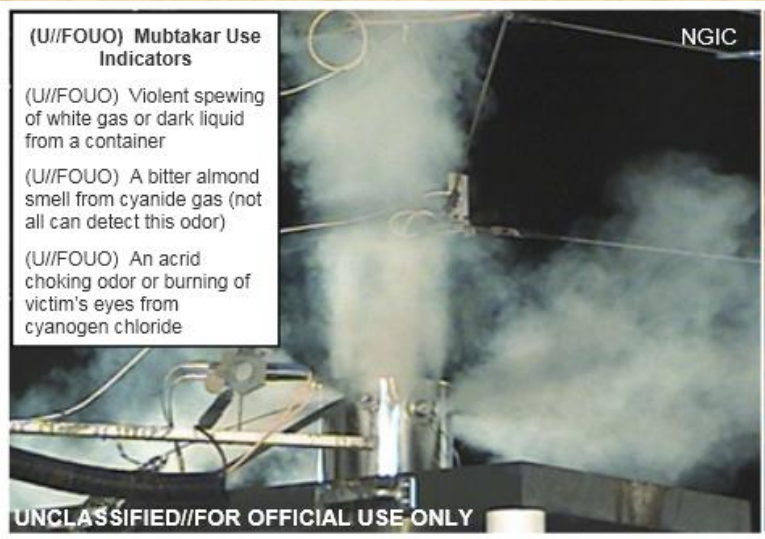
Back in Pueblo, Vincent wonders how an arsenal like Syria's could be destroyed safely in less than a year.

He says he is satisfied that the current proposal for destroying the remaining stockpile in Colorado has come a long way toward eliminating risks and pollutants, though he added, "None of us is very pleased with the idea of blowing up chemical weapons in the neighborhood."
Many of Vincent's neighbors, meanwhile, have grown tired of the debates about the chemical weapons stockpile next door, said Irene Kornelly, chairwoman of the Colorado Citizens Advisory Commission, a watchdog group for the Pueblo Chemical Depot.
"There are also a lot of people who don't care one way or another," she said. "At this point, it's like, just get it done."

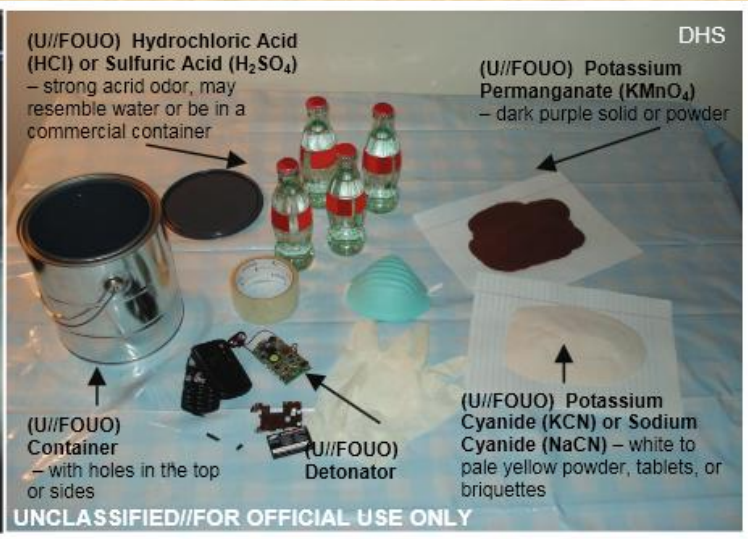
Mubtakar: An Improvised Cyanide-Producing Device

Source: http://publicintelligence.net/ufouo-dhs-mubtakar-improvised-cyanide-gas-device-warning/

Terrorists have shown considerable interest in an improvised chemical device called the mubtakar, which is designed to release lethal quantities of hydrogen cyanide, cyanogen chloride, and chlorine gases. One or more devices could be used in attacks in enclosed spaces, such as restaurants, theaters, or train cars. The mubtakar is small and could be transported in a bag or box, or assembled at the attack site. DHS and FBI encourage recipients of this document to report information about suspicious devices and the acquisition or possession of mubtakar precursor chemicals or components (see figures for details) to the nearest state and local fusion center and to the local FBI Joint Terrorism Task Force.



(U//FOUO) Demonstration of a mubtakar release.



(U//FOUO) Mubtakar production indicators (mock-up).

Symptoms of Cyanide Gas Exposure/Medical Information

High Dose Exposure: Inhalation usually causes immediate loss of consciousness, followed by convulsions and respiratory and cardiac system failure within 5 to 15 minutes of exposure. Death occurs mainly from cardiac arrest.

Low Dose Exposure: Inhalation causes symptoms that mimic poisoning from other toxic compounds, including giddiness, hyperventilation, palpitations, dizziness, nausea, vomiting, headache, and eye irritation. Low to moderate exposure can be treated if done quickly; fatality is proportional to dose.

Skin Exposure: Cyanide is unlikely to pose a dermal hazard, but skin should be washed with soap and water immediately after any contact.

First responders should follow departmental guidelines and call in a hazardous material (HAZMAT) team if cyanide gas release is suspected. Although a mubtakar may appear to be exhausted, if disturbed, unreacted materials could reinitiate the production of cyanide gas. Until HAZMAT's arrival, responders should deny access to the area and identify and isolate the material. The Emergency Response Guide (ERG) and National Institute for Occupational Safety and Health (NIOSH) Pocket Guide to Chemical Hazards contain detailed information on appropriate Personal Protective Equipment (PPE).

Al Qaeda weapons expert says U.S. ambassador to Libya killed by lethal injection

By Bill Gertz

Source: http://freebeacon.com/possible-poisoning/

An al Qaeda terrorist stated in a recent online posting that U.S. Ambassador to Libya Chris Stevens was killed by lethal injection after plans to kidnap him during the Sept. 11, 2012 terror attack in Benghazi went bad.

The veracity of the claim made by Abdallah Dhu-al-Bajadin, who was identified by U.S. officials as a known weapons experts for al Qaeda, could not be determined. However, U.S. officials have not dismissed the terrorist's assertion.

An FBI spokeswoman indicated the bureau was aware of the claim but declined to comment because of the bureau's ongoing investigation into the Benghazi attack.

"While there is a great deal of information in the media and on the Internet about the attack in Benghazi, the FBI is not in a position at this time to comment on anything specific with regard to the investigation," Kathy Wright, the FBI spokeswoman, said.

A State Department spokesman also had no comment.

The FBI is investigating the death of Stevens, State Department information officer Sean Smith, and former Navy SEALs Tyrone Woods and Glen Doherty. They were killed in the attack U.S. officials say was carried out by an al Qaeda-linked group known as Ansar al Sharia.

A State Department Accountability Review Board report and an interim House Republican report on the attack gave no cause of death for Stevens, whose body was recovered by local Libyans in the early morning hours of Sept. 12.

The House report, "Interim Progress Report for the House Republican Conference," said "Libyan doctors tried unsuccessfully to resuscitate Ambassador Stevens upon his arrival at the hospital."

To date, no official cause of death for Stevens has been made public, although it was reported that a Libyan doctor who examined Stevens said he died from apparent smoke inhalation and related asphyxiation.

Video and photos of Stevens being handled by a mob in Benghazi were posted on the Internet. It is not clear from the images whether he was dead or alive at the time.

However, according to the March 14 posting on an al Qaeda-linked website, Abdallah Dhu-al-Bajadin, the al Qaeda weapons expert, stated that Stevens was given a lethal injection and that the injection was overlooked during the medical autopsy.

According to Dhu-al-Bajadin, "the plan was based on abduction and exchange of high-level prisoners."

"However, the operation took another turn, for a reason God only knows, when one of the members of the jihadist cell improvised and followed Plan B," he wrote on the prominent jihadist web forum Ansar al-Mujahideen Network.

Dhu-al-Bajadin's claim of assassination also stated that it had been copied to the Ansar al-Mujahidin website from the closed and al Qaeda-accredited website Shumukh al-Islam. That site is only open to members and was initially posted by a member identified as Adnan Shukri for Dhu-al-Bajadin.

The reference to Shumukh al Islam has boosted the credibility of the claim among some U.S. intelligence analysts.

A western intelligence official said Dhu-al-Bajadin is a well-known jihadist weapons experts and a key figure behind a magazine called *Al Qaeda Airlines*.

According to this official, intelligence analysts believe that Dhu-al-Bajadin's claim of assassination by lethal injection appears in part aimed at putting pressure on the U.S. government

over its handling of the Benghazi attack.

The article did not say what substance was used in the lethal injection. It also stated that the State Department had come under criticism for not providing adequate security in Benghazi prior to the attack.

Dhu-al-Bajadin also said he had further details of the attack and the assassination but would not reveal them in the posting.

The *Washington Free Beacon* obtained a copy of the translation of Dhu-al-Bajadin's posting in Arabic.

The article stated that use of lethal injection is done "more than one place in the human body that autopsy doctors ignore when they see that the symptoms are similar to another specific and common illness."

"Anyone who studied the art of silent assassination that spies applied during the Cold War would easily identify these parts of the body," he said.

Dhu-al-Bajadin also stated that he was discussing the assassination of Stevens' death months later because "the cell" behind "the infiltrative and secret operation is now completely safe from intelligence bureaus."

The FBI last month disclosed it was searching for five men linked to the Sept. 11 Benghazi attack and posted video and photos of three men wanted in connection with the attacks.

"The grainy still images, taken from surveillance video, show three men who may be able to provide information to help the FBI's larger probe into the attacks that resulted in the deaths of four Americans, including the U.S. Ambassador to Libya," the FBI said in a statement.

The FBI opened a webpage in November as part of an effort to solicit information on the attack.

Dhu-al-Bajadin did not disclose details of the "turn" in events that prompted Stevens' assassination. However, he may have been referring to the armed security team encountered by the terrorists who went to the diplomatic compound from a nearby CIA office within 25 minutes of the start of the attack. The security team killed or wounded many of the dozens of terrorists at the diplomatic compound, U.S. officials have said.

The House report said the security team "repelled sporadic gunfire and [rocket-propelled grenade] fire and assembled all other U.S. personnel at the facility. Officers retrieved the body of Mr. Smith but did not find Ambassador Stevens."

The Obama administration is under increasing pressure from congressional Republicans over its handling of the Benghazi attack. Several congressional committees are investigating the attack.

The White House has declined so far to answer many questions about its response to the attack, such as what was the president's response to it, and why no military rescue operation was ordered.

Former Defense Secretary Leon Panetta and Gen. Martin Dempsey, the chairman of the Joint Chiefs of Staff, testified before Congress earlier this year that the president designated authority for handling the attack to them.

The attack took place during the final weeks of Obama's presidential campaign and it is likely that political campaign and White House officials sought to play down the attack to avoid upsetting his reelection bid.

Both Panetta and Dempsey said there wasn't enough time to mount a rescue operation, as military units were not close enough to respond in time.

However, critics have said the assessment by Panetta and Dempsey could not be accurate since they could not have known the full scope of the terrorist attack at the time or how long it would continue.

Dhu-al-Bajadin concluded the message by warning that "two jihad fronts" are now open in the Levant and in Africa and warned "we are preparing to open two other fronts soon."

A U.S. official said Dhu-al-Bajadin is considered a serious threat and in earlier writings indicated he had access to inside information from al Qaeda.

Dhu-al Bajadin claimed in July 2012 in another online article that al Qaeda was behind the killing of Gareth Williams, an employee of Britain's electronic spy service GCHQ who was working for the Secret Intelligence Service, or MI6. Williams was found dead in suspicious circumstances at a safe house in Pimlico, London, Aug. 23, 2010. His death was ruled "unnatural" and likely criminal related.

On U.S. intelligence reports and testimony that al Qaeda is severely weakened since 2001, Dhu-al-Bajadin stated "within months the world will be stunned by the opening of a new front in the global war

between the Islamic ummah [Muslims worldwide] and the Zionist-Crusader campaign."

"And if your reports state that al Qaeda is dangerous, we will strike you on your own land with operations that will awe your security experts," he stated. "We will be more dangerous than you might expect."

The U.S. Northern Command recently warned that terrorists were planning an attack on the United States, but details of the warning could not be learned.

The posting by Dhu-al-Bajadin also said the next issue of the *Al Qaeda Airlines* magazine would be published.

That issue appeared online weeks later in April and provided detailed plans on how to produce and disperse deadly concentrations of hydrogen cyanide in public places. It called the improvised cyanide-producing device "Al Mubtakar al-Farid," Arabic for "The unique innovation."

The instructions were issued in both English and Arabic and urged terrorists to conduct "lone wolf" attacks using the chemical weapons.

The al Qaeda publication *Inspire* was used by the two Boston Marathon bombing suspects in learning how to fashion the pressure-cooker explosives used in the April attack on the sporting event.

The latest *Al Qaeda Airlines* issue stated that the terror group once planned to use an improvised poison gas attack on the New York subway but the attack was canceled at the last minute.

The article suggested that terrorists pose as maintenance workers and release cyanide gas through the ventilation system of office buildings or by remote detonation of gas-filled bombs.

Suggested targets included nightclubs, schools, churches and youth clubs, and large office buildings.

The United States was mentioned as a prime target for the attacks. The article also included images of Maj. Nidal Hasan, the Islamist shooter charged in the Fort Hood massacre.

Dhu-al-Bajadin has said the *Al Qaeda Airlines* publication is not solely focused on aviation but was chosen as a way to instill fear in the enemy.

Bill Gertz *is senior editor of the* Washington Free Beacon. *Prior to joining the* Beacon *he was a national security reporter, editor, and columnist for 27 years at the* Washington Times. *Bill is the author of six books, four of which were national bestsellers. His most recent book was* The Failure Factory, *a look at an out-of-control government bureaucracy that could have been a primer for the Tea Party. Bill has an international reputation. Vyachaslav Trubnikov, head of the Russian Foreign Intelligence Service, once called him a "tool of the CIA" after he wrote an article exposing Russian intelligence operations in the Balkans. A senior CIA official once threatened to have a cruise missile fired at his desk after he wrote a column critical of the CIA's analysis of China. And China's communist government has criticized him for news reports exposing China's weapons and missile sales to rogues states. The state-run Xinhua news agency in 2006 identified Bill as the No. 1 "anti-China expert" in the world. Bill insists he is very much pro-China—pro-Chinese people and opposed to the communist system. Former Defense Secretary Donald H. Rumsfeld once told him: "You are drilling holes in the Pentagon and sucking out information."*

New spectrometry standard for handheld chemical detectors

Source: http://www.homelandsecuritynewswire.com/dr20131028-new-spectrometry-standard-for-handheld-chemical-detectors

When it comes to detectors for dangerous chemicals, toxins, or nefarious germs, smaller and faster is better. Size and speed, however, must still allow for accuracy, especially when measurements by different instruments must give the same result.

The recent publication of a new standard — a culmination of years of research at the National Institute of Standards and Technology (NIST) — provides confidence that results from handheld chemical detectors can be compared, apples-to-apples.

Such detectors are used by emergency responders to check for the presence of explosives or toxic chemicals that threaten public safety.

Quality control managers in the pharmaceutical industry use them to verify the identity of chemicals going into their production lines.

Christopher Neary of the NIST Environmental Management Group demonstrates the use of a handheld Raman spectrometer to determine the identity of an unknown sample.

A NIST release reports that the new standard, published recently by ASTM International, is intended as a guide to correct the output from different handheld Raman spectrometers, so that different instruments produce the same result for the same sample.

Raman spectrometers identify chemicals by shining laser light on a sample and detecting the very small changes in the wavelength of that light as it is re-emitted from the sample.

Spectrometers from different manufacturers, however, can produce signals with different peak intensities. These differences can be confusing, particularly if first responders from different agencies use different instruments and get differing results on an unknown sample in the field.

"Our goal is that people get the same answer for the same sample on any machine," says NIST chemist Steven Choquette. His team developed a series of NIST Standard Reference Materials (SRMs) that are used to correct Raman systems with differing excitation lasers. These standards enable the correction of the differences in peak intensities reported for the same sample by different Raman spectrometers. They then continued to work with spectrometer manufacturers to develop an industry consensus standard to enable comparisons among Raman spectrometers. Their work was funded by the NIST Law Enforcement Standards Office (OLES) and the Department of Homeland Security.

Using Unmanned Aerial Vehicles (UAVs) for CBRN Reconnaissance

Source: http://www.cbrneportal.com/using-unmanned-aerial-vehicles-uavs-for-chemical-biological-radiological-nuclear-cbrn-reconnaissance/

Due to the rapid advancement in UAVs and experience that has been gained by many nations involved in contemporary operations worldwide; CBRN detection in its current form is very likely to experience a fast transition towards a decade of new capabilities. Generally in the past the main focus has been concentrated around mounted and dismounted CBRN reconnaissance. With the emergence of new technologies and the focus on force protection in all operations; capability requirements are now addressing a new topic of unmanned platforms (UP) as part of CBRN Defence operations.

The operation of UP by armed forces is nothing new, the topic of drones has been prominent in world news and despite some bad press, UP has clearly contributed to the success of many an operation. The CBRN domain however, has seen limited UP utilisation. Although several unmanned ground vehicles (UGV) and robots have been equipped with a variety of sensors, the utilisation of flying platforms (UAV, rotary and fixed-wing) still seems to be a challenging topic.

Within the given CBRN context it must be pointed out that UGV will for sure not be High Altitude Long Endurance/Medium Altitude Long Endurance (HALE/MALE: operation above 15.000m/ operation between 5.000m – 15.000m) but could be categorised as a Tactical UAV

(TUAV; operation up to 5.000m) or VTOL (Vertical Taking Off and Landing: operation up to 4.500m). This comprises rotary wing as well as fixed-wing solutions. Whatever the propulsion concept will be, the restrictions (buzzword: legal aspects) and limitations (in particular payload) will probably be the same for both concepts. Despite these challenges, Bruker has forged ahead together with an integration company experienced on working with UAVs to set-up a R&D project. Bruker teamed-up with the German company ESG with the aim to combine the µRAID (Rapid Alarm and Identification Device) chemical sensor with the UMAT (Unmanned Mission Avionics Test Helicopter) VTOL UGV. The focus of this ongoing project is to confirm the feasibility of mounting a C-sensor in a VTOL and develop a solid base for future tests.

Using the VTOL as the platform for this R&D activity provides a variety of advantages. Among others the vertical landing capability, the hovering mode as well as the availability of a multi-role payload bay serve as good examples.

From the technical perspective the biggest challenge was to combine the avionic flight system of the UAV, the chemical sensor system and the wireless communication link while guaranteeing the absence of any mutual interference. Crucially it was not known to what effect rotor movement would influence detection performance. As such, intensive ground and preparatory flight tests were conducted. These tests resulted in the design and production of a nose mast (see picture) that acts as an air inlet and negates the negative impact that the rotors have on detector air/gas intake.

So far the project is on time and despite some bespoke developments, there have been no significant setbacks. The next milestone will be to conduct a scheduled series of test flights, including the final confirmation of in-flight chemical detection capability. This series is scheduled to take place later this year.

Looking to the future, the intention of both companies, ESG as well as BRUKER, is to continue with this project. Our aim is to further exploit the CBRN detection capability of the "UMAT" VTOL in order to gain further understanding of the potential that UP can offer. The integration of additional C and R sensors will be accompanied by the development, description and assessment.

Unmanned Sniffers

Source: http://www.cbrneportal.com/unmanned-sniffers/

The chemical weapons crisis in Syria presents a need for new military technologies which may lead to the deployment of unmanned aerial vehicles (UAV) to detect NBC threats in the future. The United States military has studying the integration of chemical detection sensor payloads on the US Army's current UAV inventory.

These include the AV RQ-11B Raven close-range mini-UAV of which more than 10,000 have been deployed and are in use by the US and several allied military forces.

Carrying a tiny 10 gram payload, the hand-launched Raven has an range of 7 miles and can remain airborne for 1 hr 30 min. Smiths Detection successfully created and demonstrated a chemical detection and identification system, able to fit in the interchangeable nose cone of an RQ-11B as a result of the collaborative efforts between Smiths Detection, AeroVironment, Inc. (AV), the US Army Edgewood Chemical Biological Center and other US Department of Defense (DoD) laboratories.

In a successful demonstration at the US Army's Dugway Proving Grounds, a 'plug and play' chemical sensor-equipped Raven was flown into a chemical cloud and successfully detected and identified the chemical, tracking the chemical vapor plume autonomously. The chemical sensor developed for the Raven is based on its Lightweight Chemical Detector

(LCD), the commercial variant of the DoD's Joint Chemical Agent Detector (JCAD) program. The LCD has been radically modified into a new cylindrical form factor unit known as the Chemical Sensor Module (CSM), yet it retains all of the critical chemical detection and identification capabilities of the LCD. Because of the size and weight, the CSM can be integrated into the AV Raven Small Unmanned Aircraft System (SUAS) to make it capable of automatic detection, identification and quantification of dangerous chemical warfare agents. Advanced control algorithms developed by DoD laboratories allow the Raven to operate in a semi-autonomous mode analyzing the data collected by the CSM and determining chemical cloud size, direction and density in real-time.

The Boeing Insitu ScanEagle long-endurance mini-UAV is operated by all three US Services and has been selected by the UK MoD for the Royal Navy. Carrying a 3.5 kg payload the ScanEagle has incredible endurance of more than 16 hours at a loitering speed of 50 mph. Two ScanEagles were modified under a US Defense Threat Reduction Agency (DTRA) for a programme known as Biological Combat Assessment System (BCAS) with one aircraft being adapted for the carriage of a payload to detect, track and collect samples of airborne biological warfare agents for recovery and analysis. The second ScanEagle would collect and record meteorological data and plume tracks with its standard EO/IR equipment. On completion of the test porgramme, the DTRA contract provides the option for more UAVs to the modified with the BCAS.

In the heavyweight class of UAV is the Northrop Grumman/IAI MQ-5B Hunter that has been acquired by Belgium, France and Israel, as well as the US Army. Carrying a 230 kg payload over a range of more than 100 miles, the Hunter has a 20-hour endurance. One of the MQ-5B's optional mission payloads is a chemical threat detection system called Safeguard which combines an infra-red linescan (IRLS) with a thermally stabilized FFT infra-red spectrometer for cloud particle analysis.

In Europe, Italy's Selex Galileo Falco MALE UAV, which has recently been procured by the United Nations of operations within the UN Stabilisation Mission in the Democratic Republic of the Congo (MONUSCO), can carry of 70 kg payload including NBC sensors.

At this year's DSEI, Bruker Detection and ESG Elektroniksystem-und Logistik-GmbH announced that they have successfully initiated an industrial funded research & development programme to mount Bruker's RAID gas trace detector for Chemical Warfare Agents (CWAs)

and Toxic Industrial Chemicals (TICs) in to an Unmanned Mission Avionics Test Helicopter (UMAT). The UAV selected for the programme is an EMT Museco (Multi-sensor copter) that utilizes the Swiss Neo-300 air vehicle, a 9 ft-long unmanned helicopter that can carry a 100 kg payload over a range of 30 miles.

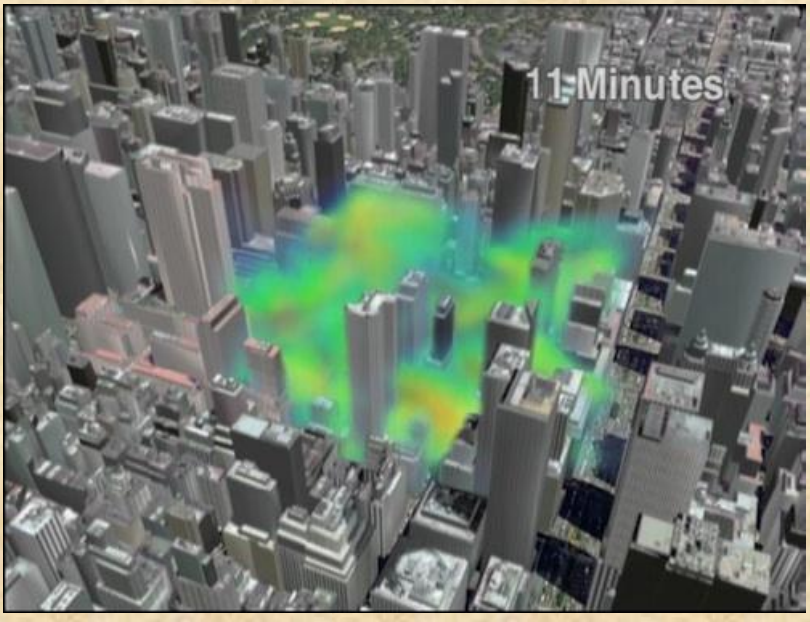
The project was established in response to clear emerging needs in the detection market for a CBRN UAV. The initial phase of design and assembly of the system has been successfully accomplished which also included fully integration of a command & control (C2) and data management capability and the flight test phase is about to begin. It is foreseen that on completion of the chemical aerial tests, a radiological component will be added.

Sebastian Meyer-Plath, the vice president of Bruker Corp, said the countries surrounding Syria will increasingly need such technologies in order to identify whether chemical agents from Syria are making their way into their borders. "The question is how quickly those countries will react with initiating urgent operation requirements. What we already see is there is a sharp increase in demand from Turkey," he said.

Helping first responders identify chemical, biological, and radiological agents

Source: http://www.homelandsecuritynewswire.com/dr20131029-helping-first-responders-identify-chemical-biological-and-radiological-agents?goback=.gde_3711808_member_580094896165 3051394#!

The U.S. Naval Research Laboratory (NRL) has expanded the reach and capabilities of its rapid urban plume modeling and hazard assessment system, **CT-Analyst,** by providing a commercial license to Valencia, California-based Safe Environment Engineering (SEE) for the fields of use of public safety, industrial safety and monitoring, and environmental monitoring. The license was executed in August 2013. SEE is a company that advances the safety and security of the general public, first responders, and critical infrastructure with real-time real-world wireless interoperable information solutions. CT Analyst will be integrated into the existing product line of SEE's Lifeline MultiMeterViewer software suite.



An NRL release reports that CT-Analyst, developed by researchers at NRL in the Laboratories for Computational Physics and Fluid Dynamics, is a tool designed to provide first responders with fast and accurate predictions of chemical, biological, and radiological agent airborne transport in urban environments. CT-Analyst excels at providing immediate results thanks to advanced pre-computed plume information databases called Nomografs. CT-Analyst was used in a command and control capacity as part of the last two Presidential Inaugurations as well as other major national security events. The NRL team working on CT-Analyst consists of Dr. Jay Boris, Dr. Gopal Patnaik, Keith Obenschain, and Adam Moses.

SEE's Lifeline MultiMeterViewer provides an overview of multiple detection instruments in a real time display and functions as an instant command center, displaying data and providing

both audible and visual alarms. A map-view or geographical information system (GIS) interface provides instrument information including tracking and survey information as map layers. Web Interfacing provides product info, references, alarm settings, guidance documents and more.

Filters and customizable display allow the specific user to view the data that is most important to them.

The release notes that the license signed between NRL and SEE's president and CEO David Lamensdorf will allow for CT-Analyst plume data to be harnessed inside the Lifeline MultiMeterViewer allowing for accurate and up-to-date plume displays plus additional relevant information such as contaminant concentration levels and hazard areas for people to avoid. This commercial license provides SEE's Lifeline MultiMeterViewer the ability to aid first responders in their jobs and provide the CT-Analyst system with a new platform to resource its rapid plume-modeling functionality.

Proytecsa Security Contributes to CBRN Defence in Saudi Arabia

Source: http://www.army-technology.com/contractors/mines/proyectosy/pressproytecsa-security-contributes-to-cbrn-defence-in-saudi-arabia.html

At the end of June 2013, Proytecsa Security will deliver five of its Aunav.EOD robots, which are specialised in CBRN (chemical, biological, radiological and nuclear) defence, to the Saudi Arabian Civil Defense Corps.

The robots have been designed to prevent and neutralise CBRN threats and will be used by the civil defense unit of the Kingdom of Saudi Arabia.

The Aunav.EOD robot has a wide variety of skills and can be used to perform different tasks such as counter improvised explosive device (C-IED), explosive ordnance disposal (EOD) and CBRN.

The medium-size robot is highly sophisticated. It has the ability to lift objects and its high precision enables it to respond correctly to risky situations in which explosive devices, car bombs or any kind of CBRN threat might be involved.

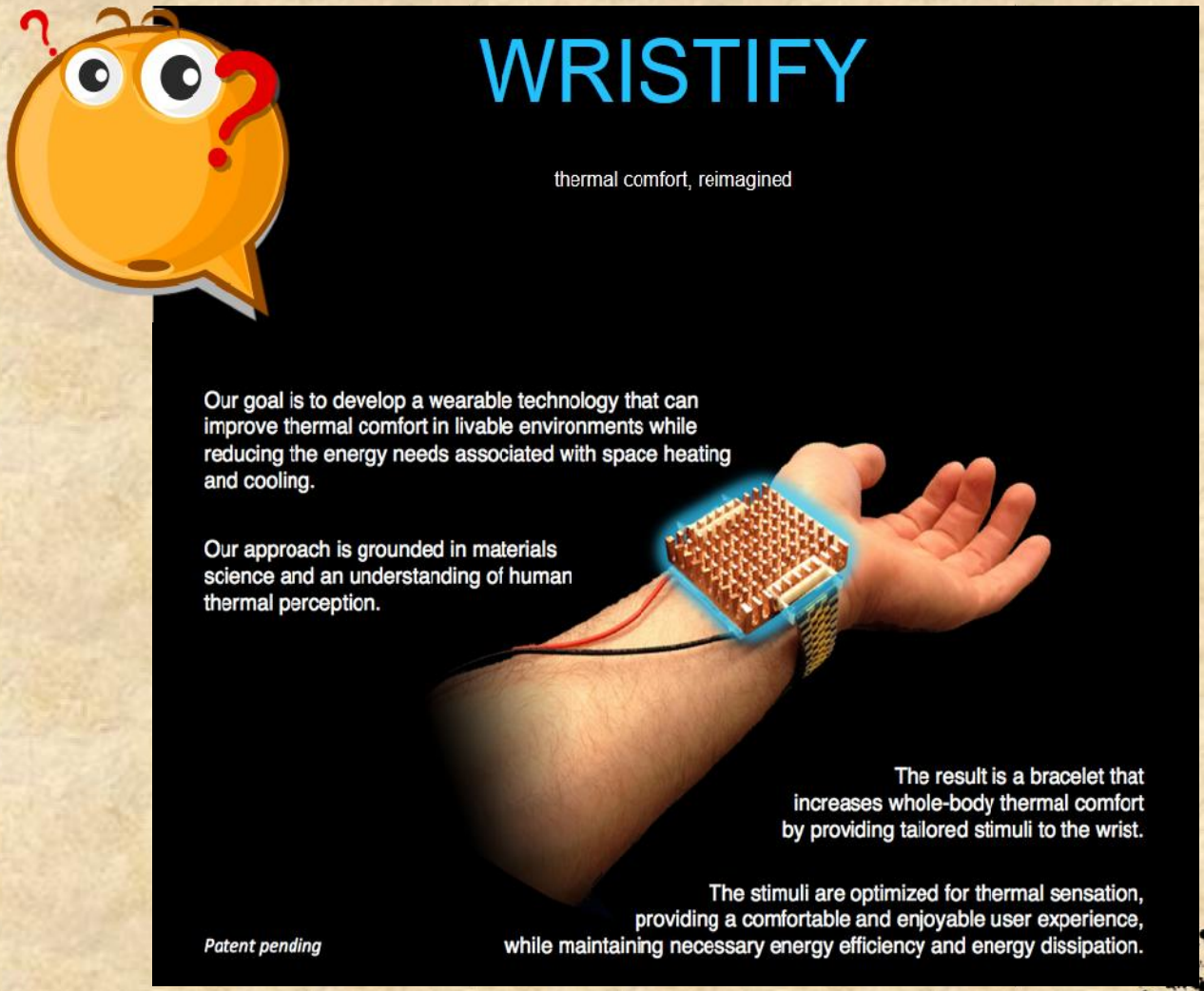
Beside its main features, the robot has radiation detectors to find any radioactive material in its surroundings. The remote control robot integrates the telemetry so its data can be seen in real-time from the master unit.

The aunav.EOD robot is fitted with a crane arm, which has been specifically designed to pick up barrels. It is also supplied with a tailor-made container that is able to store and transport any suspecting radioactive materials or samples for analysis, while eliminating or reducing the level of radiation. The robot is designed to allow its own decontamination after the process.

This supply allows Proytecsa Security to remain the leading supplier of C-IED, EOD and CBRN robots in the Kingdom of Saudi Arabia, where the aunav.EOD and aunav.MEGA robots are currently in service in several security corps.

►EDITOR'S Q: Perhaps applicable to Frist Responders' gear?

Source: http://wristifyme.com/



Russia Busts Terror Attack Plot on Chemical Facility in Kirov

Source: http://www.cbrneportal.com/russia-busts-terror-attack-plot-on-chemical-facility-in-kirov/

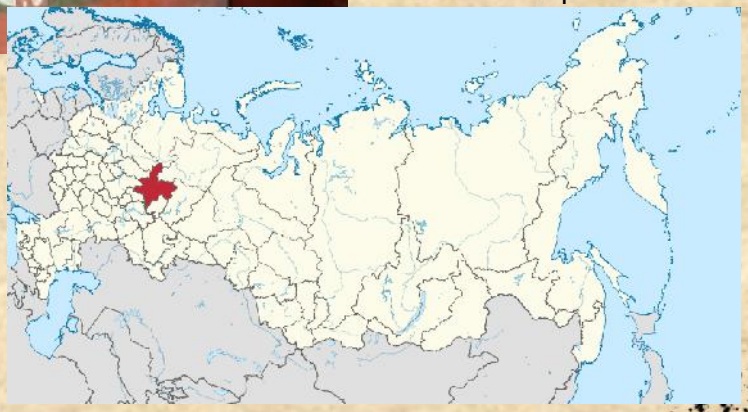
Russia has foiled (Oct 16) a deadly terror attack at one of its chemical facilities which could have killed "hundreds of people", officials in Moscow said.

Russian officials have apprehended two Islamic extremists, who have been planning to launch an attack on the chemical storage facility in the central Kirov region.

The duo, aged 19 and 21, are said to be influenced by the Wahahbi school of Islam and hail from the restive North Caucasus region.

"The action was planned in order to influence the decisions of the authorities and international organisations," said a statement from the investigators, according to the state-run RIA Novosti.

The suspects were planning to bomb the storage facility for more than a month, said officials.



U.S. Company Offers New Hand-held Chemical Identifier

Source: http://i-hls.com/2013/11/u-s-company-offers-new-hand-held-chemical-identifier/

A new hand-held chemical identifier for analyzing suspected explosives, toxic industrial chemicals and narcotics was introduced Tuesday by Smiths Detection.

ACE-ID. Photo: Smiths Detection

According to the New Scientist, the device, the ACE-ID, is an advanced, hand-held chemical identifier that has been rigorously tested to ensure it is safe to use. The identifier allows explosive ordnance disposal teams, bomb squads, hazardous materials technicians, and law

enforcement officers to identify unknown solids and water-based solutions in 20 seconds or less.
The identifier uses Raman spectroscopy, a laser-based technique that discerns chemicals through certain types of glass and plastics, thereby eliminating the need to physically handle potentially dangerous substances.

ACE-ID's advanced laser platform also minimizes heat to substances that could ignite if explosive. "Our mission is to help protect communities and those who serve them," Ian May, Smiths Detection senior vice president of sales, said in announcing the product. "ACE-ID provides an unparalleled capability to identify explosives".

Specifications

Technology	**Raman**
Size	12.7 x 8.9 x 5.6 cm (5 x 3.5 x 2.2 in)
Weight	0.45kg (1lb)
Sampling	**Point and shoot**
Library	About 500 substances with user library capability via laptop software to add samples
Start-up time	Less than 20 sec at 20°C (68°F)
Detection time	**Less than 20 sec at 20°C** (68°F)
Power	One lithium battery (SureFire or CR123A) or USB power source
Display	Touchscreen display (compatible with level A PPE gloves)
Connectivity	Micro USB
Operating temperature	-20°C to +50°C (-68°F to 122°F)
Storage temperature range	-40°C to +70°C (-104°F to 158°F)
Operating humidity	**>95%**
Color	Olive drab

US intelligence suggests Syria may hide some chemical weapons

Source: http://security.blogs.cnn.com/2013/11/05/first-on-cnn-us-intelligence-suggests-syria-may-hide-some-chemical-weapons/?hpt=hp_t3&hpt=imi_c1

The United States is looking at new classified intelligence indicating the Syrian government may not fully declare its chemical weapons stockpile, CNN has learned. That would mean it will still have a secret cache of chemical weapons even after the current agreed-upon destruction effort is carried out.

A United Nations (UN) arms expert collects samples on August 29, 2013, as they inspect the site where rockets had fallen in Damascus' eastern Ghouta suburb during an investigation into a suspected chemical weapons strike near the capital.

The intelligence is not definitive but "there are various threads of information that would shake our confidence," one U.S. official said. "They have done things recently that suggest Syria is not ready to get rid of all their chemical weapons."

CNN has spoken to several U.S. officials with access to the latest intelligence on Syria, who confirmed the information. All declined to be identified because of the sensitivity of the data.

U.S. intelligence agencies, the Defense Department, the State Department and White House are all reviewing the information. One official cautioned there is not yet a definitive U.S. conclusion about Syrian intentions based on this intelligence, but there is an effort to gather corroborating information and better understand what the regime may be up to.

There is agreement among U.S. officials that Syria's official declarations to the Organisation for the Prohibition of Chemical Weapons (OPCW) have been made largely in good faith after the threat of military action by the United States for Syria's use of chemical weapons against civilians. The United States believes Syrian President Bashar al-Assad understands not to do that again.

National Security Council spokesperson Bernadette Meehan issued a statement Tuesday evening saying: "We continue to review and assess the completeness and accuracy of Syria's declaration to the OPCW. However, in accordance with OPCW regulations, Syria's declaration is confidential, and we will not publicly discuss its details or our assessment of it. For further details, we would refer you to the OPCW."

Officials told CNN the new intelligence is related to stockpile inventories and delivery systems, such as warheads and artillery shells - items that could preserve Syria's ability to use chemical weapons again if it chose to. Officials believe al-Assad will hold on to some of the chemical weapons largely as a long-term hedge against what he sees as a threat from Israel.

"It strains credulity," one official said, to believe he will readily give up his entire chemical weapons program.

Officials would not say exactly how the latest intelligence was collected. But much of U.S. intelligence about Syria comes from satellite imagery. Also, there have been communications intercepts in the past that have given the United States clues about the intentions of the Syrian leadership. And U.S. officials have in the past confirmed channels of information from operatives on the ground who work on behalf of the Syrian opposition or other countries in the region.

Al-Assad may try to hold on to more than just weapons. Last week, Foreign Policy magazine reported that Syria's foreign minister had asked the OPCW to spare a dozen of Syria's chemical weapons factories from destruction so they could be converted into civilian chemical facilities. Asked about that report Friday, State Department spokeswoman Jennifer Psaki said it did not appear Syria had submitted a formal request to OPCW. "The OPCW would then consider any request," Psaki said. "However, as you know, the (U.N. Security Council) and the OPCW Executive Council decision made clear that Syria's chemical weapons program must be eliminated."

Asked about the Foreign Policy report, a U.S. official said, "there's a real concern that the Syrians might be trying to preserve some of their CW capabilities."

The new intelligence is not related to Syria's reported desire to keep some of its chemical factories.

The OPCW has endorsed shipping chemical stockpiles out of the country for destruction because of the ongoing conflict there. Discussions on finalizing a plan are expected in the coming days, according to the organization.

The OPCW had previously announced the destruction of production equipment at all declared chemical weapons production, filling and mixing facilities. According to the OPCW on Tuesday, 21 of the 23 sites have been inspected. The items from the other two – inaccessible because of the conflict –were moved to accessible areas and verified against disclosure statements made by the regime.

The OPCW also said 154 warheads have been destroyed by the Syrians. Destruction work has begun at five other sites which the Syrians say hold 424 bombs and 63 warheads.

Norway had considered a U.S. request that the Scandinavian country take some of the chemical weapons inventory for destruction. But last month, the Ministry of Foreign Affairs announced it rejected the plan due to "time constraints and external factors" such as regulatory requirements.

So far the United States has provided $6 million in assistance to the OPCW efforts, including 10 armored civilian vehicles to transport inspectors inside Syria.

Meanwhile, the Pentagon is looking at offering technology it has developed for any OPCW-sponsored chemical weapons destruction. The first detailed public hint of that came Tuesday from Defense Secretary Chuck Hagel, who said, "DoD has not only maintained military pressure on the Assad regime, it has also developed the technology that may very well be used to destroy these chemical weapons."

Hagel was referring to the Field Deployable Hydrolysis System, a series of containers full of high-tech equipment that can be sent into the field. Rather than use the typical incineration technology to destroy chemical agents, this system neutralizes the chemical weapons by mixing them with water and other agents.

One concept is to send the system to a third country, where the Syrian chemical weapons would also be shipped, a Defense Department official said. The Pentagon is currently analyzing what would be needed to put the chemical weapons on a ship to transport them to a third country willing to accept the material for destruction. The concerns are both how to keep the material stable during shipment and providing maritime security for the transit.

EDITOR'S COMMENT: I was surprised from the "surprise" of US officials! I thought that this possibility should have been included in the overall plan to destroy Syria's chemical arsenal. What is Syria without its chemical weapons? What is Israel without its nuclear weapons? Have anybody ever thought if Albania has never destroyed completely its (16.678kg) chemical stockpile (OPCW – July 11th, 2007) but kept a few barrels of mustard/lewisite just in case? It sounds redicoulous to believe that the Western world ordered Syria to destroy everything and Syria totally agreed to do so!

Syria chemical weapons mission funded only through this month

By Anthony Deutsch (Reuters)
Source: http://www.reuters.com/article/2013/11/05/us-syria-crisis-chemical-idUSBRE9A40DY20131105?goback=.gde_4709642_member_579490533851585331 2#!

The international body tasked with eliminating Syria's chemical weapons has raised only enough money so far to fund its mission through this month, and more cash will have to be found soon to pay for the destruction of poison gas stocks next year.

The Organisation for the Prohibition of Chemical Weapons, which won the Nobel Peace Prize last month, is overseeing the destruction of Syria's nerve agent stocks under a U.S.-Russian agreement reached in September.

It has so far raised about 10 million euros ($13.5 million) for the task.

"It is the assessment of the Secretariat that its existing personnel resources are sufficient for operations to be conducted in October and November 2013," said an October 25 OPCW document seen by Reuters. At the time, its account held just 4 million euros.

Syrian president Bashar al-Assad says the total cost could be $1 billion, although experts say it is likely to be lower, running into the tens or hundreds of millions of dollars, depending on where and how the chemical arms are destroyed.

The United States has been the biggest contributor so far to the OPCW's fund for the Syria mission, with Britain, Canada, Germany, the Netherlands and Switzerland also contributing.

Washington has contributed $6 million in equipment, training and cash, split between funds with the OPCW and the United Nations, the OPCW document said.

Under the joint Russian-American proposal, Syria agreed in September to destroy its entire chemical weapons program by mid-2014. The move averted missile strikes threatened by Washington following an August 21 sarin gas attack in the outskirts of Damascus that killed hundreds of people.

Rising costs

Until September, Syria was one of a handful of countries that were not party to a global treaty outlawing the stockpiling of chemical arms.

Damascus's joining of the Chemical Weapons Convention creates the unique problem of safely destroying huge stockpiles of poisons in the middle of a civil war that has killed 100,000 people and driven up to a third of Syrians from their homes.

Personnel costs will be largely covered by the OPCW's regular budget, less than an annual $100 million, but the Hague-based organisation will need substantial additional resources.

By the end of next week, the OPCW and Syria must agree to a detailed plan of destruction, explaining in detail how and where to destroy the poisons, including mustard gas, sarin and possibly VX.

The OPCW said last week its teams had inspected 21 out of 23 chemical weapons sites across the country, meeting a key November 1 deadline. Two other sites were too dangerous to reach for inspection, but critical equipment had already been moved to other sites that experts had visited, it said.

Syria declared to the OPCW 30 production, filling and storage facilities, eight mobile filling units and three chemical weapons-related facilities.

They contained approximately 1,000 metric tons of chemical weapons, mostly in the form of raw precursors, 290 metric tons of loaded munitions and 1,230 unfilled munitions, OPCW documents showed.

Four other countries have pledged to contribute an additional 2.7 million euros to the OPCW fund, the document said. Germany, Italy and the Netherlands supplied air transport to fly OPCW team members to Syria, while other European countries and the United States provided armored vehicles that were shipped by Canada, the document said.

Ship to Albania?

The United Kingdom has pledged to give $3 million, while Russia, France and China said they will donate experts and technical staff, who need to witness the entire, time-consuming destruction process.

A major cost still to come will be the likely shipping of raw chemicals out of

Syria for safe destruction away from the war zone. Discussions are ongoing with countries willing to host the facilities to incinerate or chemically neutralize the poisons, including Albania, Belgium and an unspecified Scandinavian country, two sources said.
Companies in the United States, Germany and France are competing for the contract to provide destruction facilities, sources said.

Since being established under the 1997 Chemical Weapons Convention, the OPCW has overseen the destruction of more than 50,000 tons of toxic munitions, or more than 80 percent of the world's declared stockpile.
The United States and Russia, the largest possessors of chemical weapons, are years behind schedule in destroying their arsenals.

EDITOR'S COMMENT: I sincerely hope that lack of money will not lead to new taxes in Greece! After the latest "idea" to penaltize fire places at homes with the excuse of microparticles' atmospheric pollution why not contribute to the destruction of Syria's chemical arsenal. We live in a world of solidarity! By the way: why not OPCW donates the money that goes with Nobel Prize for the cause?

Qafëmollë

29 Oct 2013

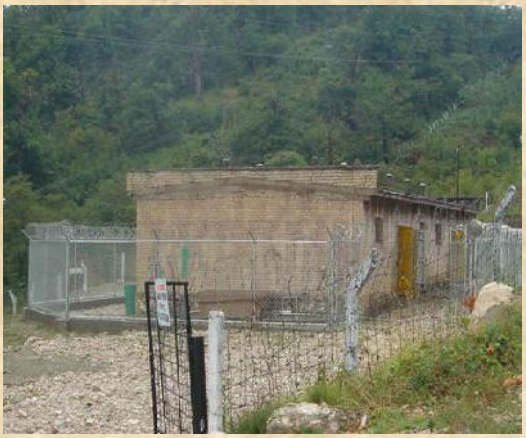
Source: http://lewis.armscontrolwonk.com/archive/6920/qafemolle

This is the spot where the Defense Threat Reduction Agency eliminated Albania's chemical weapons stockpile.

I've spent the last few weeks ruminating on the challenges of finding a third party to accept Syria's chemical weapons.
Most Syria's stockpile is in bulk form (mustard and precursors for sarin and VX.) The current plan is to consolidate the precursors at a site near one a port such as Latakia or Tartous, then ship the materials to a third country for destruction by mobile assets like the Field Deployable Hydrolysis System. Norway recently declined to be that third country. Others have made it clear they are not interested.
One of the challenges, I think, is relates to a larger problem in implementing our nonproliferation policies. We're good at doing the parts we like, but we often leave behind a mess. As a result, states that cooperate on nonproliferation issues aren't always left feeling good about having cooperated.

Consider the case of Albania.

In 2002, Albania announced that it had discovered 16 tons of Chinese supplied chemical weapons dating to the dictatorship of Enver Hoxha at a bunker near Qafëmollë (sometimes rendered as Qaf Molle). Here are some pictures of the bunker and the munitions, which is located at: 41°20'43.36"N, 19°57'21.90"E



Albania's chemical stockpile (when initially "discovered"

Tirana appealed for help. (Matthew Tompkins has questioned the veracity of the "discovery" story although that does not change our timeline or Tirana's experiences.)

It took a while, including an attention grabbing visit by Joby Warrick of the Washington Post, who ultimately wrote a pair of *Washington Post* stories on the discovery and disposition of Albania's chemical weapons stockpile, with a nice image of a guard near a (now demolished) pill box. Joby gives excellent driving directions to the site, by the way. That story upset the locals, but seemed to do the trick in Washington. A few years later, Senator Lugar would be encouraged not to say too much about the process for fear the natives might get restless.

The United States, thanks to the leadership of then-Senator Richard Lugar, ultimately paid for security at the site, including fences and armed guards, as well as for deployment of a mobile incinerator. DTRA contracted with Eisenmann AG for the incinerator unit and URS to manage the project. (The incinerator was placed in a tent on a concrete slab next to the building and several underground bunkers.)

The United States, according to Bob Mikulak, ultimately "contributed over 45 million dollars to assist the Republic of Albania in eliminating 16.6 metric tons of chemical weapons agents at Qaf Molle, destroying 100 percent of its stockpile in a verified manner" by July 2007.

Sadly, that's not the end of the story. Here we pick up the story based on cables from Wikileaks. What about all the hazardous waste?

The Albanian Ministry of Defense had agreed to take it, planning to construct a hazardous waste storage facility with assistance from the European Union. That process went nowhere. The US complained to the Europeans, but the EU canceled the project in the wake of local opposition.

The hazardous waste sat in containers on the concrete pad. The containers started to leak. In late 2007-early 2008, the US hired an environmental remediation firm, Savant Environmental, "who determined the problem was worse than originally thought. Many of the containers were leaking salts of heavy metals, primarily arsenic, lead and mercury. In addition, the conexes were not waterproof, and since contaminated components had not been properly cleaned before being put into the conexes, condensation and water leakage were dissolving some of the contaminants and causing them to leak out onto the ground."

Savant Environmental repackaged the waste and placed it in 20 shipping containers. There it sits, visible from space. Good for twenty years. Well, fifteen now. Ish.

Those containers are still sitting on the concrete pad, out in the open. Here is a satellite image from August.

It's hard to say about security on site. I don't see any evidence of security, but perhaps the guards get dropped off by bus or there are electronic alarms. Still, the site seems relatively unprotected. Someone posted a picture from 400 meters up the road on August 2011, which looks to be the remains of the rest of the base connected to the chemical weapons storage site. Things look pretty deserted to me, beyond some basic fencing and signs saying "keep out."

The stuff isn't a chemical weapons threat any more, of course, but it is an environmental hazard. Just sitting in some shipping containers. (Did you know they were called "conexes"?)

I raise the issue because it reminds me to the saga of the M/V Mochegorsk – the cargo of Iranian munitions seized in Cyprus that later exploded. We aren't always so great on the follow-through when it comes to nonproliferation, especially once the strictly national security part is over. I realize that individual states have to take some responsibility, but if we're going to argue that nonproliferation is shared interest we can't say the hazardous waste from chemical weapon demilitarization or disposing of seized munitions aren't part of our shared responsibility.

I don't want to leave the impression that I am criticizing the Defense Threat Reduction Agency, which did more than anyone else in this saga save for maybe Dick Lugar and staff. They can't do it all, for goodness sake. And lord knows, pressing for US assistance to Albania didn't help Lugar win his primary. It would be nice if the Europeans stepped up on the construction of a hazardous waste facility in Albania or the Chinese agreed to make amends for selling a nasty government some nasty weapons. Or even the Russians, for propping up Joe Stalin's buddy. I know Wikileaks hates the United States, but those leaked cables suggest Washington worked harder than any other country — even if the US wasn't perfect all the time. The Italians complained about the risk from the site, but what did they offer?

Maybe Albania is no worse off than if it had left the chemical weapons rotting in the bunker, slowly poisoning the hillside — but that setts the bar pretty low. If we want to persuade states to take, for example, Syria's chemical weapons stockpiles, it would help if Albania's story had a happy ending. And we — not just Americans, but everyone who cares about nonproliferation — should take special care that whatever country takes Syria's chemical weapons stockpile isn't left regretting that decision.

Joint Service Transportable Small Scale Decontaminating Apparatus

Source:http://semanticommunity.info/Army_Weapon_Systems_Handbook_2012/Joint_Service_Transportable_Small_Scale_Decontaminating_Apparatus_%28JSTSS_DA%29_M26

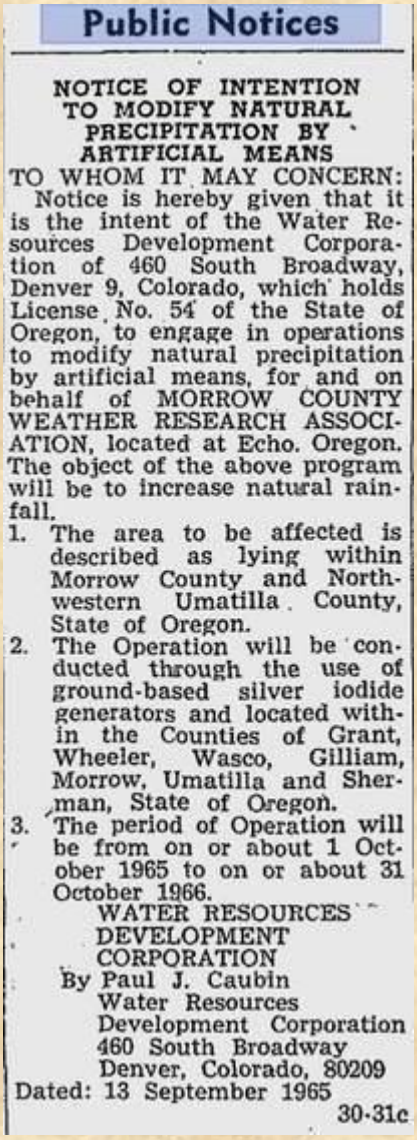
The Joint Service Transportable Small Scale Decontaminating Apparatus (JSTSS DA) will enable Warfighters to conduct operational and support thorough decontamination of nonsensitive military

materiel and limited facility decontamination at logistics bases, airfields (and critical airfield assets), naval ships, ports, key command and control centers, and fixed facilities that have been exposed to chemical, biological, radiological, and nuclear (CBRN) warfare agents/contamination and toxic industrial materials. The system may also support other hazard abatement missions as necessary. The M26 is supported with one accessory kit and one water blivet per system.
The M26 is transportable by a non-dedicated platform (i.e., High Mobility Multipurpose Wheeled Vehicle (HMMWV)/Trailer, Family of Medium Tactical Vehicles (FMTV)/Trailer) offroad over any terrain.
The M26 will decontaminate Chemical Warfare Agents (Nerve-G, Nerve V, Blister H) on tactical vehicles and crew served weapons below detection levels of M8 detector paper within 5 minutes contact time after an attack.
The M26 will have a reliability of greater than or equal to 0.89.

Planetary Weapons and Military Weather Modification: Chemtrails, Atmospheric Geoengineering and Environmental Warfare

By Rady Ananda

Source: http://www.globalresearch.ca/military-weather-modification-chemtrails-atmospheric-geoengineering-and-environmental-warfare/5356630?goback=.gde_4962526_member_5795121405699846144#!



Public Notices

NOTICE OF INTENTION TO MODIFY NATURAL PRECIPITATION BY ARTIFICIAL MEANS

TO WHOM IT MAY CONCERN:

Notice is hereby given that it is the intent of the Water Resources Development Corporation of 460 South Broadway, Denver 9, Colorado, which holds License No. 54 of the State of Oregon, to engage in operations to modify natural precipitation by artificial means, for and on behalf of MORROW COUNTY WEATHER RESEARCH ASSOCIATION, located at Echo, Oregon. The object of the above program will be to increase natural rainfall.

1. The area to be affected is described as lying within Morrow County and Northwestern Umatilla County, State of Oregon.
2. The Operation will be conducted through the use of ground-based silver iodide generators and located within the Counties of Grant, Wheeler, Wasco, Gilliam, Morrow, Umatilla and Sherman, State of Oregon.
3. The period of Operation will be from on or about 1 October 1965 to on or about 31 October 1966.

WATER RESOURCES DEVELOPMENT CORPORATION
By Paul J. Caubin
Water Resources Development Corporation
460 South Broadway
Denver, Colorado, 80209
Dated: 13 September 1965

30-31c

Developed in 1988 by the United Nations Environment Programme and the UN's World Meteorological Organization, the Intergovernmental Panel on Climate Change (IPCC) just published its Fifth Assessment Report [1] and maintains its silence on military weather modification applications which continue to skew the data.

"Extreme weather and climate events" are linked to climate change while no mention is made of government programs deliberately aimed at modifying the weather and inducing earthquakes, drought, rain, and tsunamis.

The modern weather modification program, at least in the US, is over 70 years old. Public service announcements printed in newspapers back in the 1960s warned of government intention to modify the weather.

Life Magazine, back in the 50s and 60s, continually covered US weather modification programs, including Project Stormfury which redirected and reduced hurricane intensity from 1962 to 1983. The IPCC's continuing and absolute silence on such programs is deafening.

With insider knowledge, a chapter in the 1968 book, *Unless Peace Comes: A Scientific Forecast of New Weapons*, predicts the development of technologies that will use the planet itself as a weapon. The chapter, "How to Wreck the Environment," [2] was penned by geophysicist and member of President Johnson's Science Advisory Committee, Dr. Gordon J.F. MacDonald, wherein he states:

"The key to geophysical warfare is the identification of the environmental instabilities to which the addition of a small amount of energy would release vastly greater amounts of energy."

The chapter envisions four planetary weapons which MacDonald predicted would be fully developed by the 21st century, based on the then-current state of research:

- Climate modification;
- Earthquake generation;
- Tsunami generation and direction; and
- Mass behavior control via electromagnetic manipulation of the ionosphere.

The idea is carried forward in several geoengineering schemes detailed in Eli Kintisch's *Hack the Planet*, in a chapter entitled "The Pursuit of Levers," explained as "small changes in Earth's system that can have profound global effects." [3]

As LBJ's Science Advisor, MacDonald surely knew of the military's weather modification program known as Operation Popeye, which ran from 1967 thru 1972 in Vietnam, Laos and Cambodia. By seeding clouds, the US military caused torrential downpours that inhibited enemy truck and troop movements. Initially exposed by investigative journalist Jack Anderson, the existence of the project was later corroborated in *The Pentagon Papers*.

In 1996, world renowned scientist Dr. Rosalie Bertell, who served on the Bhopal and the Chernobyl Medical Commissions, and was a recipient of the Right Livelihood Award, published "Background on HAARP," [4] describing Dr. Bernard Eastlund's brainchild, the US High Frequency Active Auroral Research Project, as follows:

"It would be rash to assume that HAARP is an isolated experiment which would not be expanded. It is related to fifty years of intensive and increasingly destructive programs to understand and control the upper atmosphere. It would be rash not to associate HAARP with the space laboratory construction which is separately being planned by the United States. HAARP is an integral part of a long history of space research and development of a deliberate military nature."

In 2000, reports Prof. Michel Chossudovsky, Dr Bertell told *The Times* of London, "US military scientists … are working on weather systems as a potential weapon. The methods include the enhancing of storms and the diverting of vapor rivers in the Earth's atmosphere to produce targeted droughts or floods." [5]

HAARP's use of the ionosphere through radio frequencies, explains Dr. Nick Begich, co-author of *Angels Don't Play This HAARP*, also triggers earthquakes and volcanoes. [6] Begich quotes Clinton's Secretary of Defense William S. Cohen, who said in 1997 at a conference on terrorism:

"Others are engaging even in an eco-type of terrorism whereby they can alter the climate, set off earthquakes, volcanoes remotely through the use of electromagnetic waves." [7]

Pragmatically, the US wouldn't be worried about such weapons unless they knew with certainty that they were feasible and had, in all likelihood, already developed them itself.

In "Atmospheric Geoengineering: Weather Manipulation, Contrails and Chemtrails," which was named the 9th most censored story in 2012 by Project Censored, a brief history of known geoengineering events was published. [8] From that report, the IPCC's co-founder, the World Meteorological Organization, complained six years ago, in 2007, that:

"In recent years there has been a decline in the support for weather modification research, and a tendency to move directly into operational projects." [9]

But the IPCC remains mum on these projects, except to deny they exist, while at the same time urging in its Summary that they must continue or global warming will spike. The 2013 IPCC report states:

"Theory, model studies and observations suggest that some Solar Radiation Management (SRM) methods, if practicable, could substantially offset a global temperature rise and partially offset some other impacts of global warming, but the compensation for the climate change caused by greenhouse gases would be imprecise (*high confidence*)." [emphasis in original]

To claim that solar radiation management methods (which include chemtrails and HAARP-induced changes) are "unimplemented and untested" is patently absurd, and contradicts a library of evidence.

Geoengineering Patents

On March 26, 2013, the US Patent and Trademark Office granted a patent to Rolls-Royce PLC to prevent contrails from forming. [10] By using an electromagnetic wave generator, contrails would not be visible, nor would artificial clouds develop.

It's not the first such patent. Back in 1962 the US Air Force wanted to add caustic chemicals to hide contrails and prevent unintentional cirrus cloud formation. Patent No. 3,517,505 was granted eight years later, in 1970. Patent, No. 5,005,355, granted in 1988 to Scipar, Inc., used various species of alcohol, which effectively lowered the freezing point of water to avoid

contrail formation. The 2013 patent characterized both of these earlier patents as environmentally inappropriate for commercial purposes.
For a partial list of patents for stratospheric aerial spraying programs from 1917 thru mid-2003, see Lori Kramer's "Patently Obvious: A Partial History of Aerosol and Weather Related Technologies." [11] *Weather Warfare* by Jerry Smith also includes an appendix of HAARP-related patents. [12]

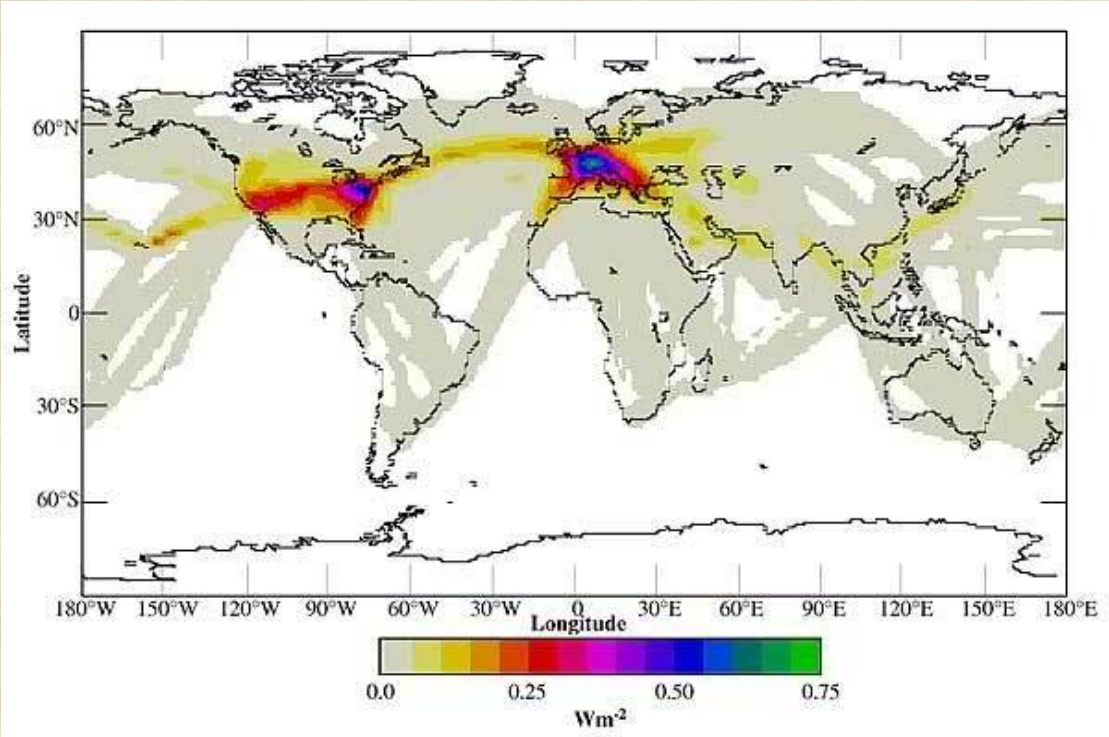
A Note on Persistent Contrails

What some see as chemtrails, the IPCC and others recognize as persistent contrails that are a normal effect of today's jet exhaust.
In the 2006 book, *Weather Warfare*, Jerry Smith explains that persistent contrails are not necessarily chemtrails. From the 1990s on, he explains, all jet engines were modified with a "high bypass turbofan" which increased fuel efficiency and, as a side effect, left persistent contrails that hazed into cirrus clouds after several hours. This is the timeframe when chemtrail sightings begin.
The reason today's jets now form persistent contrails, explains Marshall Smith, a former NASA-Ames aeronautical engineer, is that the sooty particulates in older jet exhaust provided a nucleus around which ice crystals would form (giving us a contrail). But because of its dark color, the sooty particulate absorbed solar energy which melted the ice crystals, dissipating the contrail. Today's cleaner and thus clearer jet exhaust allows solar energy to pass right through it, and so contrails persist and spread into high cirrus clouds lasting 24-36 hours.

Smith admits that this development does not disprove chemical, biological or metallic dispersants from jets, and he also states that such dispersants can be sprayed without leaving a chemtrail, depending on the particulate, and on the humidity and atmospheric temperature. But, later, in 2009, he published the following:
"'Chemtrails' theory then, is that 'normal' jet aircraft contrails disappear in a few minutes, whereas 'chemtrails' persist for hours, and therefore are not 'normal' and must contain some covert element to make them persist…. Persistent jet contrails can be entirely explained by science without having to resort to a 'conspiracy theory' scenario. They appear to be no more than the natural result of the introduction of the hi-bypass turbo fan, improved jet fuel (JP-8) and 'global warming.'" [13]
The transition to more efficient jet fuel and cold-flow additives supports this explanation, but none of that can explain the following image, taken earlier this year in Raglan, New Zealand:

The **dot-dash effects** (right) seen in the sky, Smith explains, are the result of the jet exhaust passing thru sections in the atmosphere that are warmer, creating a broken line or dotted contrail. The following image makes that explanation implausible. Instead, it illustrates that as the plane passed, an on-off switch was thrown several times. It's hardly likely the ambient temperature and humidity uniformly varied where the plane traveled.

The IPCC specifically addressed the impact of global aviation on the atmosphere in a 2000 report, noting that aircraft were then responsible for up to a half a percent of all of Earth's cirrus cloud coverage, and that cirrus clouds tend to warm the surface of the planet. [14]



However, the high-bypass turbo fan and better grade fuel do not explain the grid pattern often seen which is clearly not normal air traffic lanes. Below are two images showing the grid pattern. The first, a generic one found on the web , is one of many such images uploaded by concerned citizens who reasonably fail to recognize a normal set of flight lanes.

This next image is a satellite view looking down at the Celebes Sea, showing chemtrails and their shadows. (NASA)

Finally, the fine dusting of web-like filaments referred to as chemwebs can be explained by a natural arachnid phenomenon known as Gossamer Showers or Gossamer Filaments. Spiders are known to balloon, spreading their webs over the land for miles. Referred to throughout history, naturalist Henry Christopher McCook wrote about them in his 1890 book, *American Spiders and Their Spinningwork*. [15] Unless lab results prove otherwise, these webs are natural and should remain outside the chemtrails discussion.

Impossible to Regulate?

Weather Warfare also spends a good deal of time covering the international agreements against environmental modification (ENMOD). The first major one came in 1978, after the US

was exposed for weaponizing weather during the Vietnam War. Smith points out that none of these agreements cover "national defense" which is how governments are able to avoid the ban.

That 1978 agreement specifically objected to hostile use of ENMOD. In 2010, the UN banned friendly ENMOD. [16] The 193-member Convention on Biodiversity agreed by consensus to a moratorium on geoengineering projects and experiments, which governments promptly ignored. With no teeth to that moratorium, it's not too surprising that such programs continue unabated.

Not two months later, in Cancun, Mexico, at the United Nations Framework Convention on Climate Change, the IPCC opened the 2010 conference by promoting geoengineering options. [17]

On a practical level, notes the International Risk Governance Council:

"Countries and firms routinely fly various aircraft in the stratosphere, or send rockets through the stratosphere into space. These activities release significant quantities of particles and gases. A requirement for formal prior approval of small field studies, just because they are directed at learning about SRM and its limitations, is probably unenforceable because judging intent is often impossible." [18]

In *Hack the Planet*, Kintisch opposes an outright global ban on geoengineering, fearing that governments will simply go underground with it. This is bad, he stresses, because it will "worsen perceptions that [geoengineering is] a quasi-military strategy or a technocratic means of control." Going further, he states:

"A vibrant community of conspiracy theorists is under the belief that geoengineering is already being deployed by governments by releasing so-called chemtrails in the sky."

But de facto moratoria already exist for such projects, as mentioned above, and Kintisch lists some others, including the London Protocol, the London Convention and a German restriction limiting iron-seeding to coastal waters only. The only element missing in Kintisch's reasoning is his refusal to believe that governments have already gone underground with it and that geoengineering is already underway.

Kintisch, like all government propagandists, wields the "conspiracy theorist" label like a club, without once offering any logical counter-argument to explain what thousands of sky watchers have observed and documented with photographs, videos, and soil and water tests.

Conspiracies are argued and decided by the thousands in courts all over the world, every day. Most crimes are not committed by lone actors, yet condemning those who recognize a conspiracy pattern has become a simple and lazy way to crush investigation into inconsistencies in government position statements. Bradley Manning, Edward Snowden and Wikileaks, along with Daniel Ellsberg, Karen Hudes and W. Mark Felt, certainly prove that governments are the most dangerous conspirators facing humanity today.

Though he offers dozens of reasons why geoengineering the planet would be a bad idea, Kintisch comes out in support of the notion, likening it to a terrarium, "an enclosed controlled garden," leaving the reader with a sense that planet hacking is a necessary evil that should be regulated.

Modifying the Weather for Profit

In related news, the ecocidal giant, Monsanto, just dropped nearly a billion dollars to get into the weather insurance game, buying Climate Corporation. Forbes reports, "The idea is to sell more data and services to the farmers who already buy Monsanto's seed and chemicals." [19]

Already closely tied to the military, how easy would it be for Monsanto to know in advance of a geoengineered drought or deluge? Monsanto expects its climate insurance business to generate $20 billion in revenue beyond its seed and chemical business.

Likewise, how easy would it be for a nation with decades of experience in modifying the weather and in triggering geophysical events to create the problem of climate change (or exaggerate its significance) to induce the world into approving, even demanding, geoengineering? With decades of patents providing a history of capabilities, could this entire drama, including "extreme weather events" be orchestrated for the simple pursuit of profit?

Isn't this precisely how the Hegelian Dialect works? Problem→Reaction→Solution (Thesis→Antithesis→Synthesis). In other words, those in a position of power invent a problem, anticipating the public's reaction to it, and use that reaction to generate demand for the "solution" which was the intended program power-holders wanted to implement in the first place.

At the very least, while the veil may be lifting on geoengineering practices, there is still an apparent effort to conceal the extent to which the planet is already being engineered.

► **References are available at source URL**

Rady Ananda *is the creator of Food Freedom News and COTO Report. Rady Ananda's work has appeared in several online and print publications, including four books. He holds a B.S. in Natural Resources from Ohio State University's School of Agriculture.*

The Norwegian Center for NBC medicine (The NBC center)

Oslo, Norway

The center deals with the medical consequences of CBRN incidents; its responsibilities are defined by the Norwegian Directorate of Health. The scope of activities include i) establishment of pre- and in-hospital routines and principles for treatment for victims injured by CBRN agents, ii) information and education for medical personnel and first responders about medical aspects of CBRN agents and iii) advice to government agencies about medical aspects of CBRN incidents. The center also works closely with first responder organizations.

The NBC center is organized as a center of competence within the Department of Acute Medicine in a major emergency and level 1 trauma hospital (Oslo University Hospital, Ullevål). This hospital will also be the main medical facility for victims of CBRN incidents in the most populated central part of Norway. The staff physicians are qualified specialists in pertinent fields of medicine: Acute and Emergency Medicine, Toxicology, Intensive care, Infectious medicine and Hematology. All have also scientific experience, the majority holds a PhD degree. The staff physicians work 50% of the time as clinicians within their respective specialties in order to maintain clinical competence and skills as well as be up to date on general and emergency hospital routines. The center can in addition draw on the medical expertise of the whole hospital. A nurse specialist responsible for equipment, a part-time pharmacist responsible for antidotes and medical intensive care pharmaceuticals, and a secretary completes the staff. The center can be reached round the clock through the senior consultant on call at the Department of Acute Medicine.

One of the main objectives of the center has been to simplify the routines for handling of victims of a CBRN incident at the scene. Due to the geography, population pattern and organisation of emergency services in Norway, it is unrealistic to expect a full-fledged decontamination facility to be operative within the first 1-2 hours after an unexpected incident; the first responders will have to deal with the initial medical emergencies on their own. As an optimal outcome for seriously affected victims of a CBRN incident requires that life-saving emergency treatment starts as early as possible, simplified routines for decontamination before start of medical treatment (emergency or life saving decontamination) that can be carried out by first responders anywhere are recommended.

This handbook describes the medical aspects of CBRN incidents, with recommendations adapted to Norwegian conditions and medical tradition. Suggestions for actions during the acute phase of an incident are not necessarily based on what can be considered optimal, but on what tasks the first responders in most locations in Norway should be able to carry out.

As a consequence of the national focus, the handbook is published only in the Norwegian language. The recommendations made by the NBC center are based on both scientific data from the literature and the clinical experience of the medical staff, and does not necessarily reflect the views of the Norwegian government.

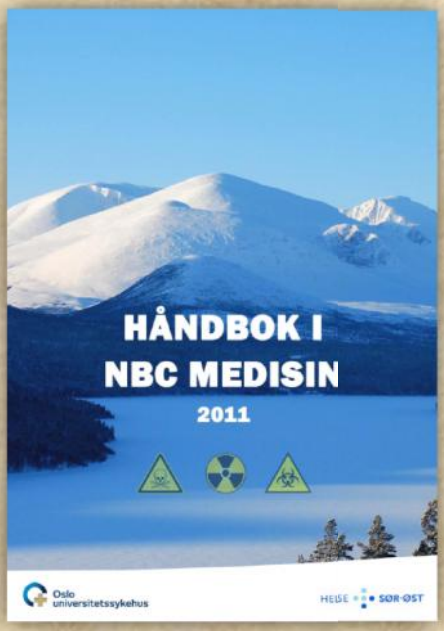
Handbook NBC medicine

(*Translation from Norwegian*)

Introduction – Version 3.0

The focus of this guide is on the medical management of individuals who are acutely ill after being exposed to harmful radioactive, biological or chemical agents. Disease images evoked by the three groups of agents are generally quite different, both in terms of symptoms, how quickly they occur after exposure, and the treatment options available. Common to them is that (i) proliferation can occur unnoticed until the first people develop symptoms; (ii) helpers who enter the area in which the agent is dispersed may become ill; (iii) primary treatment consists in evacuating from the focus of the spread; and (iv) responders' knowledge of agents and the use of protective equipment can reduce the risk significantly.

Content is primarily angled toward events where multiple people are so severely affected that they need hospital treatment. The purpose of the book is to provide comprehensive information about the medical management of such persons, both in the acute phase and during follow-up in hospital. The content is based on professional opinions and judgments made by the NBC - center doctors and other professional bodies and these people have consulted. It represents not necessarily public health authorities' viewpoints. As an adaptation to international nomenclature is now used acronym CBRN synonymous with NBC's manual, while the expression NBC medicine retained.



The majority of the content deals with agents that could be used by intentional acts. The likelihood of naturally occurring epidemics / pandemics or accidental industrial chemicals, etc. will cause illness or injury, however, is far greater than that willful B or C events do the same. Dealing RN, B or C events, as well as handle the consequences for individuals and health care, are largely independent of whether the causative factors due to intent, accident, negligence or natural causes. In the broadest sense, therefore NBC medicine as well as the pre-hospital diagnostic and therapeutic implications of all major events where such agents causing injury or illness, except for the natural spread of microorganisms. Certain types of agents that have led to the B and C events in recent years (methanol poisoning, legion ellos outbreak , the SARS epidemic) are discussed . Although these have not been triggered by terrorist acts, they illustrate many of the diagnostic problems that will also be relevant to intentional acts. Poisonings of individuals considered to be outside the book's focus.

CBRN incidents may require action at many levels, from primary care, community physicians, local and central governments as well as from institutions with special expertise and with responsibility for people health aspect. These are referred to a limited extent, reference to the detailed description of notification procedures and general responsibilities of emergency conditions exist in various places in the text, primarily in Part IV and VII.

A large number of toxins and microorganisms can cause disease. It will not always on the first phase of an intentional CBRN incident be clear that there is an incident or what agents that

produce disease and symptoms. Only your imagination limits the number of theoretically possible scenarios. A manual can not provide a complete list of possible disease- causing agents while having a scale that makes it a practical aid in emergency situations. The focus is therefore on the types of events that are considered the most likely.

An important goal has been to simplify the recommended action and treatment plans as much as possible. This is done to prevent the gap between the recommended handling situation and it is possible to perform in unexpected emergency situations should not be too large. The recommended action is not always those which are thought to be theoretically optimal in relation to each possible scenario. We consider them, however, that proper professional, realistic and feasible on a national basis.

Many types of events do not only affect hospitals, but also the pre-hospital treatment chain. For events where there is an incident, primarily of RN and C type, the emergency services (Fire and Rescue, Police, Ambulance Service), as well as any civil defense, will be engaged in the response process. Also Medical Ambulance / Air Ambulance Service will play an important role for medical assessment and prioritization of an accident. Although each of these agencies and organizations have their focus on different elements of the event, it must be coordinated efforts have as their primary objective is to save lives and health of people who are exposed to hazardous agents. For the interaction between the above agencies, local hospitals and central medical expertise to be optimal, they have different actors understand other participants' role in relation to CBRN incidents. The book therefore includes guidelines for the management of exposed individuals both pre-hospital and hospital.

To make communication with other countries as simple as possible, we have chosen to use some of the English terms, such as "hot», "warm" and "cold" zone to describe the risks of an incident . This is in accordance with the terms already used by police, and we hope also be introduced in other agencies.

Although the considerations exposed ill persons is central, the risk of injury or illness of personnel effort is reduced as far as possible without this causing paralysis or unnecessary delay. Increased knowledge of CBRN incidents will defuse risks with regard to the damage of helpers. This attempt is made by highlighting the relatively few scenarios where such damages, describe how to organize relief efforts to reduce these risks, and focus on the proper use of protective and dekontamineringsutstyr.

The following pages contain a brief overview of the RN, B and C events. The list is intended as a simplified orientation for non- medical personnel, and can also form the basis for briefings to the public.

Otherwise, the book consists of seven main sections:

Part I: A general introduction to NBC medicine.

Part II: A Practical oriented descriptions and action plan, scene / transport / emergency / medical and decontamination (to be adapted to local conditions)

Part III, IV and V: A more detailed description of the agents that may cause an RN (III), W (IV), or C (V) event as well as processing of exposed people.

Part VI: Decontamination of exposed persons.

Part VII: A list of agencies, authorities and other bodies that should / could be involved , or that mobilize resources necessary for handling events .

While the book is supposed to work also as a reference in emergency situations, some information and facts are discussed in more places.

Electronic versions of the guide are available as links via NBC Centre's website www.oslo-universitetssykehus.no/nbc. These will be updated periodically. Electronic information sources are vulnerable, when catastrophic events can blackout internet, intranet and telephone networks. Hospital's computer systems, where computer the function is dependent on a central server, will not necessarily work normally. We therefore recommend that all acute hospitals / AMK centers etc. A PC that is independent of the local network and that is not connected to the internet permanently (virus hazard data sabotage). This must be able to function even if external power failure. An updated electronic version of the manual and of hospital's emergency plan and other important sources of information and templates for patient and mass media information are also available.

The following persons are responsible for the book's main sections:

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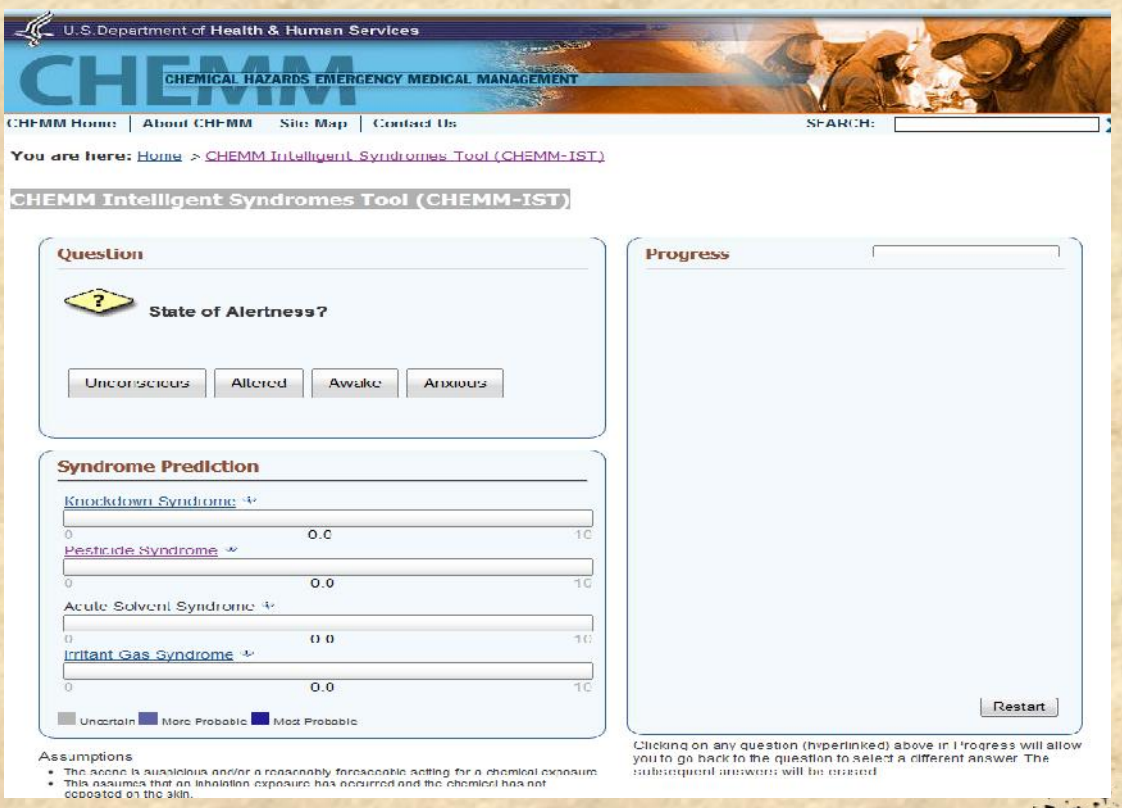
Professor PhD Pål Aas, Norwegian Defence Research Establishment (FFI) and Senior Adviser PhD Vibeke Thrane have contributed their expertise on C-section. Chief Stone Frøyshov, Emergency Medical Dept. OUS Ullevål, also contributed to this section.
Chief physician Dr. med. As Sandvig, Institute of Public Health (FHI), and section chief Terje Hoel, Department of Infectious Diseases , OUS Ullevål have done the same for the B-section. Øyvind Selnæs and Morten Sickel, Norwegian Radiation Protection Authority, has made valuable contributions in R and N parts. Many others have also contributed advice and clarification through feedback on the content of the preliminary draft, as well as through discussions in various forums.

CHEMM Intelligent Syndromes Tool (CHEMM-IST)

Source: http://chemm.nlm.nih.gov/chemmist.htm

CHEMM-IST is a prototype decision support tool developed by experts in medicine and emergency



response as an aid for identifying the chemical a patient was exposed to in a mass casualty

incident. Since CHEMM-IST is currently in the prototype phase of development, it should not be used for patient care. This tool, once thoroughly tested and validated by a wide range of potential users via case studies, is intended for use by basic life support (BLS) and advanced life support (ALS) providers as well as hospital first receivers. The focus of CHEMM-IST is only on severe cases. CHEMM-IST assumes that the patient has undergone an exposure via the air, with potential toxic effects from what is inhaled from the air and also possible skin-related toxic effects from what might be deposited onto the skin from the air.

EDITOR'S COMMENT: On-line, fast & easy to use gives initial diagnostic directions!

Albania says no to Syrian WMDs

Source: http://www.heraldscotland.com/news/world-news/albania-says-no-to-syrian-wmds.22717791

Albania has rejected a request from the US to host the destruction of Syria's chemical weapons, saying it is ill-equipped to handle the disposal of thousands of tonnes of toxic waste.
The announcement marks a setback for a Russian-American plan to get rid of Syria's sarin, mustard and other nerve agents.
"It is impossible for Albania," Prime Minister Edi Rama said in a televised address to the nation. "We lack the necessary capacities." Rama had faced a chorus of opposition and street protests against the request.

EDITOR'S COMMENT: It is amazing that the Nobel 2013 Peace Winner OPCW cannot find a candidate to undertake the destruction of Syria's chemical weapons! Why don't they ask the Greek government to provide an uninhibited island in order to construct the necessary facilities manned with international staff? We have so many islands and they are so close to Syria without putting populace in danger even in case of a process accident.

BUT…

Albania was decided as the location for the destruction of weapons, the decision to be announced on Friday (Nov 22)

Source: http://www.balkaneu.com/foreign-media-albania-decided-location-destruction-weapons-decision-announced-friday/

Tirana, November 13, 2013
In spite of the declarations coming from authorities in Tirana that a decision is yet to be made as to whether Syrian chemical weapons will be accepted for destruction in Albania, foreign media report the contrary.
In its program "The Stream", Al Jazeera pays special attention to the destruction of the chemical arsenal of Syria.
The director of the Green Cross International program, Paul Walker, who was invited in the

program, said that the decision to destroy Syrian chemical weapons in Albania has been taken and the decision will be announced on Friday.
Mr. Walker said that almost all chemical agents will be transferred to our country.
Asked as to why Albania has been chosen for the destruction of these chemical weapons, Walker said: "I asked the same question a few weeks ago. Who would have ever thought of Albania? This country has undergone a process of the destruction of chemical weapons in the past. In 2007, for 6 months the country has destroyed 16 tons of chemical wastes, consisting on mustard gas coming from China. The destruction of chemical weapons will take place in the next 2 to 3 months", said Walker.
He added that the most important thing is to insure safety in spite of the location that is chosen.
According to the director of Green Cross International, Paul Walker, Albania has positively responded when USA and Russia asked as to who would be ready to welcome these chemicals to be destroyed.
"They established a small base, a small industrial facility and I believe that the process will kick off in Albania in the next 2 to 3 months", said he.
But what Mustafa Kibarog, professor at the "Okan Tuzla" university fears, relates to the transport of the chemical arsenal out of Syria at a time when fights continue and the capacity of Albania to destroy around 1 thousand tons of chemical substance consisting on sarin gas and mustard.
Yesterday, the prime minister of the country, Edi Rama said that NATO countries are still discussing and that the country is not yet ready to take a decision. Rama admitted that he has discussed with the US Secretary of State for 30 minutes on the phone, but that no decision has yet been taken. The prime minister said that the decision will be shared with the public and parliament.

EDITOR'S COMMENT: The proposed location is at Mamaliaj where there are old lignite mines and (unsecure, non-tight) underground tunnels. This might might pollute the rivers of the area and transfer pollution to Greek rivers (Aoos River: 80km in Greece and 192km in Albania) or the Ionian Sea.

Syria's chemical weapons may be destroyed at sea - sources

Source: http://www.reuters.com/article/2013/11/19/us-syria-crisis-chemical-idUSBRE9AI19H20131119

Syria's chemical weapons could be processed and destroyed out at sea, say sources familiar with discussions at the international body in charge of eliminating the toxic arsenal.

Four days after Albania rejected a U.S. request that it host a weapons decommissioning plant,

Western diplomats and an official of the Organisation for the Prohibition of Chemical Weapons at The Hague told Reuters the OPCW was studying whether it might carry out the work at sea, on a ship or offshore rig.

Confirming the discussion, the OPCW official stressed there had been no decision: "The only thing known at this time is that this is technically feasible," the official said on Tuesday.

While other states, notably Japan, have dealt with chemical weapons at sea, mounting such a large and complex operation afloat would be unprecedented, independent experts said.

But given the equally daunting challenge of neutralizing over 1,000 metric tons (1102.3 tons) of material in the middle of a civil war, and the reluctance of governments like Albania to defy popular protests against hosting any facility, it is being considered.

"There are discussions about destroying it on a ship," one U.S. official told Reuters.

Syrian President Bashar al-Assad agreed to join a global ban on chemical weapons after Washington threatened air strikes following a major sarin gas attack on rebel-held territory in August, for which the Damascus government blamed its enemies.

OPCW inspectors have checked Syria's declared 1,300 metric tons of sarin, mustard gas and other agents and the organization decided last week that most of the deadliest material should be shipped abroad by the end of the year and destroyed by mid-2014.

While battles for control of the highway from the capital to the Mediterranean port of Latakia have raised questions over the trucking of the chemicals to the coast, the Albanian refusal on Friday took negotiators by surprise, sources said, and prompted a radical shift in thinking to keep the plan on schedule.

Technically feasible

Ralf Trapp, an independent chemical disarmament specialist, said of the offshore decommissioning suggestion: "It had to come up as a option at some point in time, given the circumstances.

He added: "Technically it can be done, and in fact at a small scale it has been done."

Japan destroyed hundreds of chemical bombs at an offshore facility several years ago. And Trapp said setting up a disposal plant on a floating platform might not differ greatly from the Pacific atoll where the United States destroyed much of its chemical arsenal through the 1990s.

Trapp said Syria's stockpile would require more complex treatment than the World War Two bombs that Japan found on the seabed, raised and destroyed off the port of Kanda from 2004-06.

The Japanese munitions, as a finished product, did not produce liquid waste, he said. By contrast, much of Syria's stockpile is of bulk "precursor" materials that were stored in order to manufacture weapons at a later stage. Burning these, or neutralizing them with other chemicals in a process known as hydrolysis, would produce large amounts of toxic fluids.

"If you use hydrolysis or incineration, there will be liquid waste," Trapp said. "So there will be problems with regard to environmental pollution that need to be addressed."

Countries around the Mediterranean might not relish the prospect of such an operation, though shipping the Syrian material further afield could also pose difficulties.

Siting a facility close to shore could risk the kind of demonstrations in Tirana that forced Albania's government to change tack. Further

out at sea could pose other problems, such as providing a rapid response to emergencies.
Trapp said that a "large floating platform at sea would not be fundamentally different" from the now dismantled U.S. chemical weapons destruction facility at Johnston Atoll in the North Pacific: "There are many technical and legal challenges," he said. "But it may be an alternative worthwhile considering."

Toxic Materials Disposal in Israel – New Developments

Source: http://i-hls.com/2013/11/toxic-materials-disposal-in-israel-new-developments/

The reform in the Israeli fire fighting system, which began a year ago, didn't skip toxic materials disposal. The operating procedures are being updated, and by government orders issued during November 2012 now include several new missions:

- Detection and identification of toxic materials during an incident
- Monitoring air toxicity
- Threat assessment during incidents
- Consultation services to police and military officers in order to help protect lives
- Operating a national toxic materials training center

The reason for the changes is the way the national toxic materials disposal system originally worked. The system, established in 1993, included many government organizations: Police; IDF Home Front Command; Fire Fighting and Rescue; Magen David Adom; the Ministries of Environmental Protection, Internal Security, Health, Transportation and Economy; and the Prime Minister's Office. The basic idea behind this complex system was that every organization would act within its own area of responsibility, as defined by law.
The dependencies created by this system slowed down response during incidents, and the government aimed to overcome the problem by transferring monitoring and threat assessment duties from the Environmental Protection Ministry to the fire fighting services. The government's decision was based on the understanding that these missions would be conducted more effectively by the fire fighting services, which offer faster response times and are deployed throughout Israel.
Until recently the fire fighting and rescue services were only in charge of containment and mitigation, fire fighting and rescuing casualties of fires or exposure to toxins. In the future the fire fighters will, in addition, identify and monitor toxic materials, and issue threat assessments to civilians and the various personnel in the field.
In order to facilitate these changes the Fire Fighting Authority began training its personnel, especially the district toxic materials disposal units, in operations under the new procedures.
In addition, the authority began enlisting professional personnel which would be in charge of the threat assessment and monitoring duties. In August the authority began enlisting 12 chemists, toxic materials specialists and monitoring officials to be part of the district toxic materials disposal units. These specialists will monitor incidents, identify materials and advise the disposal unit commanders. Eight specialists were enlisted so far. There were also hierarchy changes within the authority itself, with the addition of monitoring officers and a new national threat assessment chief in the authority's operations division. The district officers will have degrees in sciences, will advise and supervise during events, and will be in charge of maintaining monitoring and threat assessment operational capabilities. Five district threat assessment officers were enlisted so far in the North, Shore, Dan and Jerusalem districts, and another enlistment tender was issued for Central and South districts.

Dr. David Hoichmann was appointed national threat assessment chief. The new chief will be in charge of training and advancement of professional personnel, and the authority also aims to enlist new training personnel for its national

academy, to train elements outside of the authority itself.
Additional changes include:

- Renewed deployment of disposal units, taking into account industry changes and the location of new dangerous facilities.
- Operating 16 new mobile monitoring command centers, issued to the district disposal units
- Purchasing monitoring equipment to be installed on Vulcan vehicles in use by the line-2 teams.

"Over the last decade there were more and more toxic materials incidents every year, and a growth in the overall Israeli chemical industry. These challenges call for constantly assessing the current response procedures, and the transfer of responsibilities to the fire fighting service is an important step in enhancing these response procedures," this according to Sandra Moskovich, head of toxic materials disposal in the Fire Fighting and Rescue Authority.

WISER

Source: http://wiser.nlm.nih.gov/

The Wireless Information System for Emergency Responders (WISER) is a system concept for providing First Responders at the scene of hazardous material incidents - chemical, biological, or radioactive - with integrated information, decision support, and communications. The WISER application assists First Responders in rapidly determining the substance involved, including aiding in the identification of unknown substances. Once a substance is identified, WISER quickly and conveniently provides critical information regarding the substance, allowing the necessary immediate actions to be taken to minimize the effects of the HAZMAT incident and thus save lives and protect the environment.

Substance information and identification properties come from the Hazardous Substances Data Bank (HSDB), developed and maintained by the National Library of Medicine. WISER contains HSDB

information and decision support logic for 440+ substances. The substances were chosen based on First Responder inputs, degree of chemical hazard, and historical frequency of incidents.
WISER currently exists as a:

- Stand-alone mobile application for IOS and Android devices
- Microsoft Windows PC application
- Web application (WebWISER)

Destroying Syria's chemical weapons in the midst of war

Source: http://www.homelandsecuritynewswire.com/dr20131122-destroying-syrias-chemical-weapons-in-the-midst-of-war

Close to 1,400 tons of chemical weapons are stored at twenty-three locations scattered throughout Syria. To destroy this stockpile, officials will need multiple strategies. The most dangerous are the munitions filled with "live" chemical agents, such as mustard gas, sarin, and VX. Dealing with these weapons will require bringing specialized equipment into the war-torn country.

Weapons technicians work on the newly developed Field Deployable Hydrolysis System at the U.S. Army Edgewood Chemical Biological Center in Maryland.

Syria no longer has the capacity to produce new chemical weapons en masse, but arms control experts caution that what remains is the more difficult job of destroying the existing stockpile in the midst of the country's brutal civil war. An article in *Chemical & Engineering News*, the weekly newsmagazine of the American Chemical Society, details the challenges involved.

An ACS release reports that Glenn Hess, a senior editor at *C&EN*, explains that close to 1,400 tons of chemical weapons are stored at twenty-three locations scattered throughout Syria. To destroy this stockpile, officials will need multiple strategies. The most dangerous are the munitions filled with "live" chemical agents, such as mustard gas, sarin, and VX. Dealing with these weapons will require bringing specialized equipment into the war-torn country. Chemicals that serve as precursor ingredients for warfare agents are more stable and will be simpler to neutralize — though disposal teams will likely have to navigate through a violent landscape to transport them out of country to a safer environment for handling.

The article notes that the "live" agents could be destroyed by the agreed-upon mid-2014 deadline, but neutralizing the precursor chemicals could take longer. The Hague-based Organization for the Prohibition of Chemical Weapons, tasked with overseeing the chemical disarmament deal struck between the United States, Russia, and Syria in September, me 15 November (after *C&EN* press time) to adopt a schedule for destroying the stockpile.

— Read more in Glenn Hess, "Eliminating Syria's Chemical Arsenal: Experts say a variety of disposal methods will be needed," Chemical & Engineering News *91, no. 46 (18 November 2013): 24-25*

Baltic Sea threatened by wartime chemical weapons

Source: http://www.scotsman.com/news/environment/baltic-sea-threatened-by-wartime-chemical-weapons-1-3090752

The Baltic Sea faces contamination by thousands of tons of corroding chemical weapons dumped on the ocean bed after the Second World War.

Research carried out by marine scientists has found that thousands of shells, many containing mustard gas, have now started to leak and pollute the surrounding seabed.

Historians estimate that in 1947 Britain and the Soviet Union dumped up to 65,000 tons of German chemical weapons and chemical weapons agents into the Baltic under an international agreement.

Beachgoers on Travemuende on the Baltic Sea, northern Germany. Chemical weapons used in wartime conflict pose a severe threat to the Baltic System, new research has claimed. Picture: AP

There have long been fears that the metal cases of the shells, missiles and drums containing the highly-toxic chemicals would corrode, and now scientists studying the Gotland Deep, the area of the Baltic where many of the munitions were dumped, have said those fears appear to have been realised.

"Our research has shown that in the Gotland Deep there are about 8,000 shells and missiles that could pollute the environment," said Dr Jacek Beldowski, for the Polish Institute of Oceanography.

"We have now confirmed that these objects are contaminating the seabed. Until now we could only speculate this would happen. As part of the project we also studied fish swimming in the area of the dumping site," he added. "We found that they have more illness than fish in other areas of the Baltic and genetic defects."

The cold waters of the Baltic turn mustard gas into a dense solid but it can escape and remains highly toxic and so poses a serious long-term threat to the marine environment.

There have been sporadic incidences since the war of Baltic fisherman suffering burns from lumps of solidified mustard gas caught in their nets, and once a mustard-gas seeping from a canister washed up on the shores of the Polish seaside town of Darlowo burnt about 100 people and left four victims blind. However, Dr Beldowski said a greater danger to human health stems from the possibility of eating contaminated fish.

Deep-water fishing is prohibited around the dumping sites and general fishing discouraged, but complicating the issue is the fact that it is unclear just where all the chemical weapons lie.

"Unfortunately the Russians, once they found out what they had onboard, often threw them [the weapons] overboard as soon as land was out of sight," said Dr Beldowski. This has raised the prospect of hundreds or even thousands of undetected weapons leaking toxic waste into the shallow waters of the Baltic and into the fishing fields.

However, Captain Jacek Fabisiak, from Poland's Naval Academy, stressed there was little risk to humans.

"We are not threatened with an ecological disaster on the scale of Chernobyl," he told Polish Radio. "But, of course, fishermen, and seabed researchers have to be very careful. Sooner or later this problem will have to resolved."

Removing any leaking weapons from the seabed could prove difficult as scientists have warned that the

operation could spread contaminated silt, and that the rusting cases and drums could break up during their journey to the surface.
The Polish research heaps more environmental woe on the Baltic. Shallow, almost enclosed and fed by numerous, and sometimes very polluted, rivers the sea is particularly vulnerable to pollution.

There have also been accusations that during the early 1990s Russia dumped chemical and nuclear weapons into the sea following the break-up of the Soviet Union, although this has been denied by former officers of the Russian Baltic Fleet.

Dumping of chemical warfare in the Baltic Sea after World War II

Source: http://mercw.org/?option=com_content&view=article&id=48&Itemid=59

During World War II around 65000 tons of chemical warfare agents were produced and developed in Germany. Mustard gas was the most widely produced, accounting for around 39 % of total production. Table A.1 shows the quantities of chemical warfare agents produced in Germany (Helcom 1996).

Table A.1 - Chemical warfare agents produced in Germany between 1935 and 1945 (Helcom 1993c).

Warfare agent	Quantity [t]
Chloroacetophenone	7100
Clark I	1500
Clark II	100
Adamsite	3900
Arsenic oil*	7500
Phosgene	5900
Mustard gas	25000
Nitrogen mustard	2000
Tabun	12000
Lewisite	Production small but unknown

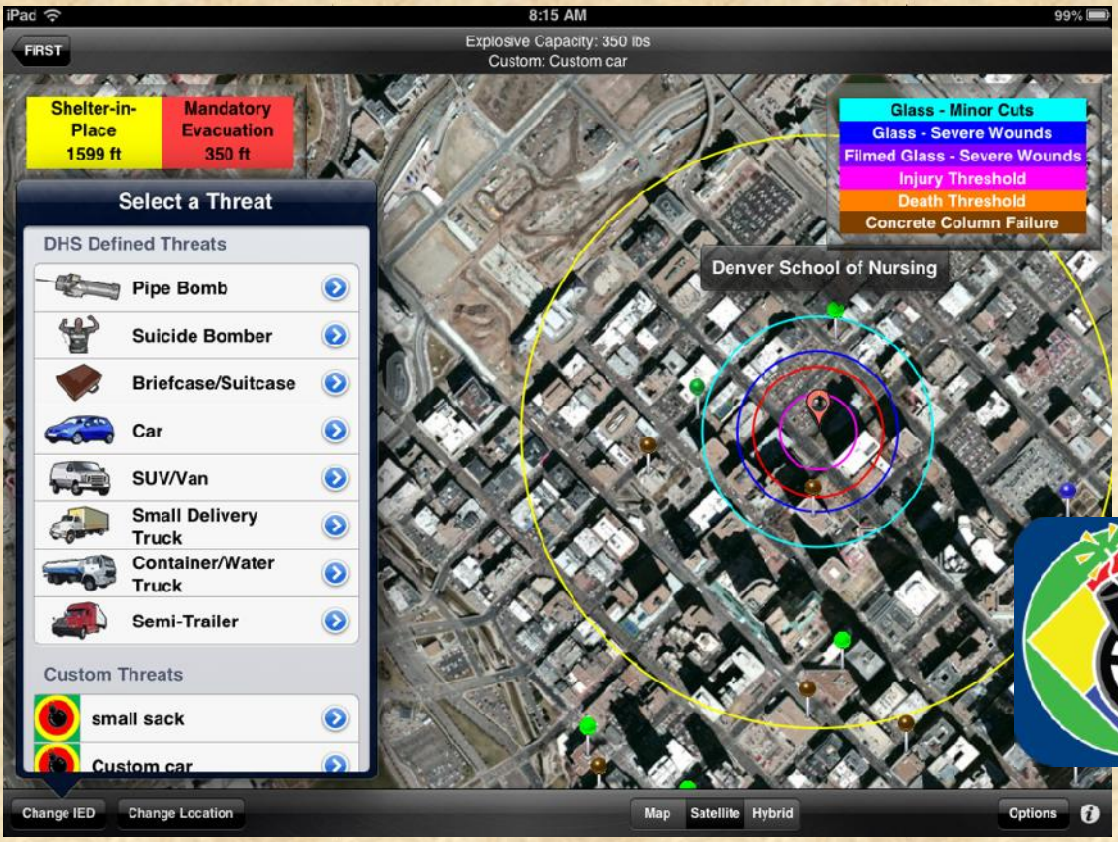
(* Mixture of arsenic containing compounds)

After World War II some 300 000 tons of chemical weapons (CW) were captured on German territory. By far the largest part of these weapons was dumped in the Baltic Sea and Skagerrak Strait on the orders of the British, Russian and American occupation authorities (Helcom 1994). At least 170000 tons of CW was dumped in the Skagerrak, mainly in the Norwegian trench and in the eastern Skagerrak, off the Swedish coast. In most of the dumping operations in the Skagerrak complete ships were sunk with their cargo (Helcom 1994, 1996).

In the Baltic Sea at least 50 000 tons of CW were dumped; the most important dumpsites here are located in the Lille Belt, near the island of Bornholm, and in the Gotland basin (Helcom 1994). In most cases the warfare was thrown over board, either loose (bombs, shells) or in containers, but some ships were also sunk (Helcom 1996). There are strong indications that part of the warfare was thrown overboard during transport to the Baltic dumpsites; how many tons were thus dumped is not known (Andrulewicz 1996, Schultz-Ohlberg 2001).

First Responders can Share Incident Data Instantly with DHS FiRST App Update

Source: http://www.hstoday.us/single-article/first-responders-can-share-incident-data-instantly-with-dhs-first-app-update/003a020d6659ed245ba4cd228dd131bb.html



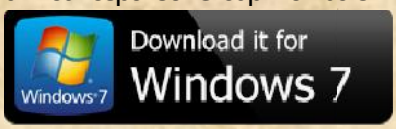
The Department of Homeland Security (DHS) Science and Technology Directorate (S&T) Tuesday announced the release of a "major sharing service update to its First Responder Support Tools (FiRST) mobile application" that was first released in 2011.

"The FiRST app provides first responders with useful information and response resources, such as information on safe distances for cordoning off in response to potential improvised explosive device or hazardous material incidents, on their smart phones, tablets or laptop computers," S&T said.

"Real-time information sharing is critical when responding to an incident," said FiRST Program Manager, Christine Lee. "With the new FiRST Sharing Service feature, first responders at the incident location and decision-makers at a command center are able to send incident information in real time and are also able to control who has access to the data."

S&T said it "worked with first responders who used the tool in the field to develop the new FiRST Sharing Service -- allowing response agencies to create defined user groups to share

incident data and photos with colleagues directly through the app. In addition, users will be able to share this data with external information systems, such as WebEOC and S&T's Virtual USA, ensuring a unified response. Group members will also be alerted when new incident data is posted."



The FiRST app -- currently available for Apple, Android and Windows PC devices -- was developed in partnership with the DHS National Protection and Programs Directorate Offices of Infrastructure Protection and Bombing Prevention, as well as Applied Research Associates Inc.

► **The FiRST application is available for download at:** www.firstsupporttools.com.

Gas Masks: Toward the End of the Line?

By Meir Elran and David Friedman
Source: http://www.inss.org.il/index.aspx?id=4538&articleid=5992

The emerging proposition in the Israeli defense establishment, reported recently in the media, to shut down the gas masks project to protect the country's civilians on the home front is yet another manifestation of the fluctuations that have characterized Israeli policy in this critical area. Only two months have passed since public and media pressure caused anxiety at the mask distribution centers in Israel, following the US threat to employ force against Syria after the regime's August 21, 2013 chemical weapons attack against the rebels. There was also a suggestion, originating from the National Security Council, to place the financial burden of purchasing the masks that were lacking, some 40 percent, directly on the public. The extent to which Syria is in fact destroying its extensive arsenal of chemical weapons is still not clear, nor are its intentions regarding the production capabilities. Under such circumstances, is the new idea of closing the program, on which billions of shekels of

taxpayer money have been spent, correct?

The project to distribute gas masks for personal protection against chemical weapons started in connection with the perceived Iraqi threat. The decision was made in 1990, on the eve of the 1991 Gulf War. Although the Iraqi threat never materialized, the IDF Home Front Command maintained the project until 2003, when the decision was taken by the government to collect the gas masks from the public, which took place in 2007-2008. Two years later, upon the recommendation of the Home Front Command, the government decided to resume the gas masks distribution, despite reservations from, among others, IDF quarters. However, the funding provided for the renewed project was far less than needed. This has never changed, creating an odd situation in which there has been a constant gap between supply and demand, with masks unavailable to more than one third of the Israeli public – even those who wished to respond to the ongoing pleas of the Home Front Command to acquire the masks.

From the outset the gas mask chapter has been accompanied by sharp controversy within the defense establishment and the public at large. On the one hand, there is the natural tendency – some would say critical need – to provide optimal protection to the general public against a threat that has been presented as real, even if most of its impact is psychological in nature. Technologically, the gas masks indeed provide a high quality, simple solution for the consumers, even in a biological attack scenario. The chemical threat has always been perceived in the civil defense system as a primary risk component and has prompted serious and meticulous response steps in many fields, including the medical system. Numerous and frequent exercises have also been held in a chemical attack environment, to sustain a high rate of Israeli preparedness.

On the other hand, there are those who repeatedly argue that although

Syria possesses large quantities of chemical weapons, and despite the history of Arab states (Egypt, Iraq) that have used such weapons in conflict situations, as well as the unconfirmed reports about the spillover of chemical weapons to terrorist organizations, the chances that this weapon will be used against Israel are slim and have never created a real risk that made this broad and very expensive civilian project necessary. The main argument in this context is that Israel's deterrent capability will be sufficient, particularly as there is arguably no precedent to using chemical weapons against an enemy that has the ability to launch a tough and painful response. The budget was always at the center of this ongoing debate, because of the very high cost involved. Estimates suggest that it would now cost some 1.4 billion shekels just to complete the production and distribution of gas masks to the entire population, with an additional 300 million shekels a year over twenty-five years required to maintain the masks and replace those that have worn out.

Discussion on a different, more professional level, namely, the issue of emergency preparedness, should focus on the strategic priorities for building the right and balanced response to the needs of the home front in Israel. Like many other countries that deal with protecting the homeland and engage with mass disaster preparedness, Israel has a clear tendency to invest most of its resources in resistance and prevention. Over the years, Israel has invested in deterrence and offensive capabilities, based on the correct assumption that those will contribute to at least postponing the next conflict. On the second level there are the growing expenditures on defensive measures, and in particular, acquisition of "hard" systems of protection. Here, for example, are the extensive procurement of active defense systems, such as the Iron Dome and the components of passive protection, such as the gas masks and the public and private shelters. In this context too there is an ongoing debate about the scope of expenditure required. There are those who believe it is not appropriate "to protect ourselves to death" (in the words of former Prime Minister Ehud Olmert) and hence the tendency to limit the spending to the extent possible. Others, like the current Home Front Defense Minister Gilad Erdan, hold that the gaps in passive protection are not acceptable and call for additional funding. Investments in the realm of resilience, which address the consequences of disruptions on the "day after" and the fast recovery of functional continuity and rehabilitation, are regarded only as a distant third priority.

In conclusion, we suggest that:

1. The idea of reexamining the issue of gas masks is correct and necessary, given the developments in connection with Syria's apparent new policy on chemical weapons. This will require a careful study of Syria's residual capabilities and Hizbollah's future potential. In terms of timing, it would be appropriate to wait until it is clearly proven that Syria has in fact destroyed its chemical weapons arsenal, including the production capabilities.
2. The adequate alternative strategy for a possible renewed military chemical threat in the future is a combination of active deterrence, close intelligence monitoring, and destruction of a new arsenal upon its establishment, or at the start of the fighting.
3. If a decision is made to cancel the gas mask project, it is recommended to transfer the funds still to be spent on it to other areas connected with the preparedness of the civilian front. We recommend that these funds be used primarily for developing community resilience, in order to strengthen the ability of communities and systems that may be damaged in the future to recover and return quickly to improved functional continuity.
4. Finally, this episode also indicates unwarranted confusion regarding the primary issue of responsibility and authority in the sensitive field of the civilian front. It would be right for the government to make a clear decision promptly on the question of who is responsible for this critical area and what the role of the defense minister is in the decision making process and in setting the priorities.

Meir Elran *is a senior research fellow and the director of the Homeland Security Program and a co-director of the Society–Security Program of INSS. Elran joined the Jaffee Center for Strategic Studies in 2003, after he served in senior analytical, command. and staff positions in the IDF Directorate of Military Intelligence. His last post was the deputy director of MI (1987-1989). Brig. Gen. (ret.) Meir Elran took an active role in the peace talks with Egypt and was*

an active member (as a reserve officer) of the military delegation to the peace talks with the Hashemite Kingdom of Jordan. Following his retirement for the military Elran served as the chief of staff of the Tel Aviv municipality and afterwards as a senior consultant for strategic planning for several government offices, including the Ministry of Defense, the Ministry of Education, the Ministry of Internal Security and the National Security Council, where he focused on social issues relating to the national security. Elran holds a BA from the Hebrew University in Jerusalem in Political Science and Middle East Studies (1965), and an MA from Indiana University in International Relations and Russian Studies (1970). He is presently working on his PhD at the Haifa University School of Political Science School, on measuring societal resilience.

***David Friedman** is a senior research fellow at INSS. His research focuses on non-conventional terrorism, with particular attention to strategies for confronting bioterrorism, including preventing the proliferation of biological weapons to terrorist groups.*
For nearly 25 years, Dr. Friedman served in the IDF and Israel Ministry of Defense, mainly in the R&D directorate. He was responsible for R&D projects in the field of chemical / biological defense. He retired from the IDF in 1994 at the rank of colonel, serving as Head of the Chem/Bio Protection Division. He then joined the IMOD where he served as Special Assistant for Bio/Chem Defense in the office of the Assistant Minister of Defense. He holds a Ph.D. in Life Sciences from the Weizmann Institute of Science.

As Syrian Chemical Attack Loomed, Missteps Doomed Civilians

By Adam Entous, Nour Malas and Rima Abushakra
Source:http://online.wsj.com/news/articles/SB10001424052702303914304579194203188283242?goback=.gde_3711808_member_581006852572476621 2#!

Casualties of alleged gas attack outside Damascus. Reuters

As Syrian troops battled rebel forces in the Damascus suburbs Aug. 18, U.S. eavesdropping equipment began picking up ominous signals. eavesdropping equipment began picking up ominous signals.

A special Syrian unit that handles chemical weapons was ordered closer to the front lines, officials briefed on the intelligence say, and started mixing poisons. For two days, warning signs

mounted until coded messages went out for the elite team to bring in the "big ones" and put on gas masks.

U.S. intelligence agencies didn't translate the intercepts into English right away, so White House officials didn't know what the Syrian regime was planning until the assault began.

Just before 2:30 a.m. on Aug. 21, the first salvo of poison-filled rockets streaked through the clear night sky and crashed into rebel strongholds.

Sarin gas, which kills almost instantly by attacking the nervous system, spread across sleeping farms. Pushed down by falling temperatures, the poison settled in low-lying areas and penetrated homes.

Men, women and children began coughing and gagging, with little more than wet handkerchiefs and T-shirts to hold over their mouths. Neighborhood doctors quickly ran out of antitoxins, and, in a desperate effort to wash away the poison, flooded clinic floors and dragged unconscious victims through the water. More than 1,400 people died, according to U.S. estimates, making it the worst chemical-weapons strike in a quarter century.

Photo from an opposition news source of dead children in Ghouta, authenticated by AP. Associated Press

A final report is due soon from the United Nations. The Wall Street Journal has pieced together a reconstruction of that fateful day from battlefield reports and dozens of interviews with eyewitnesses, rebels, medics, activists and Western intelligence officials. It reveals both the horror of the attack and the months of miscalculations by the Syrian regime, opposition groups and U.S. government that left them all unprepared for what happened.

U.S. and Israeli communications intercepts reveal chaos inside the Syrian regime that night. When the reports of mass casualties filtered back from the field, according to the officials briefed on the intelligence, panicked Syrian commanders shot messages to the front line: Stop using the chemicals!

Calls came in to the presidential palace from Syrian allies Russia and Iran, as well as from Hezbollah, the Lebanese militant group whose fighters were inadvertently caught up in the gassing, according to previously undisclosed intelligence gathered by U.S., European and Middle Eastern spy agencies. The callers told the Syrians that the attack was a blunder that could have profound international repercussions, U.S. officials say.

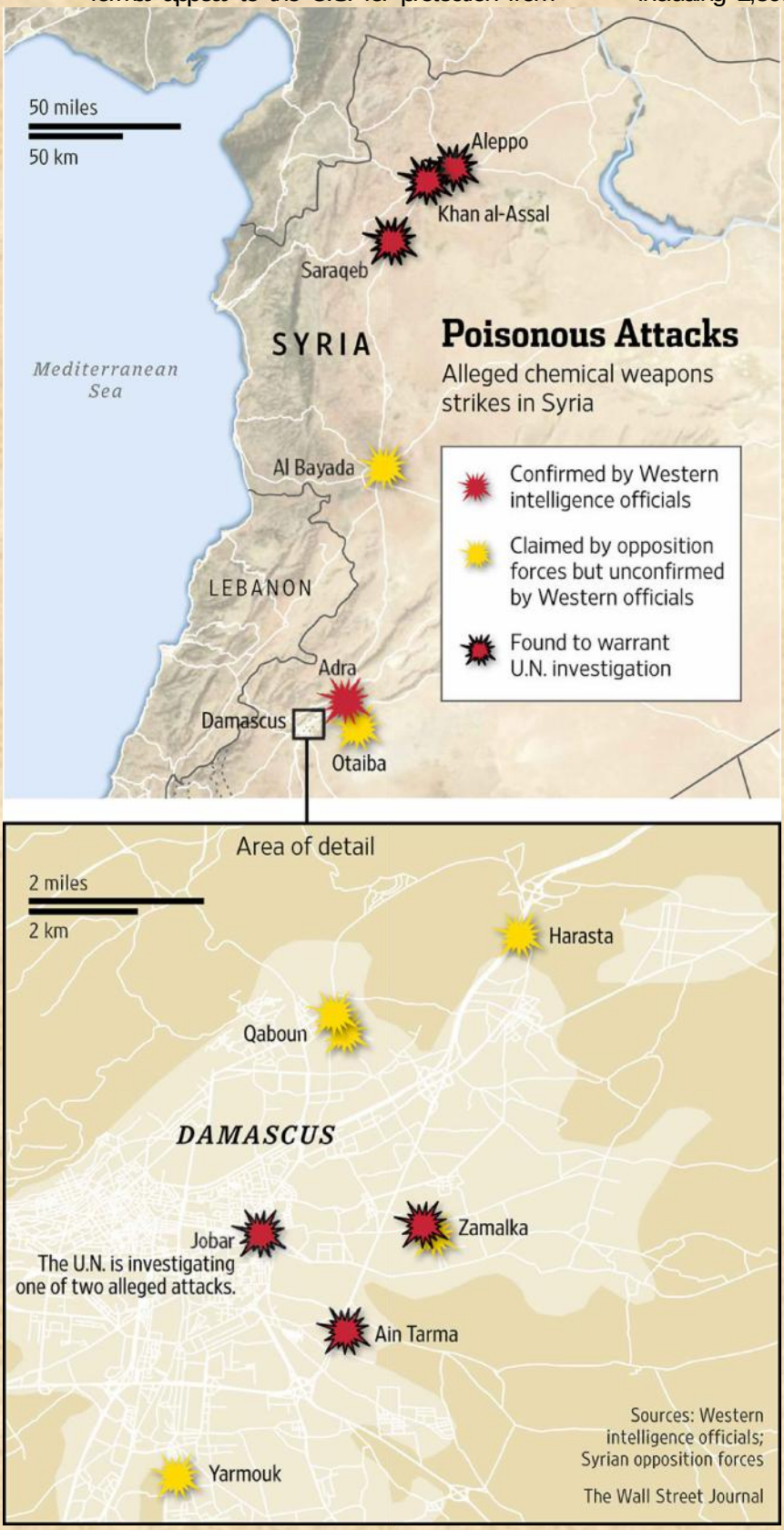
The Obama administration had been closely monitoring Syria's chemical-weapons stockpile since the conflict began in 2011, and had watched the regime carry out about a dozen small-scale chemical attacks before the big one, U.S. officials say. Even if they had translated the intercepts before the Aug. 21 strike, these officials say, they likely wouldn't have acted because there were no indications it would be out of the ordinary.

Top policy makers had little appetite for getting more deeply involved in the conflict, and questions loomed large about the legality of providing support to the rebels and the best strategy for managing the chemical-weapons threat, these officials say. Rebel leaders and their allies in the U.S. government say the White House failed to act on requests for gas masks, antidote injectors and other protective gear until it was too late.

All told, the events of Aug. 21 changed the Middle East and U.S. policy in ways likely to reverberate for years. It prompted the U.S. to consider and then pull back from military action. The eventual deal to avert a strike, in which Syria agreed to destroy its chemical-weapons stockpiles, elevated Russia, for now, to a leadership position in the region.

President Bashar al-Assad has tightened his hold on power. His regime has denied using chemical weapons, blaming the attacks on the rebels. In exchange for giving up his chemical arsenal, he avoided an American military intervention and likely will get even more support from Russia and Iran. Mr. Assad has pressed ahead with his offensive using conventional arms. U.S. intercepts show a Russian official later boasting to a Syrian counterpart about how easy it had been to get the U.S. to back off strike plans, officials briefed on the intelligence say.

Syrian opposition leaders made their first formal appeal to the U.S. for protection from chemical weapons back in June 2012. At a meeting in Washington, opposition representatives handed administration officials a request for various nonlethal supplies, including 2,500 gas masks, say people who attended.



Samantha Power, then the White House's top human-rights official and now U.S. ambassador to the United Nations, was receptive, these people say. But other White House advisers, they say, questioned whether the masks would make much of a difference. Some worried that if Islamic extremists in the opposition got their hands on them they might try to seize poison gas from the regime. Administrative lawyers worried about potentially running afoul of domestic and international law.

"It was never 'no.'" says one opposition representative about what would become a series of requests. "But it would never happen."

A senior administration official says, "Decisions that were made on assistance to the opposition were made in consultation with them as to what their priorities were."

That July, American and Israeli spy agencies for the first time intercepted fragmentary intelligence about regime forces using chemical weapons on a small scale. The evidence wasn't conclusive—there were no physical traces—but some top military officials say they found it persuasive and wanted to make it clear right away to Syria the U.S. wouldn't tolerate even small attacks.

Then-White House Deputy National Security Adviser Denis McDonough and other officials told their agency counterparts that the top-secret information shouldn't be made public, but congressional committees were briefed, according to

officials. Mr. McDonough also decided to restrict the distribution of such "raw" intelligence inside the government because of its sensitivity, these people say. White House officials didn't want to set off a chain reaction that would restrict their ability to decide how active a role to play, senior U.S. officials say.

The following month, on Aug. 20, President Barack Obama said the regime would cross the U.S.'s "red line" if it started moving or using "a whole bunch of chemical weapons."

Last December, the U.S. intercepted an unusually complete communication in which Syrian officials spoke about a potentially larger-scale chemical attack involving aircraft. The White House sent private messages to the Russian government, which in turn asked Iran to lean on the Syrians to scrap the plan, according to current and former U.S. officials involved in the matter. Iran did just that, the officials say. A spokesperson for Iran's U.N. mission said Iran had made it clear it opposed the use of chemical weapons.

U.S. and Israeli officials say Mr. Assad settled into a pattern of using small amounts of chemical weapons, believing the West wouldn't intervene. "The regime was using chemical weapons on a small scale to terrorize and warn," says Ziad Issa, a Syrian doctor based in France who worked frequently in northern Syria. Dr. Issa and others on the ground knew they needed to supply Western nations with proof of chemical-weapons use.

In February, U.S.-based representatives of the opposition stepped up their requests for protection, asking top Pentagon officials for a supply of the penlike auto-injectors carried by American troops, diplomats and spies to treat sarin exposure. They argued the devices were easier and quicker to use than conventional syringes. The answer was no.

Reports from the ground were frustratingly murky. On March 19, Syrian activists in Aleppo reported chemicals had been used in a missile strike on the government-held town of Khan Aasal, drawing international attention. State television said it was the rebels who had deployed the chemicals. Later, the Aleppo forensics chief defected to Turkey and claimed the government was responsible.

After the attack, doctors on the ground smuggled blood samples from four patients into Turkey, giving it to U.S. embassy officials as evidence of chemical-weapons use, says Mazen Kowara, a Syrian doctor who helped coordinate the process.

A month after the Khan Aasal strike, on April 13, an attack in Aleppo killed several people. Again doctors collected blood and other samples and delivered them to representatives of the U.S. embassy in Turkey. This time, administration contacts told rebel doctors and opposition activists they believed the regime had used poison gases, but that it didn't constitute a mass killing—implying that Mr. Assad hadn't crossed the "red line," according to opposition sympathizers who recalled the conversations.

Under pressure from allies, the U.S. made its findings public on April 25, saying American intelligence agencies "with varying degrees of confidence" believed that the Syrian government had used sarin.

France, too, had been trying to confirm chemical-weapons use. French anesthesiologist Raphael Pitti, formerly a military doctor trained in chemical-weapons treatment, taught Syrian doctors how to gather evidence. On April 29, a small bomb dropped from a helicopter landed in the garden of a home in Saraqeb, in Idlib province, killing one. A Syrian doctor carried two tubes of blood from the victim to Turkey, where Dr. Pitti put them in a cooler and flew them to Paris. Tests confirmed the use of sarin.

As the attacks multiplied, the efforts by Syrian doctors to get gas masks and antidote gained traction. A French humanitarian group sent 50 protective suits and 40,000 units of the antidote atropine to northern Syria.

Syrian doctors sketched a plan to distribute the protective gear and began teaching decontamination. "By April, Aleppo was ready," recalls Dr. Pitti, and the goal was to do the same in Damascus and other cities.

By then, the battle for Damascus was raging, and evidence began trickling out that chemical weapons were in use there. In late June, the French ambassador to Syria, Eric Chevallier, accompanied a convoy of 16 tons of drugs, including 40,000 units of atropine, to the Syrian border.

Hundreds of gas masks and thousands of doses of antidote now were in the pipeline to the Damascus suburbs. They didn't arrive in time.

On Sunday, Aug. 18, U.S. and Israeli spy agencies began picking up intercepts that Unit 450, the Syrian

military group that secured the chemical weapons, was mixing poisons and loading them into munitions.

Mr. Assad had delegated day-to-day decision-making on chemical-weapons use to senior commanders, according to Western intelligence officials. In the middle of that chain of command, according to U.S. and French intelligence, was Bassam Hassan, a presidential adviser and a leader in the elite Republican Guard. Maher al-Assad, Mr. Assad's brother and head of the Republican Guard, worried that rebels in the suburbs of Damascus were preparing a new offensive.

In the earlier, smaller-scale attacks, U.S. officials say, Syrian units appeared to assess population densities and weather forecasts to hold down death counts. These officials now believe Syrian forces may have simply gotten sloppy on Aug. 21, misjudging the weather or the number of people in the line of fire.

One rocket landed in the town of Zamalka, behind the home of Iman, 40 years old, and Abu Suleiman, 48. The Palestinian-Syrian couple were asleep with six of their children in a first-floor apartment. The thunder of rockets shook them awake.

Iman doused a white handkerchief with water and held it to her mouth. When her husband started to gag moments later, she handed it to him. Within hours, Iman, 11 other members of her family and at least 700 others in the town had died.

From their fourth-floor kitchen window in the adjacent agricultural hamlet of Hazeh, two brothers, age 18 and 28, watched orange smoke rise from Zamalka.

Through the darkness, one brother recalled in an interview, he could see dozens of people running from Zamalka. Some collapsed on the way. Calls boomed through mosque loudspeakers telling residents to go to rooftops. Many people had done just the opposite, thinking they were being hit by conventional shells.

"There were bodies everywhere," the brother recalled. "Sidewalks, streets, stairwells, everywhere."

In nearby Ain Tarma, Abu Mahmoud, 21, had been having a late dinner when a friend barged in with the news. When he reached the town's main intersection, he saw people running in the streets and pickup trucks filled with bodies.

Hezbollah fighters, allies of the regime, were in some of the areas hit. Unlike Syrian troops, they weren't told in advance to don gas masks, according to U.S. and European officials briefed on the intelligence. Some quickly fell ill. Angry Hezbollah commanders protested to their Syrian counterparts. Hezbollah officials didn't respond to requests for comment.

Thousands of patients flooded into four area clinics, which quickly ran out of atropine.

Would-be rescuers went door-to-door looking for survivors. In Ain Tarma, Abu Mahmoud and others used flashlights to search darkened homes. Some soaked their T-shirts in water and wrapped them around their faces. Abu Mahmoud recalled seeing a friend speed off in a car after being called to ambulance duty. The car, he said, returned 10 minutes later carrying his friend's lifeless body.

In a field hospital set up in a former wedding hall, there were corpses everywhere, said Abu Mahmoud. On one shelf in a dressing room, he said, he saw six tiny bodies. "You thought you might be looking at a doll," he said, "but they were kids."

In Hazeh, one of the brothers who had seen the smoke rising from Zamalka went to a makeshift clinic in a mosque to help out. Residents were lining up corpses in rows and putting numbers on their foreheads. The brother recalled placing numbers 100 through 180.

One woman taken as dead began coughing and shaking with cold, he recalled. Volunteers wrapped her in a blanket. A rebel fighter issued an order over a hand-held radio: All burials in the area should be halted for four hours. The rescuers said about 20 people at that field hospital were spared from being buried alive.

Abu Suleiman, the Palestinian-Syrian from Zamalka whose wife had perished, was one of those presumed dead. He was found sprawled on the side of the road and was being transported with other bodies when he regained consciousness, family members said in interviews.

As day broke in the devastated area and international outrage flared, top Syrian commanders sent urgent messages to front-line forces to stop using chemicals. Western officials believe senior regime officials were only beginning to realize the scale of the attack.

Calls of protest came in from allies whose support Mr. Assad needed. Top Iranian and Russian officials called the presidential palace

demanding to know what had happened, according to U.S. officials briefed on the intelligence. Both had previously warned Mr. Assad against such an attack. A top Hezbollah official also complained, the U.S. officials say.

In Paris, London and Washington, government officials were waking up to images of carnage. Intelligence gathered by U.S. spy agencies starting on Aug. 18 hadn't been translated until that morning, officials said. They began culling through it.

In Paris that morning, Dr. Pitti, who had trained the Syrian doctors to gather evidence, scanned dozens of videos of people convulsing on roadsides and children being carried into clinics. He asked Syrian doctors to zoom in on faces and particularly eyes. The pinhole-size pupils, convulsions and respiratory troubles strongly indicated sarin, he said.

To **calculate the death toll**, the U.S. Central Intelligence Agency counted the bodies using computer programs that analyzed images of the dead. Analysts loaded more than 100 videos from YouTube into the system, which scanned each image for unique features and then compared the images to ensure bodies weren't double-counted.

Bodies showing gaping wounds or that were covered by bloody sheets weren't included, because intelligence analysts assumed they might have been killed by conventional weapons. **The CIA's final tally came to 1,429.**

About a month after the attack, Mr. Obama eased restrictions on the transfer of some protective equipment, including atropine auto-injectors. It is unclear if the opposition will get them.

Off-shore barges considered for destroying Syria's chemical weapons

Source: http://www.homelandsecuritynewswire.com/dr20131125-offshore-barges-considered-for-destroying-syria-s-chemical-weapons

After failing to find a country willing to allow its territory to be used for disposing of Syria's chemical weapons, the United States is exploring two other options.

The list of countries rejecting the U.S. request is growing, and last week Albania, prompt by public protests, turned down an appeal by the United States to have a plant built in Albania in which chemical weapons and agents would be destroyed.. Norway also rejected a similar request, claiming it did not have the expertise or the facilities to destroy the weapons.

The *New York Times* reports that as a result, the United States is now seriously considering two other options, both involving the destruction of Syria's chemical weapons off shore, rather than on land. Both proposals call for removing the chemical weapons from Syria and placing them on a large barge at sea, where they would be dissolved or incinerated.

Both plans aim to destroy the precursor materials which, when combined, form the chemical munitions. Syria's arsenal of operational chemical weapons would be destroyed separately.

"These are among the options we are considering, as we have unique capabilities that can be applied to the disposition" of Syrian chemical weapons, said Caitlin Hayden, a spokeswoman for the National Security Council.

The destruction of the chemical weapons would be monitored by officials from the Organization for the Prohibition of Chemical Weapons (OPCW). The group is currently operating in Syria to locate and identify the weapons at twenty-three declared weapons sites.

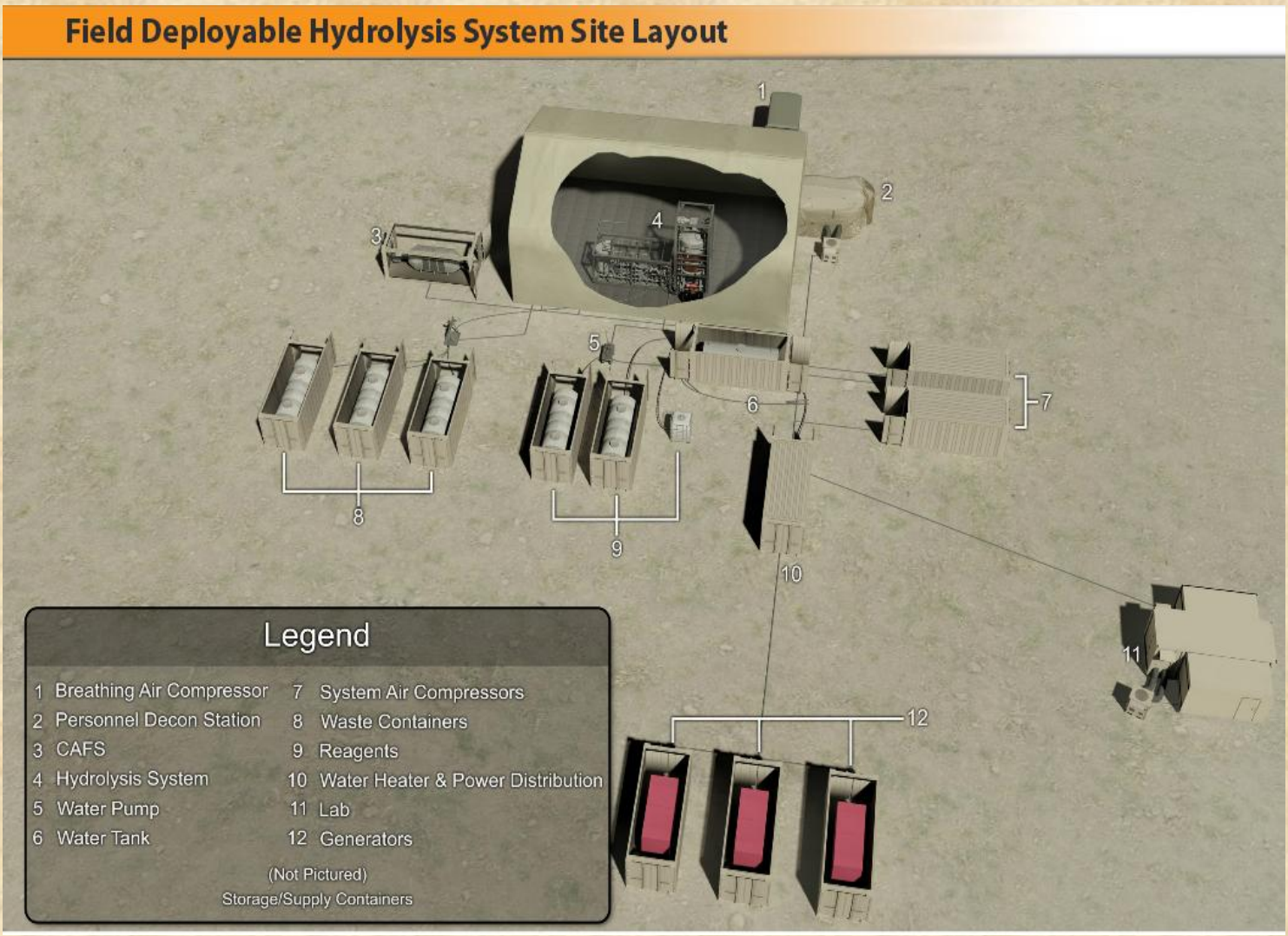
Under the first plan, five incinerators operating at 2,700 degrees Fahrenheit aboard a barge, would be used to destroy, in less than sixty days, all of Syria's top precursor materials for chemical weapons. Officials said the byproducts would be harmless salts and other solids, according to the*Times*. No American companies, ships, or personnel would be involved under the proposal; although the American military, using warships or surveillance planes, may assist in securing the area where the barge would be positioned.

The second plan for off-shore destruction would rely on the Pentagon's Field Deployable Hydrolysis System, a highly sophisticated mobile system which neutralizes chemical agents through chemical reactions involving reagents which are mixed and heated, resulting in compounds that cannot be used for military use.

The system would be used to neutralize the precursor chemicals which could be used by the Syrian government to make sarin and other forms of chemical weapons. The Pentagon reports that this option can be activated within ten days of activation.

Destroying the weapons in international waters would not require approval by any particular country.

The *Times* reports that a senior U.S official familiar with the matter said the United States had not given up on finding a country that



Secretary of State John Kerry last week referred to the two options when he said that "We are not without other alternatives [if more countries refuse to accept Syrian chemical weapons]," he said. "In fact, we are actively pursuing two other alternatives which provide us a complete capacity to do the destruction and to meet the schedule."

Kerry added: "The chemical weapons of one country are being corralled and moved and contained and placed under the supervision of an international organization which is committed to removing those weapons from Syria by the end of the year," he said. "And I believe we are on target currently to achieve that."

would accept the 1,000 tons of precursors and other chemicals in Syria's arsenal, where the OPCW would monitor the chemicals' destruction. The key to moving forward, however, is securing the chemicals and transport them safely out of Syria. "The key now is to get it onto a ship and get it out of the country," the official said, noting that the chemical weapons would remain in Syria until a decision on how to destroy the arsenal is made.

Security for the shipments is being provided by the Syrian Army, which has raised concerns of vulnerability to attacks and seizure as the weapons are transported to Syrian ports. Syria has

agreed to a 31 December 2013 deadline to destroy the most critical materials, and 5 February 2014 for most of the remaining arsenal.

► **Read more on the Field Deployable Hydrolysis System at:**
http://dtirp.dtra.mil/PDFS/cbw_news_FDHS_130923.pdf

Ansell introduces hands-free lighting system for TRELLCHEM® Level A Suits

Source: http://www.cbrneportal.com/ansell-introduces-hands-free-lighting-system-for-trellchem-level-a-suits/

Ansell, a global leader in protection solutions, announces the launch of the TRELLCHEM Hands-Free Visor Light System, US patent pending. The system offers Hazmat responders in encapsulating Trellchem suits a built-in hands-free LED lighting solution with a panoramic view with no risk of blinding reflections.

Access to light and good visibility plays a vital role in creating a safe environment for most kinds of work. Trellchem encapsulating gastight suits are used by a variety of responders in emergency situations where the environment can be both very dangerous and most often very demanding in terms of access to daylight or any other light sources. Typical situations include visibility limited by smoke from the off-gassing of chemicals to the dark, non-lit space of an industrial building where lights are out. The responder must also normally carry a wide range of tools to be able to complete the mission. A solution that offers hands-free operation of a light source therefor contributes both to safety and efficiency for the entire response team.

"The Trellchem Hands-Free Visor Light System adds true value for any responder working in demanding and hazardous environments" says Thomas Draskovics, President and General Manager Ansell Specialty Markets. "By adding an integrated lighting solution into our suits we are convinced that we will help create a safer environment for responders working in these sometimes life-threatening operations".

The Trellchem Hands-Free Visor Light System is a "short throw' illumination system based on a LED panel mounted along the top inside of the visor. It is connected to a standard 9V battery giving the user an expected duration of more than

one hour. The wide beam of the LED panel creates a panoramic view in poorly illuminated environments. It helps the responder with better orientation as well as safer and more rapid performance since it frees up both hands. The design of the system eliminates any risk of reflection back into the eyes of the user and mounts easily in both new and existing suits without the need of any special tools. The LED panel is powered by standard batteries to eliminate the need of any recharging management.

The system fulfils EMC (Electro Magnetic Compatibility) requirements and does not interfere with any radio communication devices. Further, it does not influence or interfere with any regulatory certification regarding the Trellchem suit. For decontamination and cleaning purposes, once the battery pack is dismounted, the system will remain unaffected inside the suit when being washed.

DESIGN

The Trellchem Hands-Free Visor Light System comes in two different designs to fit inside the visor of the corresponding chemical suit design:

- type CV
- type VP1

PARTS INCLUDEd

The system consists of the following parts:

- LED panel (plastic frame with installed LED lamps)
- Battery casing (battery not included)
- Battery pack holder with cable loop and elastics
- Cable loop (short)
- Screwdriver (type Phillips)
- Instructions for use

An optional extension kit (for use for alternative positioning of the battery) is available. This kit contains:

- Extension cable
- Cable loops (2 short, 2 long)

Standards

- Fulfills the requirements of the EU Directive 2004/108/EC on electromagnetic compatibility (EMC)
- The Trellchem Hands-Free Visor Light System can be used in Trellchem suits with ATEX approval without affecting this approval
- The system does not influence or interfere with any certification in regards of the Trellchem suit

WMD spies target Swedish universities

Source: http://www.thelocal.se/20131126/nuclear-weapons-spies-eye-swedish-universities

Foreign powers interested in developing weapons of mass destruction are regularly targeting Swedish universities in hopes of obtaining sensitive technology, Swedish intelligence officials say.

Anti-proliferation experts with the Swedish Security Service (Säpo) mention **Iran, Pakistan, and North Korea among the countries that are actively seeking nuclear technology in Sweden.**

During the past year, foreign powers have on average made one attempt per week to obtain access to dual-use technology and equipment that can be used to develop weapons of mass destruction (WMD).

"We see acquisition attempts by all three of these countries in Sweden today in 2013," an expert in Säpo's working group for WMD non-proliferation told the Svenska Dagbladet (SvD) newspaper.

"It's unmistakable and continues uninterrupted; it's not something that's happening on the margins and can be ignored."

While Swedish defence companies have long been targeted for their missile technology, Säpo says that universities in Sweden with advanced research programmes have become increasingly popular with agents of foreign countries looking to develop nuclear arsenals.
Currently, half of all acquisition attempts involve Swedish research that could be used to aid in the development of WMD.
Säpo's non-proliferation expert explained that other countries in Europe have become better at ensuring foreign agents involved in weapons development don't gain access to educational programmes that could help their efforts.
"That means that we now see that these people are coming to Sweden," she told SvD.
The security service now hopes Swedish universities start to do more when vetting foreign researchers looking to join sensitive research programmes.
"I hope they take this seriously and feel a moral responsibility," the anti-proliferation expert said.

Unexploded chemical weapons could be headed to New Mexico, Panama says

Source: http://www.ruidosonews.com/ruidoso-news/ci_24626251/unexploded-chemical-weapons-could-be-headed-new-mexico

Unexploded chemical weapons from U.S. tests at San Jose Island, Panama, containing dangerous agents of mass destruction such as mustard gas and hydrogen cyanide, could be headed to New Mexico for disposal, according to the Panamanian government.
A team of experts from the U.S. Department of Defense will evaluate "the fragility of chemical weapons in San Jose Island with the goal of moving and transporting them by sea toward to the New Mexico desert, where they will be buried," according to a Nov. 21 statement posted online by Panama's Foreign Minister Fernando Núñez Fábrega.
Following his Nov. 13 meeting with U.S. State Secretary John Kerry, the Panamanian official said the U.S. government had agreed to pay for the cleanup costs, and that removal of the chemical munitions will take place as soon as possible under an agreement with the U.S. government.
"In this way, Panama will be free of unexploded bombs in San Jose Island, and the (island) will be able to recover its touristic value," Núñez Fábrega said.

In New Mexico, the desert regions are in the southern part of the state, which also encompass White Sands Missile Range, a vast military reservation.
The New Mexico governor's office referred questions about the matter to the state Environment Department and the Energy, Minerals and Natural Resources Department.
"The U.S. Department of Defense would be the regulatory agency to oversee safety, security, and safeguarding the environment from the potential impacts of disposed weapons," said

Jim Winchester, spokesman for the state environment office. "The Department of Defense (or any other entity) has not contacted the state of New Mexico's Environment Department in regards to this report."

Neither the U.S. State Department nor the Department of Defense had responded to questions about the agreement with Panama, and that country's statement that New Mexico was discussed as the destination for the chemical weapons.

A spokesman with the State Department said he would look into it, but had not responded by late Friday.

A State Department press announcement states that Kerry and Núñez Fábrega met in the department's Treaty Room in Washington, D.C., on Nov. 15.

"We have also worked together closely on the issue of how to destroy some old Word War II chemical weapons munitions that are on San Jose Island, and we're working on that issue as well as cooperating on counter-narcotics initiatives," Kerry said in a video and statement that the State Department posted online, but without elaborating on the possible disposal site.

In October, Núñez Fábrega told the McClatchy News Service he had "a firm commitment from the United States" that the Pentagon will send a team to the island later in 2013 and that another team will dispose of the munitions next year.

McClatchy also reported that Panama sought help from the Organization for the Prohibition of Chemical Weapons at The Hague, Netherlands, in getting the U.S. government to remove the munitions from San Jose Island. The organization is the same one that oversees the destruction of chemical weapons in Syria.

The presence of U.S. chemical munitions in Panama is a lingering issue between the two countries. The United States tested weapons in the country from the 1930s to 1960s.

According to the International Fellowship of Reconciliation, an interfaith advocacy organization based in The Netherlands, mustard gas and distilled mustard, phosgene, cyanogen chloride, hydrogen cyanide, butane, and possibly also Lewisite were among the chemicals the U.S. military tested at San Jose Island.

"From available documents," IFOR reported, "the number of munitions tested are known for 18 of the 130 tests conducted on San Jose Island. Some 4,397 chemical munitions were fired in these 18 tests, for an average of 244 munitions fired in each test.

"Most of the munitions fired -- 3,816 -- were 4.2-inch mortars charged with Cyanogen Chloride, mustard, or phosgene, but the chemical munitions also included bombs from 100 pounds to 1,000 pounds in weight and 105mm Howitzer shells," reported IFOR, which has a U.S. counterpart, FOR-USA.

San Jose Project

John Lindsay-Poland, a member of FOR-USA, wrote about the San Jose Project chemical tests in his book "Emperors of the Jungle: The Hidden History of the U.S. in Panama," (Duke University Press; 2003).

In an interview, the author in San Francisco said the U.S. government has a moral obligation to follow through on its commitment to rid the island of the dangerous munitions.

"(The) United States had an active chemical weapons program from at least 1930 until 1968," Lindsay-Poland said in an article he wrote for Envio Digital. "From 1930 to 1946, this program focused on canal defense. From 1943 until 1968, the program aimed to test chemical munitions under tropical conditions. Dozens of tons of mustard gas and phosgene were stockpiled at a number of sites in Panama, particularly from the 1930s to the 1950s. Unused and dud chemical munitions were also abandoned in Panama."

Lindsday-Poland said several of San Jose Island tests involved soldiers. "These included "patch tests," which called for applying drops on a soldier's forearms, often after protective ointment was put on one of them.

One of the U.S. tests was conducted to see if any difference existed in the sensitivity of Puerto Rican and Anglo-Saxon soldiers to mustard gas, Lindsay-Poland said.

"A summary of the (1944) test produced by Defense Secretary William Cohen in April 1998 implied that some men were hospitalized after they "sustained severe body burns or eye lesions," Lindsay-Poland said.

"That was the mentality back then," the author said.

U.S. ship readies for Syria arms destruction

Source: http://english.alarabiya.net/en/News/middle-east/2013/12/02/U-S-ship-readies-for-Syria-arms-destruction-.html?utm_source=Sailthru&utm_medium=email&utm_term=*Mideast%20Brief&utm_campaign=Mideast%20Brief%2012-2-2013

The U.S. ship Cape Ray is being readied to possibly remove Syria's chemical weapons. (File photo: Reuters)

The U.S. government has started equipping U.S. ship Cape Ray to enable it to destroy some of Syria's chemical weapons at sea, if Washington is asked to assist in the effort.

The Maritime Administration vessel MV Cape Ray is being **equipped with the newly developed Field Deployable Hydrolysis System**, which was designed by the Defense Department to neutralize components used in chemical weapons, a defense official said on condition of anonymity to Reuters.

The Organization for the Prohibition of Chemical Weapons, which is monitoring the destruction of Syria's chemical arsenal, said last week the United States had offered to destroy some of the components on a U.S. ship and was looking for a Mediterranean port for the process.

"The United States is committed to supporting the international community's efforts to destroy Syria's chemical weapons in the safest, most efficient and effective means possible," Caitlin Hayden, a spokeswoman for the White House National Security Council, told Reuters.

"We have offered and are currently outfitting a U.S. vessel with field deployable hydrolysis system technology to support the OPCW's efforts," she said, adding the U.S. remained "confident that we can meet the milestones for destruction set out by the OPCW."

The Cape Ray, a 198-meter vessel with built-in ramps to enable cargo to be efficiently rolled on and rolled off, is part of the Maritime Administration's ready reserve force of 46 ships, Reuters reported.

The operation will destroy what is known as "priority chemical weapons," the most dangerous of Syria's total arsenal and ones that have to be out of the country by Dec. 31. All other declared chemical materials are to be eliminated by June 30.

Some chemical weapons are destroyed through a process called hydrolysis, in which agents, like detergents, are used to neutralize chemicals such as mustard gas and sulphur, resulting in liquid waste known as effluent.
The OPCW said on Saturday that 35 commercial companies have expressed an interest in destroying the lower priority, less dangerous weapons, according to Agence France-Presse.

Syrian President Bashar al-Assad agreed in September to give up his country's chemicals weapons stockpile to avert a the threat of U.S. missile strikes following a sarin gas attack that killed hundreds of people outside the capital Damascus. The U.S. has blamed Assad for the attach, a charge he rejected.
A team of U.N.-OPCW inspectors has been on the ground since October, checking Syria's weapons and facilities.

DHS debuts virtual training, improved app for first responders

By Mark Rockwell
Source: http://fcw.com/articles/2013/11/20/dhs-first-responder-tools.aspx

The Department of Homeland Security has rolled out two tools for improving emergency response training, with the goal of enhancing

first responders' communications and coordination while also making training more efficient and cost-effective.
The projects -- one an upgraded mobile app, the other a new training program -- are not operationally related, but share an emphasis on efficiency and collaboration. And in both cases, DHS' Science and Technology Directorate is using either existing resources or a relationship with a commercial vendor to provide the capabilities as cost-effectively as possible for first responders and for the department.
On Nov. 20, DHS unveiled a new virtual training platform pilot project with the City of Sacramento, Calif.'s police and fire departments. The Enhanced Dynamic Geo-Social Environment (EDGE) gives first responders the ability to train together in a virtual world to test and coordinate their abilities to handle a broad-reaching emergency. It will allow emergency responders to react to complex, dynamic situations without having to spend tens of thousands of dollars deploying real-life personnel and equipment for physical drills.
DHS is saving money and resources for EDGE by adapting an existing virtual simulator the U.S. Army developed to train soldiers to its own purposes, said DHS program manager Christine Lee in an interview with FCW. The EDGE platform currently resides on the Army's servers, she said, but a transition study currently underway by Rutgers University could determine whether it's more effective to house it on DHS equipment. DHS is currently developing hosting capabilities, she said.
EDGE is essentially a big, immersive video game-like simulation that allows users to set their own local department's resources against an active shooter scenario that takes place in a virtual 23-story hotel. The shooter scenario

can be changed to other crises in future iterations, but Lee said the active shooter scenario was most the most common training request it had gotten from local emergency response agencies.

And a day earlier, the agency announced an upgrade to its First Responder Support Tool, or FiRST app. FiRST is a sharing service that can jointly provide information to smart phones, tablets and laptop computers about how to handle hazardous materials incidents -- how big an area to cordon off in a hazmat spill, for example -- as well as a map-based diagrams of how winds may affect any drift of toxic fumes or exhaust.

***Mark Rockwell** is a staff writer covering acquisition, procurement and homeland security.*

UR Army Chemical Review Journal

Source: http://www.wood.army.mil/chmdsd/

Grand Opening of the International CBRNE Institute

Source: http://www.army-technology.com/contractors/nbc/hotzone-solutions/pressgrand-opening-international-cbrne-institute.html

The International CBRNE Institute opened in Belgium on 5 October 2013.

The opening of the International CBRNE Institute, established by the directors of Hotzone Solutions Group at Les Bons Villers (Frasnes-Lez-Gosselies - Brussels), Belgium, took place on 5 October 2013. The mayor of the municipality, Mr Emmanuel Wart, presented the region and explained how the establishment of the ICI fits in the general framework of the rural development policy implemented by the local authorities and supported by the EU.

The director of the United Nations Mine Action Service (UNMAS) Mrs Agnès Marcaillou, who honoured the Institute with her presence and by accepting to be its patron, highlighted the

importance of setting up a CBRNE training institute and centre of expertise in the heart of Europe, given the recent international developments and emerging threats.

Hotzone Solutions Group's co-owner and CEO Oliviern Mattman and Hotzone Solutions Group's co-owner, Director of Operations, and President of the ICI Dieter Rothbacher explained the principles and ideas underlying the establishment of the ICI, which is a non-profit, fully-independent entity, and outlined its structure, consisting of the CBRNE Training Centre, The Expert Knowledge Centre, and an administrative and support unit.

From the left to the right: Mr Olivier Mattmann, Hotzone Solutions Group's co-owner and CEO; Mrs Agnès Marcaillou – the Director of the United Nations Mine Action Service (UNMAS); Mr Dieter Rothbacher – Hotzone Solutions Group's co-owner, Director of Operations, and President of the ICI; Mr Emmanuel Wart, Mayor of the municipality; Mr Yves Dubucq, Director of the ICI

The Group' management also seized the occasion to thank all consultants and the Headquarters' staff for their professional skills and extraordinary commitment, which have allowed Hotzone Solutions Group to grow rapidly over the last four years and expand to seven countries and four continents. The Director of the ICI, Mr. Yves Dubucq, informed the local authorities and the representatives of the local community of his intention to run the ICI in line with the highest quality, safety, and eco-friendliness standards, by respecting the spirit of the local community and contributing to the enhancement of the local economy.

142 outstanding guests, including representatives from UNO,NATO, EDA, EU,EC, OPCW, ICCSS, attended the grand opening, witnessed the ribbon-cutting ceremony, the reveal of the commemorative engraving, and had the opportunity to visit the facility, which features a very functional layout and organisation, state-of-the-art audio, video, and conference equipment, as well as HZS's top-quality CBRNE training material and simulants.

An open-day for the local population took place on 6 October, which recorded very good turnout and significant interest.

The Facility

Based in the village of Les Bon Villers (Belgium), the ICI occupies an area of 8400 m^2 including a large open indoor training area (1200 m^2), multimedia training rooms, and a fully equipped conference room with seating for up to 220 people.

The infrastructure allows not only for individual trainings, but also for scenario-driven training, including illicit laboratories, mailrooms, shops, and many other variants.

The Institute is composed of the following units:

- CBRNE Training Centre;
- Expert Knowledge Centre;
- Administration and Support Unit.

Location

The Institute is located in Les Bons Villers, 18 km north of the city of Charleroi, nearby (approximately 10 km) Brussels South Charleroi Airport, and 45 minutes from Brussels city centre.

Master Courses in 'Protection Against CBRNe Events' are Now Open for Registration for 2014

Source: http://www.army-technology.com/contractors/nbc/hotzone-solutions/pressmaster-courses-cbrne-events.html

The evolution and increase in safety and security threats at an international level places extraordinary focus on the improvement of emergency systems to deal with crisis, including those connected to ordinary and non-conventional events (chemical, biological, radiological, nuclear and explosives).

Given the global interest in these issues, the department of industrial engineering and the faculty of medicine and surgery at Tor Vergata University introduced the international master courses in 'Protection Against CBRNe Events':

- Master Course in 'Protection against CBRNe events' I Level (120 ECTS) and
- Master Course in 'Protection against CBRNe events' II Level (60 ECTS)

This has been developed with the support of the Italian Prime Minister's Office, and in cooperation with the Italian Ministries of Defense and Interior, as well as with national and international partners like the ENEA (Italian National Agency for New Technologies, Energy and Sustainable Economic Development), the Italian National Institute for Geophysics and Vulcanology, the Italian National Health Institute, the Italian Parliamentary Committee for Technological Innovation, University consortia: Crati scrl, Maris scarl, Scire scarl, the Organisation for the Prohibition of Chemical Weapons (OPCW), NATO School Oberammergau and NATO CBRN CoE/Vyskov, the NBC School of Rieti (Italy), VVU (Czech Republic), Chornobyl Centre (Ukraine), Seibersdorf Laboratories (Austria) and Hotzone Solutions Group.

These courses aim at providing attendees with comprehensive competences in the field of CBRNe safety and security, through teaching and training - organised in modules - specifically focusing on real needs, including elements with live agents.

These master courses have also been accredited by NATO as 'NATO selected'.

These courses are now open for registration; for more information and details please visit the website at www.mastercbrn.com or contact master@hotzonesolutions.com.

Tennessee Apparel and WL Gore Partner to Produce New CBRN Ensembles for USSOCOM

Source: http://soldiersystems.net/category/cbrne/

Tennessee Apparel Corp. (TAC), manufacturer of military garments, has been identified as the only qualified source for the procurement of chemical and biological protective garments under the Uniform Integrated Protection Ensemble Increment 1 (UIPE I1) effort. TAC has received the production option on a $129MM firm-fixed-price contract that had been issued in February 2012.

The chemical and biological protective ensemble is a layered clothing system that consists of a lightweight combat uniform worn over a CB protective undergarment. W. L. Gore & Associates (Gore), a world leader in the development of high-performance protective fabrics, is the key material supplier on the

contract. Gore's stretch GORE® CHEMPAK® selectively permeable fabric is used in the protective undergarment layer of the clothing system.

This clothing system provides enhanced individual protective capabilities through superior protection from warfare agents after wear, and after exposure to petroleum, oils, lubricants (POL) and other environmental contaminants. In addition, the innovative undergarment design integrates easily with current combat gear and personal protective equipment.

The breathable performance of GORE® CHEMPAK® selectively permeable fabric reduces thermal burden by allowing perspiration vapor (sweat) to escape. In addition, the stretch construction allows for a comfortable, next-to-skin fit, which further reduces heat stress by eliminating the thermal insulating layer that surrounds the body and by increasing heat loss through convection.

"We are excited about the launch of the UIPE I1 chemical and biological protective garment for the Special Operations community," says Rick Francis, Co-President of Tennessee Apparel Corp. "This durable, low-profile protective undergarment is truly a revolutionary CB product that will protect the Operator while allowing them to be more functional during operations in adverse conditions."

Mike Kienzle, Product Specialist at Gore for GORE® CHEMPAK® products, says, "This is another instance of a user group choosing GORE® CHEMPAK® selectively permeable fabric because of the combination of durable, broad protection, and reduced thermal burden. This is a paradigm shift when compared to traditional chemical and biological protective fabrics." Kienzle adds, "Our commercially available selectively permeable fabrics have been certified for use in civil responder protective ensembles and approved for use in other US military CB protective ensembles."

The chemical and biological protective clothing system is suitable for wear while performing combat operations, whether on land or at sea, in any climate, with minimal impact on combat effectiveness. The versatile design allows for easy integration with current and developmental clothing and equipment including load-bearing equipment, handwear, footwear, and protective masks.

Video capture from a **Danish CBRN exercise** – modern EOD helmet equipment – nice!